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## **An analysis of the acceptability, feasibility, and utility of the Global Mental Health Assessment Tool for Primary Care (GMHAT/PC) in a UK primary healthcare setting: a practice-based mixed methods study**

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**An analysis of the acceptability, feasibility, and utility of the  
Global Mental Health Assessment Tool for Primary Care  
(GMHAT/PC) in a UK primary healthcare setting:  
a practice-based mixed methods study**

A thesis submitted to the University of Chester for the degree of Doctor  
of Philosophy (PhD)

**February 2021**

**Bennett Noel Eugene Quinn**

**Faculty of Health and Social Care**

The material being presented for examination is my own work and has not been submitted for an award of this or another HEI except in minor particulars which are explicitly noted in the body of the thesis. Where research pertaining to the thesis was undertaken collaboratively, the nature and extent of my individual contribution has been made explicit.

## Abstract

An analysis of the acceptability, feasibility, and utility of the Global Mental Health Assessment Tool for Primary Care (GMHAT/PC) in a UK primary healthcare setting: a practice-based mixed methods study.

Bennett Quinn.

**Introduction:** Published evidence shows that at least one in four people at any one time have mental health symptoms, most commonly of anxiety and depression. This is set against a background where the evidence demonstrates that primary care in general is poorly equipped to identify, diagnose and manage mental health disorders. The effect of these disorders affects the individual's physical and social wellbeing and has an impact at all levels of Society. This study investigates the acceptability and feasibility of the Global Mental Health Assessment Tool for primary care (GMHAT/PC), and the impact of using it on the confidence and self-rated competence of healthcare workers.

The Global Mental Health Assessment Tool for primary care (GMHAT/PC) is a computerised semi-structured interview tool to support a healthcare worker in the assessment of patients presenting with mental health symptoms. While single diagnosis tools are now more widely used in UK general practice, semi-structured mental health interview tools are not. GMHAT/PC was developed in the UK using resources from both community mental health services and primary care. Used in clinical practice, GMHAT/PC guides a healthcare worker through a comprehensive mental health assessment and its greater use has the potential to increase their diagnostic accuracy. With diagnostic accuracy comes more appropriate patient management.

**Method:** The study deploys mixed methods research strategies in a UK general medical practice setting. Fifty-five healthcare workers were trained in the use of GMHAT/PC. They provided pre- and post-training self-ratings and participated in semi-structured interviews to provide views of the feasibility of the tool and its impact on their confidence and self-rated competence in mental health assessments. After training, the healthcare workers interviewed 198 patients with mental health symptoms using GMHAT/PC. The patients completed a questionnaire exploring their views of the time taken for the interview, whether it addressed their symptoms and whether they found it acceptable. Seventeen patients were also interviewed to further explore their opinions.

**Results:** Ninety-nine per cent (99%) of the patient participants found the use of GMHAT/PC in their clinical assessment either “somewhat acceptable” or “very acceptable” ( $\chi^2(1) = 6.636, N = 198, p = .010$ ). Most healthcare workers identified time as a barrier to GMHAT/PC’s feasibility but viewed its use as feasible, provided that additional time was available for the assessment, such as extra appointment time, arranging an appointment at the end of a consulting session, or delegating the assessment to another healthcare worker with less time pressures.

There was a statistically significant improvement in the self-rated competence ( $T = 253, z = 4.221, p < .001$ ) and confidence ( $T = 378, z = 4.560, p < .001$ ) of healthcare workers still in undergraduate training. For healthcare workers working under the supervision of a fully qualified general practitioner, statistically significant improvements were also seen in self-rated competence ( $T = 73, z = 2.801, p = .005$ ) and confidence ( $T = 150, z = 3.491, p < .001$ ). There was no statistically significant change in the confidence and self-rated competence of fully certified practitioners.

**Conclusion:** The results show that the use of GMHAT/PC is highly acceptable to patients. Its use is feasible provided additional time is made available for the interview. There were improvements in the confidence and self-rated competence of undergraduate healthcare workers and those working under supervision. This research is important because it shows how the use of a tool such as GMHAT/PC could support healthcare workers in their practice, facilitating more accurate diagnoses and hopefully reducing the burden of mental health disorders for the individual and their societal settings.

Future research should assess the value of semi-structured interview tools, such as GMHAT/PC, in developing trainee healthcare workers’ skills in mental health assessments, most particularly for common mental health disorders which cause significant disability for a large proportion of Society. Healthcare workers were concerned about the additional consultation time required for the GMHAT/PC interview. Future research could assess the impact of a semi-structured mental health interview on the patient’s subsequent consulting patterns.

## Dedication

I dedicate this thesis particularly to the 198 people of Wirral, who in the stressful moments of presenting their symptoms, agreed to take part in a research project, to the healthcare workers who gave up their time to learn about the primary care version of the Global Mental Health Assessment Tool and then use it in their day to day practice, and to the practices that facilitated the research by allowing their staff to take part.

Thanks too to Yan-Ru Lin MSc for her Mandarin expertise, to Professor Susan Benbow for showing me how to use NVivo ©, and, most especially, to Professor Elizabeth Mason-Whitehead and Professor Vimal Sharma for helping me to navigate the journey.

No man is an island – this one certainly isn't. I am eternally grateful to my wife Denyse for her forbearance.

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## Abbreviations and Terms

<b>Abbreviation or Term</b>	<b>Meaning or Definition</b>
ACASI	Audio Computer-Assisted Self-Interviewing.
AOD	Alcohol and Other Drugs.
AUDIT	The Alcohol Use Disorders Identification Test. Developed by the World Health Organisation.
CG90	Clinical Guideline 90; published by the UK's National Institute for Health and Clinical Excellence.
COPD	Chronic Obstructive Pulmonary Disease.
EMIS	Egton Medical Information Systems, creators of patient management software. Commonly known as "EMIS", this software is used in many general practitioners nationwide. EMIS is used by the practices whose healthcare workers took part in this research.
EPDS	Edinburgh Postnatal Depression Scale. (Cox, Holden et al., 1987)
F2/ST	A Foundation Year 2 (FY2) or Specialty Training doctor. A junior doctor, holding their basic medical degree, but still in training. A Foundation Year 2 doctor is in their second year post-qualification. FY2 doctors usually spend four months in primary care during this second year.  An ST doctor in the context of this research should be described as a "GPST" as they are training to become general practitioners. They can be a variable number of years post-qualification but will be at least in their third year post-qualification.
FY2	See F2/ST.
GAD-7	The Generalised Anxiety Disorder 7-question tool (Spitzer, Robert L., Kroenke et al., 2006).

GMHAT/PC	The Global Mental Health Assessment Tool – Primary Care version (Sharma, Vimal K, Lepping et al., 2004).
GPST	General Practice Specialist Trainee.
HAD / HADS	The Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983).
HCA	HealthCare Assistant.
HMO	Health Management Organisation.
MHF2013	The UK's Mental Health Foundation publication "Starting today – the future of mental health services"
NHS	National Health Service.
OCD	Obsessive Compulsive Disorder.
PHQ-2/9	Public Health Questionnaire – 2 or 9 question versions. (Spitzer, R. L., Kroenke, K. et al., 1999).
PPD	Post-Partum Depression.
QOF	Quality and Outcome Framework.  See <a href="https://www.bma.org.uk/advice/employment/contracts/gp-partner-contracts/qof-guidance">https://www.bma.org.uk/advice/employment/contracts/gp-partner-contracts/qof-guidance</a>
RGN	Registered General Nurse.
SMI	Serious Mental Illness.
ST1/ 2 /3	A junior doctor in training to become a general practitioner.
WHO	World Health Organisation.
YLDs	Years Lived with Disability.

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# Chapter 1 Introduction and Background

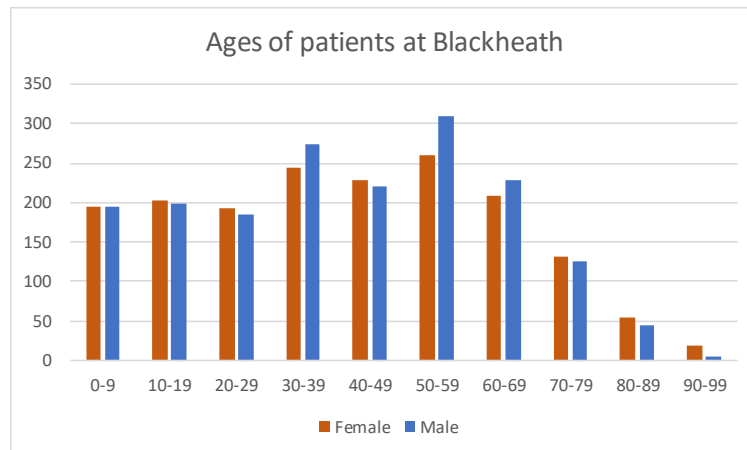
It is said that every journey starts with a single step. But what journey? Surely there must be some consideration of why the journey is needed, and so it is with this study. Here, I paint a picture of my professional and personal experiences with my pre-project views of reality, allowing the reader to identify and recognise the preconceptions and biases of a comfortable life as a general practitioner, the events that unsettled the tranquil professional idyll, my initial investigations of the problem and my considerations of what could be done to remedy it.

## 1.1 The Study Setting

I have been a general practitioner in practice in the UK's National Health Service since 1983. Actually, I feel that I have been a GP since I was about five years old – my father was a GP in small town Ireland, with his surgery attached to our family home. I still recognise similarities between some of the things I do now and things I saw over fifty years ago. Technology, pharmaceutical options, and clinical governance may have improved but the job hasn't changed that much over the years.

For the past twenty years or so, I have been the lead practitioner at Blackheath Medical Centre in Wirral, Merseyside, in the north-west of England. I joined the practice in 1983 and over those years I have been involved in the care of four generations of some families. The medical centre is on the edge of the Leasowe Estate at the north end of the Wirral peninsula. I bought the land on which the medical centre is built from chocolate-makers Cadburys who were a major local employer at the time. The local land was previously marshland that flooded at high water until a barrage and embankment was constructed. The Leasowe Estate was built in the 1960's. More recently, several hundred private homes were built between Reeds Lane and Pasture Road on land also previously owned by Cadburys.

**Figure 1: Ages of patients attending Blackheath Medical Centre**



There are 4 fully qualified general practitioners working at Blackheath, along with one practice nurse, looking after 3,500 patients (Figure 1). The patient list size at Blackheath has increased by some two hundred in the last year and is likely to increase further with another housing development currently being built in our catchment area. The patient population is mainly white British in ethnicity. Other ethnicities represented include those of European origin (predominantly Poland) and a smaller cohort of Asian origin. Wirral Council's Intelligence Service 2019 report shows that the practice area has significant rates of income deprivation (Wirral Council Public Health Intelligence Team, 2019, p.7).

The practice has always been involved in medical and nursing education, supporting medical students and physician associate trainees from the University of Liverpool, nursing students from Liverpool John Moores University, and physician associate trainees from the University of Chester. We also host junior doctors in training, either as part of their foundation year two or as part of their specialist general practitioner training. I have an additional training role as the Royal College of General Practitioners Mersey Faculty lead for "membership by assessment of performance" – a route for established general practitioners to gain membership of the College (Royal College of General Practitioners).

Early in my career I recognised the potential of computerised databases in medical practice and learned how to program them. Blackheath still uses a computer program based on the Ryan algorithm (Ryan, Gilbert et al., 1989) that I wrote about twenty years ago to dose its warfarinised patients. Another of my programs, a heart disease risk calculator based on the Wilson equation (Wilson, P W, D'Agostino et al., 1998), was distributed to thousands of

doctors across the UK. I was one of many national information technology advisers on the NHS's National Programme for Information Technology in the late 1990's. Currently, an analytical tool I developed in Microsoft Excel© to calculate the opioid equivalence of every opioid prescription issued in a rolling six-month period is being used to highlight prescribing issues in Blackheath and some neighbouring practices. This knowledge of information technology and its application to patient care was central to my initial involvement in the development of the Global Mental Health Assessment Tool for Primary Care.

**Figure 2: Blackheath Medical Centre**



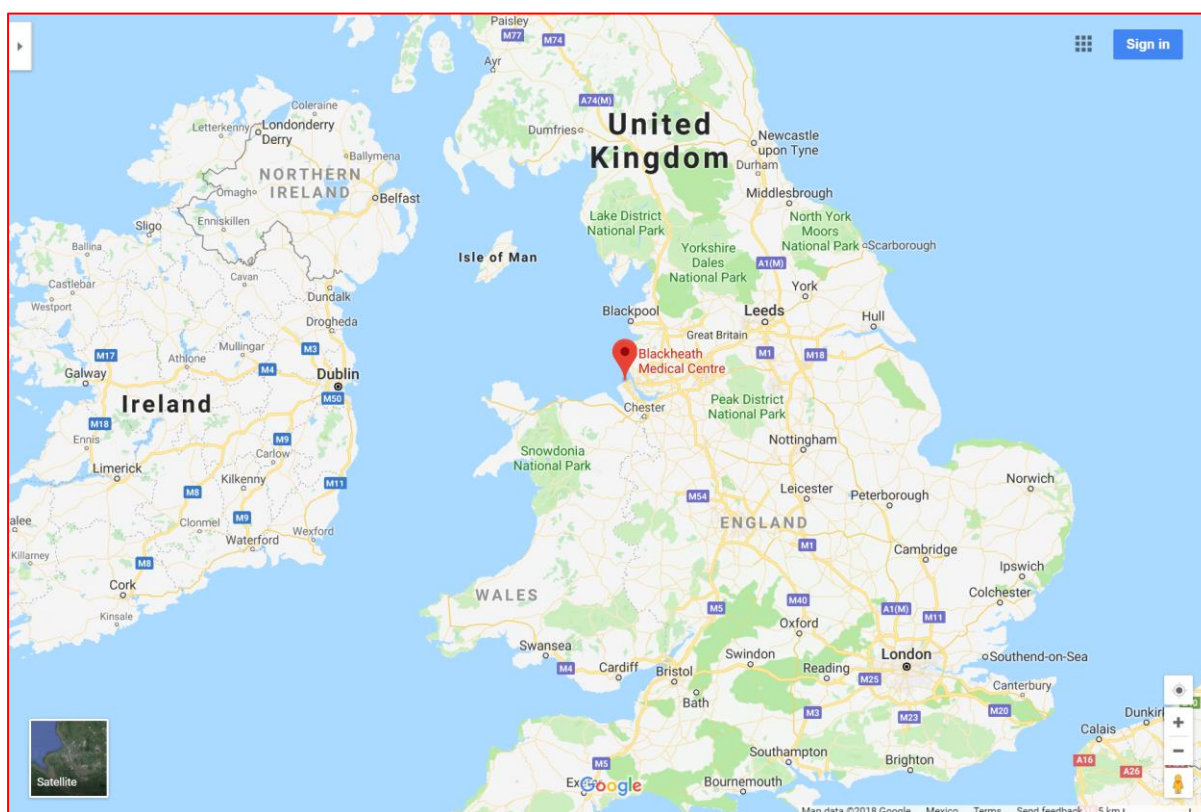
[This photograph shows BlackHeath Medical Centre, Moreton, Wirral.]

A couple of years ago, I had to paint a word picture of my practice in an advertisement for an additional doctor. It went something like this:

*“Blackheath is a forward-thinking family orientated practice. The cohesive team delivers high quality service to its 3,300 patients. In this year’s (2019) NHS Patient Survey, the practice was ranked in the Top Ten practices in Merseyside. We score highly in the Quality and Outcome Framework. We are an established teaching practice and host GPST and FY2 junior doctors, medical, physician associate and nursing students. The Care Quality Commission said we were “Good” in all areas.”*

Despite the then current national shortage of doctors, we successfully recruited a very suitable candidate.

**Figure 3: Blackheath Medical Centre location**



[A Google Map© showing Blackheath’s location in the British Isles.]

## **1.2 Social inequalities and mental health**

In their publication “Social Determinants of Mental Health”, the World Health Organization describes how adverse social, economic and environmental settings place people at greater risk of mental health disorders (World Health Organization, 2014). One key measurable index of this is deprivation. When this study was conceived, Wirral Borough Council had published the 2015 indices of multiple deprivation for Wirral that revealed that the area was, by a whisker, no longer in the 20% most deprived authorities in England. This could have suggested either that Wirral had become better off, or that other areas had become more deprived. Within Wirral it was a mixed picture, showing the usual east-west divide for Wirral with pockets of the peninsula still showing severe deprivation. The report showed that my practice area covers one of the most deprived “lower super output areas” (LSOAs) in England, ranking in the top 3% most deprived LSOAs (Wirral Intelligence Service, 2015). This was actually an improvement – it used to be in the top 1% most deprived. This

improvement is accompanied by an increase in life expectancy. Some 20 years ago, there was a ten-year difference in life expectancy for males living in parts of postal code CH46 compared to their counterparts living about a mile away in the CH45 postal area. A 2016 report showed that the difference has been reduced to 3 years (81.7 v. 78.6 years) (Wirral Council Public Health Intelligence Team, 2016). The map of Wirral deprivation in Figure 4 below from the Wirral Intelligence Service 2019 report shows that the situation has not greatly changed (Wirral Council Public Health Intelligence Team, 2019).

Public Health England calculates deprivation scores for England, each Clinical Commissioning Group (CCG), and each practice. This data is freely available on their web site, <http://fingertips.phe.org.uk/>. Table 1 below shows that Wirral is more deprived than England overall and that the patients attending Blackheath Medical Centre are more deprived again.

**Table 1: Public Health England Deprivation Scores**

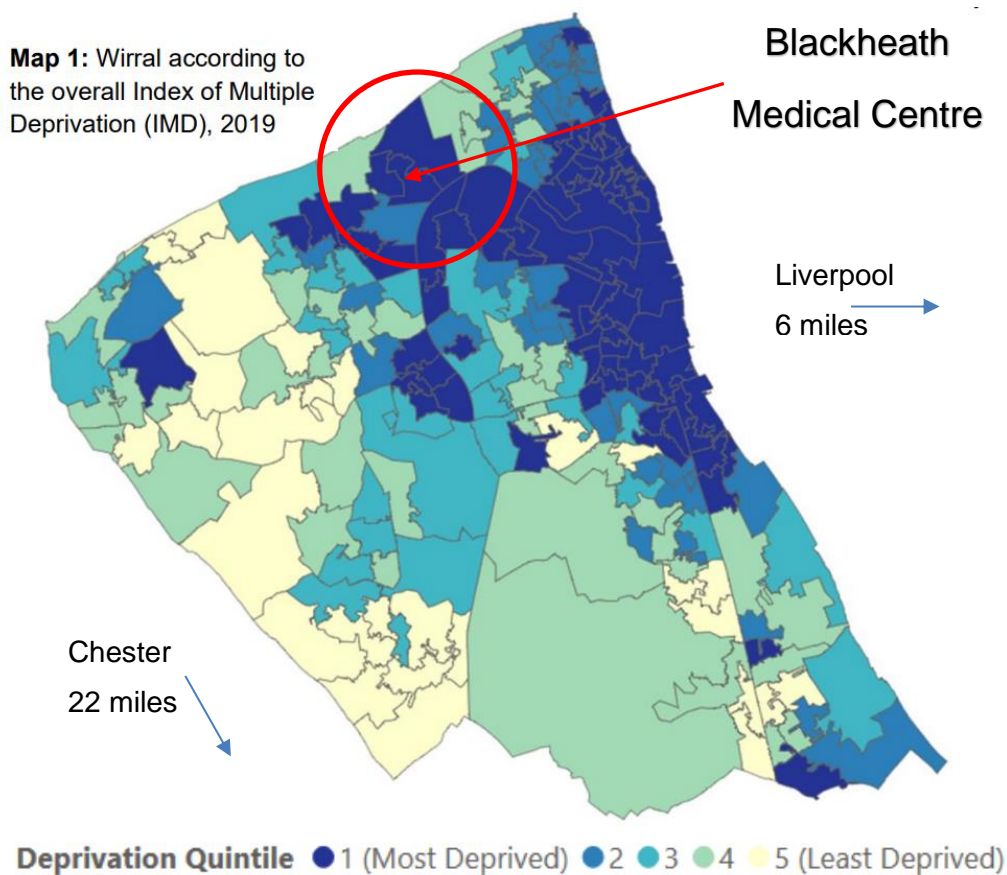
	<b>2015 Commencement of study</b>	<b>2019 Latest figures</b>
England	21.8	21.7
NHS Wirral CCG	26.9	29.6
<b>Blackheath Medical Centre</b>	<b>29.3</b>	<b>32.7</b>
Liverpool CCG	41.1	42.4
West Cheshire CCG (Now part of Cheshire CCG)	17.5	17.6

[The higher the number, the greater the degree of deprivation. This table shows that Wirral overall, and Blackheath Medical Practice in particular, have become more deprived during this study. Figures from neighbouring Liverpool CCG and West Cheshire CCG are included for comparison.]

Data published by NHS Digital for 2015-16 shows that my practice's prevalence of dementia is 0.51% (NHS Digital). This is less than the national prevalence of 0.76%. We believe that this is because of the low number of nursing and residential care homes in the practice area.

Rather more startling is our prevalence of depression at 13.64% against a national figure of 8.26%. There are a number of reasons why this might be so, including better clinical recording, better recognition of the symptoms of mental health disorders, and the increased deprivation rates in the practice patient population. The link between deprivation and an increased prevalence of mental health problems is well described (Fone & Dunstan, 2006; Harrison, Barrow et al., 1998; Osborn, Levy et al., 2008).

**Figure 4: Wirral Deprivation**



[Source: Wirral Council (2019) Wirral Intelligence Service.

<https://www.wirralintelligenceservice.org/this-is-wirral/wirral-indices-of-deprivation/>

Reproduced with permission.

This figure shows the location of Blackheath Medical Centre in the “*most deprived*” area of Moreton, Wirral.]

The practice also has an above average number of patients with significant mental illness, such as psychotic disorders, with a prevalence of 1.40% against the national average of 0.90%. The practice used to have a significant problem with patients arriving in considerable respiratory distress, suffering exacerbations of their asthma or COPD. New junior doctors starting their attachments in the practice were always quickly coached in the management of these patients. Reflecting on our prevalence of mental health disorders, this early coaching should have included the assessment of mental health symptoms and related management strategies.

Some consultations occurring over a period of several months upset the complacency and confidence of my comfortable career in general practice. The first related to a woman who had presented at the reception desk in a distressed state. The staff would not let her leave and insisted that I see her. I had never met her before. The consultation revealed that she had been depressed for eleven years and had become more depressed with the birth of her little girl who was now five. A quick glance at the child revealed a contented little girl, sitting on a chair about a metre from mother, with curly blonde hair, in a nice clean blue dress, playing happily on an electronic device.

The second followed a call from a GP colleague practising about two miles away. He told me that one of his patients had expressed concern about the health of her son who was my patient. I arranged to review him. He was known to me as being a little odd, generally dressed untidily with plastic bags fastened to his belt. I used to see him out walking, sometimes a couple of miles from his home. He was always pleasant in his demeanour. A hearing deficit complicated conversation with him. In the consultation with him, he revealed that about thirty years earlier his wife of some eighteen months had left him, saying that he was "odd". He had also been dismissed from his job round the same time. On questioning, he revealed some paranoia and visual hallucinations. It seemed likely that he had suffered an acute psychosis all those years ago and had progressed through life enduring a mild psychotic illness for some thirty years – mild in that other than losing his job and his marriage, he had not presented any risk to himself or others.

The third consultation related to a forty-year-old woman who presented with her mother. She reported that her current antidepressant therapy was not helping her and that she wanted a change of treatment. On questioning, she revealed that in addition to depression and significant social phobia she had an intolerance or fear of odd numbers, insisting that

she had two of everything. This imparnumerophobia extended to items of food. Her mother recounted her embarrassment when the patient had caused a scene in a local restaurant recently because there was an odd number of chips on her plate. This situation had prevailed for possibly up to twenty years and gone unreported by the patient (and her mother), and unrecognised by her primary care health team, including myself.

I asked myself how these patients could have gone so long without diagnosis and management. How could a woman had gone undiagnosed with depression and then post-natal depression for eleven years? How could a man have been mildly psychotic for 30 years? How could a woman with significant affective problems go unrecognised for twenty years? At the start of this chapter, we wondered what journey we were going on. We might not know the full details yet but at least we now know **why** we are going on the journey.

### 1.3 Primary care and mental health

The NHS's "Health Careers" Internet site describes general practitioners as treating all common medical conditions with a focus on the whole person (NHS Careers). While the information provided is inevitably concise, it does not, in my opinion, give sufficient emphasis to the role UK primary care plays in the provision of mental health services, or how important those services are to the many people suffering with common mental health symptoms such as anxiety and depression.

The UK's Royal College of General Practitioners provides a Mental Health Toolkit which tells us that a quarter of all people will experience a mental health problem at any one time and that 23 out of 30 of those will visit their general practitioner (Royal College of General Practitioners). However, the provision of care to people presenting with mental health symptoms in primary care is not all as it should be. In 2013, the UK's Mental Health Foundation published "*Starting today – the future of mental health services*" (MHF2013) where they report that people with mental health problems receive inconsistent care, have difficulty accessing services, some get no help at all, and others abandon their efforts to get assistance. The report identified several issues relating to patient care in primary care:

- the high societal cost of mental health problems,
- the high and rising prevalence of mental health problems,

- the shift in mental health service provision from specialist to generalist care, and,
- under-resourced primary care staff.

(Mental Health Foundation, 2013).

There is no suggestion that the situation is any better in 2020. One of the key messages from the Centre for Mental Health report “*Mental health and primary care networks*” is that “*the current arrangements for mental health in primary care do not serve the interests of patients or professionals*” (Centre for Mental Health, 2020b, p.1).

### 1.3.1 The high societal cost of mental health problems

As a general practitioner I bear witness to the burden of mental health disorders in primary care, both to the service and to the people affected by them. Amanda Howe, previously President of the Royal College of General Practitioners, described the impact of this burden, which as well as the distress related to the illness, often includes financial penalties such as loss of employment with its impact on those affected and their families. Society at large is affected too as the individual, and often their family, shifts from a positive societal function, e.g. working, paying their taxes, to one of greater social dependency (Howe, A, 1996).

Little has changed since Professor Howe’s observations over twenty years ago. The most recent Adult Psychiatric Morbidity Survey reminds us that common mental disorders “*cause marked emotional distress and interfere with daily function, but do not usually affect insight or cognition. Although usually less disabling than major psychiatric disorders, their higher prevalence means the cumulative cost of CMDs to society is great*” (McManus, Bebbington et al., 2016, p.38). People with common mental health problems are still likely to lose their job through persistent absenteeism. They are still likely to need financial support from the State and face repeated stress from challenges to their entitlement to ongoing support. In 2011, the World Health Organisation reported that mental disorders accounted for 13% of the global burden of disease which they defined as premature death combined with years lived with disability. They remind us that untreated mental disorders exact a high toll in terms of the total global burden of disease and that, by 2030, depression will be the leading cause of disease burden globally (World Health Organization, 2011).

The Centre for Mental Health puts a number to the financial burden, reporting that for England the total societal costs in 2009/10 (comprising both business costs and health and

social care costs) had risen to £105 billion from 2002/03's figure of £77 billion (Centre for Mental Health, 2014). Their 2020 briefing "*A Spending Review for wellbeing*" reports that the economic and social costs of mental health in England had risen to nearly £119 billion (Centre for Mental Health, 2020c). This should not be viewed as only a problem in the United Kingdom. In the European Union, Huxley, one of the expert advisors in the development of the Mental Health Integration Index, noted the toll exacted by mental illness on people and regional economies, and that the workforce of every European organisation is affected by mental health issues (Huxley, P J, 2015). Huxley's research, based on a large European survey, highlighted the need for social integration of people with mental health problems. He pointed out that in spite of state policies, people with common mental disorders remain untreated and remain excluded from community activities (Huxley, P, 2015). The following year, Trautmann et al reported that 165 million people in the EU (about 32% of the population) are affected each year by mental health disorders, mostly anxiety, mood and substance use disorders, estimating the total EU costs at €798 billion (Trautmann, Rehm et al., 2016). In the United States, Kroenke and Unutzer reported in 2017 that "*depression and anxiety alone account for as many YLDs<sup>1</sup> ... as do chronic obstructive pulmonary disease, diabetes, Alzheimer disease, ischemic heart disease, stroke, and chronic kidney disease combined*" (Kroenke & Unutzer, 2017, p.404). On a global scale, the World Health Organisation reports that mental health conditions account for 1 in every 5 years lived with disability, costing more than US\$1 trillion in global economic losses (World Health Organization, 2019).

### 1.3.2 The high and rising prevalence of mental health problems

GPs are the true generalists. Their work embraces the entire spectrum of medical disorders, managing or treating in the community where they can and referring to specialists as appropriate. Several researchers have demonstrated that mental health issues comprise a large part of the GPs' workload. A review of the evidence shows that this is not just a UK problem. Figure 5 below shows the reported global distribution of mental health and substance use disorders. The underlying data shows that about 15% of the World's population have one or more mental health disorder (Ritchie, H & Roser, 2018).

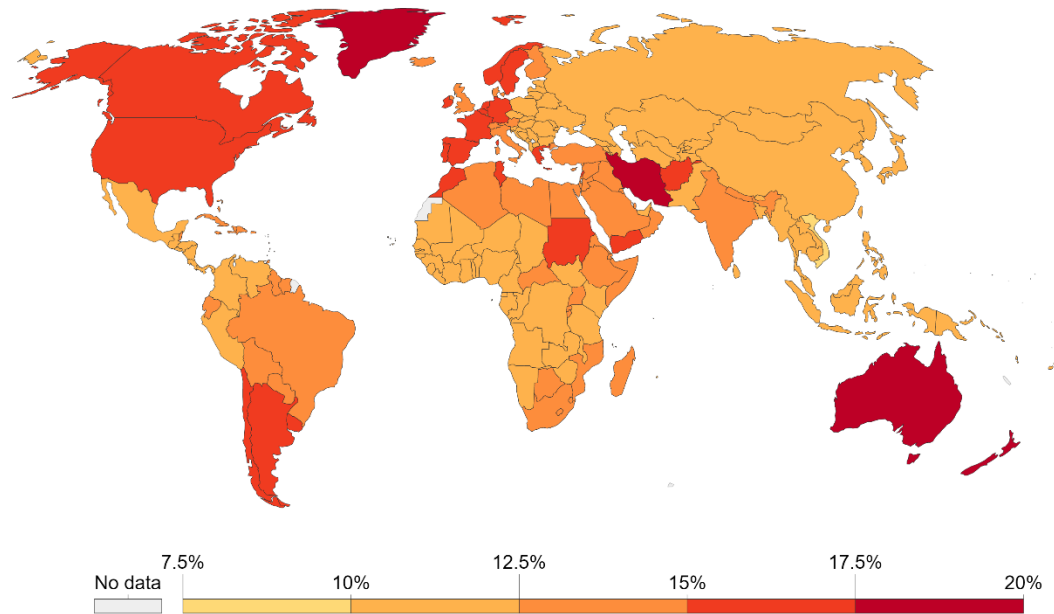
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<sup>1</sup> Years Lived with Disability

**Figure 5: The reported global distribution of mental health disorders**

### Share of population with mental health and substance use disorders, 2017

Share of population with any mental health or substance use disorder; this includes depression, anxiety, bipolar, eating disorders, alcohol or drug use disorders, and schizophrenia. Due to the widespread under-diagnosis, these estimates use a combination of sources, including medical and national records, epidemiological data, survey data, and meta-regression models.



Source: IHME, Global Burden of Disease

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(Ritchie, H & Roser, 2018). Reproduced under Creative Commons BY licence.

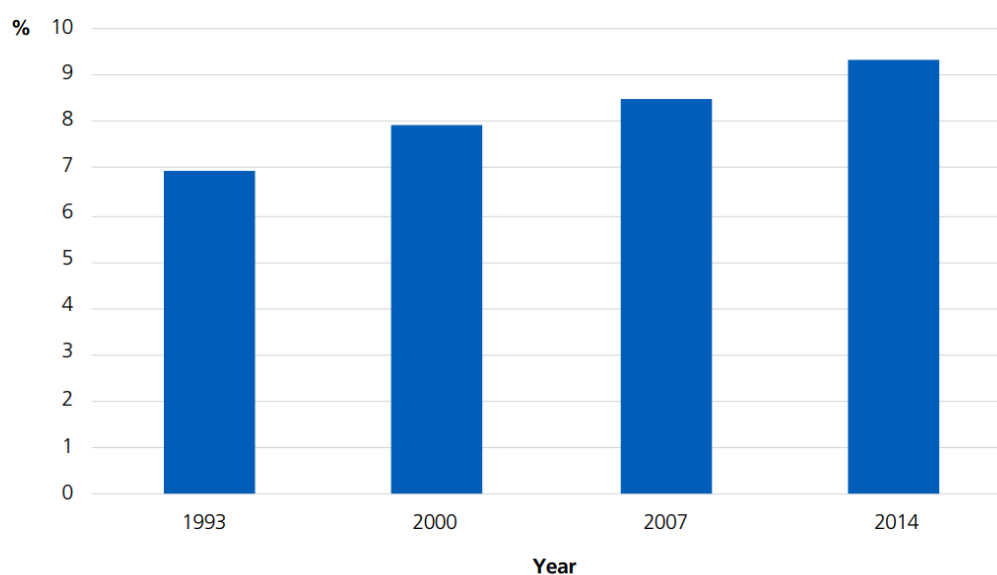
[This graphic from the Institute for Health Metrics and Evaluation at the University of Washington shows the reported global distribution of mental health and substance use disorders.]

The rising prevalence of mental health problems is evidenced by the Adult Psychiatric Morbidity Survey which is carried out in England every seven years. The latest report shows that the prevalence of severe common mental health symptoms has steadily increased since surveys began in 1993 (McManus, Bebbington et al., 2016) – see Figure 6 below.

**Figure 6: Prevalence of severe common mental health symptoms**

**Severe CMD symptoms in past week (CIS-R score 18+), 1993 to 2014**

*Base: adults aged 16–64*



<sup>1</sup> Trends are based on people aged 16–64, as this age-group has been covered by every survey in the series.

(McManus, Bebbington et al., 2016).

[This graph shows the steady increase in the prevalence of severe mental health symptoms since the first Adult Psychiatric Morbidity Survey in 1993.]

The burden of mental health illness on the workload in primary care is considerable. In their discussion of service utilisation, the Mental Health Foundation reminds us that approximately 30% of all GP consultations are related to a mental health problem and that, on average, a patient with severe mental health problems has 13 to 14 consultations per annum with their GP. They estimate that there will be nearly 8 million more adults in the UK by 2030 and extrapolate that if the prevalence of mental health disorders matches current rates of 25%, there will then be an additional two million adults with mental health problems – about 60 additional patients with mental health problems per GP in the UK (Mental Health Foundation, 2013).

Perhaps recognising the rising pressure from the increasing prevalence of mental health illness, the Joint Commissioning Panel for Mental Health in their guidance for commissioners of primary mental health care services identifies, inter alia, a need for the earlier recognition and diagnosis of mental health problems (Guidance for commissioning public mental health

services, 2013). The 2020 COVID-19 pandemic infection has added substantially to the mental health caseload, with the Centre for Mental Health predicting that, in England alone, “up to 10 million people (almost 20% of the population) will need either new or additional mental health support as a direct consequence of the crisis” (Centre for Mental Health, 2020a). This alarming projection is mollified by Fancourt et al who suggest that the highest prevalence of depression and anxiety, the commonest mental health disorders, occurs in the early stages of the enforced isolations (“lockdowns”), and declines rapidly as people adapt to new realities, although those with emotional vulnerabilities remain at risk during isolation and subsequently (Fancourt, Steptoe et al., 2020). Kwong et al found higher levels of anxiety and reduced wellbeing, but not depression, during the pandemic, particularly in younger people, females, people with pre-existing mental or physical health issues, those living alone or in socio-economic hardship (Kwong, Pearson et al., 2020).

### 1.3.3 The shift in mental health service provision from specialist to generalist care

As the consequences of the 2007 global financial meltdown played out, the Mental Foundation opined that “*the impact of the [then] current economic downturn will be felt for a long time and it is highly unlikely that health and social services will ever get the same amounts of generous funding that we have had in the UK in the past two decades. Hence, we need to look at fresh ways of developing and delivering services*” (Mental Health Foundation, 2013, p.1). It feels to me working in primary care that the wider primary care community will be the backstop of these fresh ways of developing and delivering services. Indeed, Wittchen et al identified this ten years earlier (Wittchen, Mühlig et al., 2003) and provide an explanation for the shift in workload:

- First, the high prevalence, which turned out to be more than previously estimated. They remind us that about half of us will experience at least one mental health disorder during our lifetime and one in four will have suffered a mental health disorder during the last year.
- Second, most people with mental health disorders get some assistance or intervention from their primary care physician.
- Third, the ongoing reduction in mental health hospital beds perforce shifts the workload to other settings such as specialist out-patient services and/ or primary care.
- Finally, the newer treatment options suitable for deployment in primary care further facilitates the shift from hospital to community settings.

Wittchen et al identify attributes of primary care that make it eminently suitable for its increasing role in mental health care (Wittchen, Mühlig et al., 2003). These include its stable and enduring relationship with its patients and the GP's deeper knowledge of the individual's psychosocial context. I recognise these attributes – I have looked after four generations of some families in my career and three generations of many others. There is also the much-reduced stigma of a visit to the general practitioner – people sitting in the GP's waiting room do not have labels on their foreheads saying why they are there – they could be there for any of a very wide spectrum of issues. Compare that to the possible stigma (real or imagined, viewed by self or by others) of attending a mental health clinic.

Primary care is normally the first port of call for people with any new illness, including mental health disorders. People with mental health symptoms may present at Accident and Emergency departments where most, after initial assessment, are referred back to primary care. People largely respect their general practitioner and have a stable and enduring relationship with them. The GPs for their part will have some understanding of the patient's psychosocial context (Kmietovicz, 2002). Despite getting only 10% of the NHS budget, primary care is the cornerstone of the UK's National Health Service, delivering over one million consultations every day. Providing a comprehensive, longitudinal ("*Cradle to Grave*"), accessible first contact service, it provides an essential gatekeeper role for limited, resource-hungry secondary care services.

The World Health Organisation states that, in industrialised societies, the general practitioner is the only clinician working at the nine levels of care (Atun, 2004). The levels of care, several of which are relevant to the care of people with mental health symptoms, are prevention, pre-symptomatic disease detection, early diagnosis, diagnosis of established disease, management of disease, management of disease complications, rehabilitation, palliative care, and counselling.

#### 1.3.4 Under-resourced primary care staff

The Mental Health Foundation (Mental Health Foundation, 2013) opines that GPs of the future need to become leaders in mental health care and that they need to know as much about mental health as they do about physical health, a viewpoint shared by Smith (Smith, R. C., Laird-Fick et al., 2014). Realising this aspiration in a setting of an under-resourced

primary care presents significant challenges. During this study, England's primary care faced a shortage of general practitioners. The UK's "Daily Telegraph" newspaper reported on 30th May 2018 that more than a million people had needed to find a new GP amid a seven-fold increase in practice closures. The same newspaper reported in the same month that there were over 30,000 nurse vacancies. These vacancies present a substantial workload issue for those currently in post, time pressures for primary care appointments, and a clinical risk for patient care. Healthcare worker shortages present problems for time utilisation and seem likely to lead to greater pressures on mental health training and the recognition and assessment of patients with mental health symptoms. While seeking to recruit and train new healthcare workers, consideration should be given to the idea of equipping those in post to facilitate their care of patients with mental health symptoms.

A patient making an appointment to see their general practitioner in the UK will generally be allocated ten minutes of the doctor's time. This reflects historical practice and the considerable pressure on GP time due to an increasing population, an aging population and a nationwide shortage of general practitioners (Irving, Neves et al., 2017). The King's Fund found that activity in UK general practice had increased significantly in the five years leading up to October 2015, that patients have more chronic conditions and that part of the burden relates to an expectation of immediate service, all of which serve to increase time pressure on clinicians, reduce their resilience and reduce their physical and psychological capacity to cope with complexity (The King's Fund, 2016).

## **1.4 General Practitioners' Training in Mental Health**

Before enrolling in a general practice training scheme, all general practice trainees will have completed at least two years of foundation training – so-called FY1 (Foundation Year 1) and FY2. Some may spend time in other specialities before embarking on their general practice training. For example, one of my practice's trainees had spent ten years working in emergency medicine and another had worked in psychiatry for two years. Satisfactory completion of the training programme is dependent on a workplace assessment and two professional examinations. Newly qualified general practitioners are provided with support through the First Five groups facilitated by the local faculties of the Royal College of General Practitioners (Royal College of General Practitioners).

Currently, training for primary care in the UK lasts three years. Entry to the training programme is by assessment. Eighteen months is spent in two primary care training posts. The other eighteen months is spent in other specialist posts, generally in hospitals. The specialties include emergency medicine (Accident and Emergency), ear nose and throat, paediatrics, obstetrics and gynaecology, oncology, general medicine, and mental health. MIND, a mental health charity, submitted a Freedom of Information request to Health Education England and found that less than half of all GP trainees in England and Wales completed a psychiatry placement in their rotations. The proportion for the Northwest of England was 31% in 2015. The training provided to those that do complete a psychiatry attachment is “*often hospital-based and certainly in secondary care*” (MIND, 2016, p.20). Any such psychiatry posts will generally concentrate on the assessment and care of those with serious mental illnesses such as psychosis and severe affective disorders with much less focus on those with the commoner affective problems of anxiety-related disorders and depression.

From 2022, general practice trainees are to spend two years of their three year programme in primary care settings which, unless innovative posts are created combining primary care with a significant community-based mental health component, will mean that the proportion of trainees receiving any formal mental health training is likely to reduce. A proposal to extend the training programme to five years may provide different opportunities for future trainees.

#### 1.4.1 The adequacy of GP training in psychiatry

Smith asserts that educators “*do not adequately train our students and residents to manage common diagnoses like depression, anxiety, medically unexplained symptoms, eating disorders, and substance misuse*” (Smith, Robert C., 2011, p.e16). He opines that medical education now needs “*a quantum leap forward in biopsychosocial training*” and to produce doctors as competent in mental health conditions as they are in physical health problems, increasing the proportion of their time spent in mental health training. He identifies the issue of “*the poorly prepared primary care physician*”, the non-existence of teachers and role models in primary care mental health, and the consequent need to train appropriate faculty in every medical school.

Two themes emerge from a critical review of published evidence in relation to primary care mental health. First, that only one in eight patients presenting with mental health symptoms in primary care gets recognised, diagnosed and treated properly (Wittchen, Mühlig et al., 2003). Second, that there is a belief that primary care doctors are not trained adequately to manage patients with mental health problems and are basically ill-equipped for the task (Smith, R. C., Laird-Fick et al., 2014). These two learning points are probably related one to the other – if healthcare workers are inadequately trained for a task, it is not likely that they will complete it appropriately. This is even though the prevalence of mental health disorders exceeds the combined prevalence of hypertension and diabetes.

Smith et al's observations are nothing new. Over the past forty years researchers have considered the issue of how best to improve doctors' and nurses' skills in undertaking a competent mental health assessment and improving their diagnostic accuracy. As far back as 1980, Goldberg et al found that family doctors did not detect a large proportion of minor mental health disorders in their patients. They note the time pressure under which GPs work and that the accuracy of their assessments depended greatly on the way each doctor interviewed their patients (Goldberg, D P, Steele et al., 1980).

General practitioners in the United Kingdom would view the diagnosis of mental health disorders as being within their clinical competencies and falling within their role as community-based healthcare workers, albeit with the backup support of specialist mental health services. Additionally, they would probably view the management of most mental health problems as also coming within their clinical competencies. However, the evidence review above suggests that primary care's ability to recognise mental health symptoms, to assess those symptoms, and come to a correct diagnosis is far from satisfactory.

I have already identified the poor or inadequate training most general practitioners have in mental health. And in any case the bulk of any training they have had will have been focussed towards so-called "serious mental illness" such as psychosis and the more serious affective disorders, particularly where the capacity of the patient is compromised, or there is a risk to the safety of others or the patient themselves.

Training in the assessment and management of common mental illness is less robust. Most GPs will have accrued their skills in the assessment and management of common

mental health disorders through teaching from GP Trainers (themselves products of the same educational paradigm) and their own experiential practice, possibly supported by NICE guidance (NICE, 2001; NICE CG90, 2009 (updated 2018)) and peer-reviewed papers, and perhaps some self-selected continuous professional development.

Specialist mental health services do not generally accept referrals for patients with common mental illnesses. These patients make up the greater majority of people with mental health problems and will typically present to their general practitioner. Their assessment may or may not include some validated standardised quantifiable assessment with tools such as the PHQ-9 or the GAD-7 (Spitzer, Robert L., Kroenke et al., 2006; Spitzer, R. L., Kroenke, K. et al., 1999).

Management options will include brief interventional counselling by the GP (depending on the skills of the practitioner), prescription of medication, and referral to community based mental health services provided as part of the NHS's "Improving Access to Psychological Therapies" programme which started in 2008. Third sector organisations also provide valuable services to patients with mental health issues. An example of such an organisation in Wirral would be "The Open Door" (<https://theopendoorcentre.org/>) which provides valuable services to younger patients.

The evidence outlined above suggests that primary care health care workers are not adequately trained for the recognition, assessment, and management of mental health symptoms. And yet, they are expected to deal with mental health problems effectively in their clinical setting. Echoing Wittchen, Smith describes how, despite the fact that primary care has become what he describes as the "*de facto mental health service system*", less than one in four people presenting with mental health symptoms in primary care gets any mental health care and that "*fewer still receive recommended care*" (Smith, Robert C., 2011, p.e16).

Further evidence reveals that others share Smith's perception of mental health management in primary care. In the 1980's, Freeling et al screened patients presenting in primary care before they saw their doctor and found that only half of those who screened 'positive' for depression were diagnosed by their doctor. The patients with unrecognised depression were less obviously depressed, they had been depressed for more protracted periods and a

significant proportion of them had co-morbid physical illness (Freeling, Rao et al., 1985). A few years later, Schulberg and Burns reported that “*the many investigators studying this issue consistently have found that medical clinicians underdiagnose mental illness*” (Schulberg & Burns, 1988, p.79). Ormel et al concurred, reporting that only 47% of patients meeting diagnostic criteria for anxiety, depression or ill-defined disorder were recognised as such by their general practitioner (Ormel, Koeter, van den Brink, and van de Willige, 1991). The same problem was recognised in the Prime-MD validation study where again it was found that nearly half the patients meeting criteria for specific mental health disorders had not been diagnosed despite being known to their physicians (Spitzer, Robert L., Williams et al., 1994).

Andersen and Harthorn reported that primary care physicians under-recognised mental health symptoms and that additionally when they did recognise such symptoms they did so with “*substantially lower diagnostic accuracy*”, i.e., correctly identifying that their patient had mental health symptoms but failing to classify the disorder correctly. They list factors that impede diagnostic accuracy which include insufficient information, poor interviewing skills, lack of interest and lack of time (Andersen and Harthorn, 1989).

Move forward to 2003 and the picture is no better. Wittchen describes primary care’s performance “*is best described by the rule of diminishing halves*”, “*...only half the patients with a threshold disorder are recognized; only half of those recognized are treated; and only half of those treated are effectively treated.*” – disappointing reading indeed for a general practitioner and concerning findings for primary care patients (Wittchen, Mühlig et al., 2003, p.115).

Mitchell et al reported a meta-analysis of the clinical diagnosis of depression in primary care where they found that “*across 41 studies, GPs correctly identified depression in 2514 out of 5534 true cases*” and that “*across 19 studies reporting full data for rule-in and rule-out accuracy, GPs could correctly exclude 5408 out of 6560 non-depressed individuals, giving a raw detection specificity of 82.4%*”, concluding that “*GPs can generally identify about half of true cases*” and that they could “*accurately exclude 81.3% of non-depressed individuals*”. Noting that GPs do no worse than other non-mental health medical colleagues, they discuss mitigating factors such as non-disclosure of symptoms by patients, collusive behaviour between clinician and patient, mild or minor symptoms regarded as inconclusive by the clinician and the short GP consultation duration with the related time-pressures on both

parties (Mitchell, A J D, Vaze et al., 2009, p.609). Tyrer, commenting on Mitchell's work, adds that "*depressed patients might disguise or underplay their symptoms when they present in primary care because of the stigma of disclosure, and there is the fear of receiving 'addictive' antidepressants*" (Tyrer, 2009, p.589).

Tyrer also notes that in other studies "*the apparent failure to identify depression accurately in primary care might have been overstated, because many of the discrepancies were found in patients close to the threshold of diagnosis*" (p.589). Although many of the patients with undiagnosed depression were close to the diagnostic threshold, he argues that healthcare workers should not use this as a basis to trivialise their symptoms. Looking at sub-syndromal depression, Lavretsky et al report that "*the most commonly reported symptoms in minor depression are insomnia, fatigue, loss of appetite, and thoughts of death. Additional symptoms, such as irritability, anxious mood, and lack of concentration, are also characteristic of minor depression*" (Lavretsky, Kurbanyan et al., 2004, p.26). Additionally, they suggest that subsyndromal depression is a "*component of a symptomatic continuum in the general disease category of depression*" and assert that "*all forms of clinically significant depression are associated with considerable economic and psychosocial consequences*" (p.29). Good reasons indeed to identify patients with subsyndromal or mild depression and to see what can be done to ameliorate their difficulties.

Drawing closer to the present day, there is no evidence that there is better recognition of common mental health disorders in primary care settings. Olariu et al point out that anxiety disorders are "*associated with impaired quality of life and compromised psychosocial functioning, and the disability they cause is comparable to that of chronic physical illnesses such as diabetes and hypertension*" and that their financial impact costs Europe €74.4 billion (Olariu, Forero et al., 2015, p.472). While acknowledging that "*diagnosing anxiety disorders at nonspecialized health-care levels can be a challenging task*", they found that GPs' identified anxiety disorders in only 44.5% of cases.

Also in 2015, Huxley, reporting on the development of the Mental Health Integration Index, recognised access to care and treatment as one of the index's four major dimensions and identified that many people with common disorders in the UK remain untreated (Huxley, P J, 2015).

## 1.5 Future direction of integrating mental health in primary care

Knowing the high prevalence of mental disorders and having identified the insufficient training of medical students and doctors in mental health, and the consequential issues of under-diagnosis and inappropriate management of mental health disorders in primary care, what then is the appropriate response?

National strategies that could be introduced to the UK's single health management organisation, the National Health Service, could include:

- Setting strategies and policies for nationwide mental health services.
- Providing resources – people, money, leadership.
- Facilitating a closer integration of mental health services with general health services.
- Supporting frontline staff with training and tools.
- Developing the roles of new types of healthcare workers to support people presenting with mental health symptoms.

Physician associates are being trained in increasing numbers and are being seen more frequently now in primary care settings. Aiello and Roberts identify the role of physician associates in a revised primary care model (Aiello & Roberts, 2017). Gill et al reflect on the benefit of physician associates in secondary care mental health settings, and, notwithstanding the current inability to prescribe medication, found that they provided consistency and helped with service delivery (Gill, Kauser et al., 2014). I have been involved in the supervision of trainee and qualified physician associates and feel confident that Gill et al's findings could be extended to primary care with roles extending to include the assessment, review, and monitoring of patients with mental health issues.

MHF2013 identifies a need for change, urging “*an increased knowledge and understanding of mental health issues among generalist staff, and particularly GPs ... to ensure that patients are recognised, diagnosed properly and signposted to appropriate care*” (Mental Health Foundation, 2013, p.44).

### 1.5.1 Possible responses

If patients are accurately diagnosed, then their management is likelier to be more appropriate. Extending this train of thought, one might suggest that improved or more 'fit for purpose' training might reduce the problems of under-diagnosis as well as misdiagnosis.

Where then would this take us? Increased time given to undergraduate mental health teaching? At the expense of some other aspect of training or in addition to it? Mandatory mental health clinical attachment during the Foundation Years training for newly qualified doctors? Mandatory inclusion of mental health learning in the continuous professional development of qualified doctors?

These large systematic changes would be problematic. Issues to be addressed would include the huge organisational shift in undergraduate and early years training which would probably prolong the training period, putting financial pressure on the wider system. A lengthened training period might prove unacceptable to students and recently qualified doctors due to their own financial pressures. Fully qualified and certificated doctors might prove resistant to mandatory training.

### 1.5.2 Support tools

A possible alternative response might be the use of support tools - diagnostic and management algorithms where peer-reviewed evidence and expert opinion are distilled down to a quickly referenced flowchart or computer program to support the individual healthcare worker at the clinician-patient coalface.

Despite the availability of these tools however, Beidas et al note that, despite the limited resources provided to health services, there is insufficient attention given to the objective evidence-based assessment of mental health (Beidas, Stewart et al., 2015). In other clinical domains, the use of tools is well established in primary care. Examples would include the Wells score to estimate the likelihood of deep venous thrombosis (Wells, Anderson et al.), the FRAX score to assess fracture risk in osteoporosis (Leslie, Morin et al., 2012), and the QRisk-II algorithm to estimate the future risk of cardiovascular disease (Hippisley-Cox, Coupland et al., 2008). In the management of anticoagulation, the use of a computer-based algorithm is now considered an essential element in the calculation of warfarin dosing

(Keeling, Baglin et al., 2011). In the 1980's, warfarin doses were adjusted according to the doctor's sagacity. Technology and peer-reviewed evidence-based algorithms mean that it would now be a clinical governance issue to adjust a patient's warfarin dose without reference to a computerised algorithm. Could the same thing happen to the assessment of mental health symptoms in primary care?

The idea of using diagnostic support tools in mental health is not completely unknown in UK primary care. In 2009, the UK's National Institute for Clinical Excellence published Clinical Guideline 90 (CG90), "*Depression. The treatment and management of depression in adults*", in which they recommended the use of the Whooley screening questions (NICE CG90, 2009 (updated 2018)) (Whooley, Avins et al., 1997). CG90 then went on to advise clinicians to "*consider using a validated measure (for example, for symptoms, functions and/or disability) to inform and evaluate treatment*" (para 1.3.1.4). This guidance was implemented in several Quality and Outcomes Framework (QOF) indicators for primary care, incentivising the use of simple mental health assessments such as the PHQ-9.

Other more comprehensive diagnosis support tools are available for mental health conditions such as the Structured Clinical Interview for DSM-5 (SCID) (Spitzer, Robert L, Williams et al., 1992). Rogers, Williams et al would support the use of more structured, more wide-ranging diagnostic support tools in what they describe as "*augmented clinical practice*" (2019, p.181), where the healthcare worker uses a structured interview tool, either a fully structured interview tool that defines precisely the questions to be posed, or a semi-structured interview tool that allows the healthcare worker to expand on the enquiries with questions appropriate to the patient's presentation. Semi-structured interviews allow for a more comprehensive picture of the presentation, with a wider holistic view of the patient and additional detail about their difficulties, all of which provides a more considered clinical view.

Rogers et al also identify the advantages of more structured interviews:

- **Comprehensiveness.** More extensive coverage of the patient's presentation, minimising the risk of missing diagnoses.
- **Standardisation.** The key benefit of more structured interviews.
- **Level of measurement.** Rogers opines that unstructured interviews provide nominal data – either the symptom is present or absent. More structured interviews provide

ordinal data that can indicate condition severity and be used to monitor patient progress.

- Non-pejorative inquiries. Structured interviews help to eliminate physician biases.
- Reliability. Structured interviews facilitate consistency of observations across time and between different healthcare workers.

(Rogers, Williams et al., 2019, p.180)

Any mental health diagnostic tool intended for deployment in UK primary care must support the assessment of a wide range of conditions. The use of single disorder tools such as the PHQ-9 can add to the healthcare worker's confirmatory biases, meaning that they do not consider any co-existing or related mental health disorders, and in consequence do not diagnose them. General practitioners are expected to deal with common mental illness such as anxiety & depression. However, serious mental illness such as psychosis and mania, along with other disorders such as alcohol and drug misuse, cognitive impairment and eating disorders also present in primary care. Therefore, any tool intended for primary care must be able to diagnose a broad spectrum of disorders.

In addition, any tool should fit easily into the doctor's operational paradigm and that presents an immediate problem. The American Psychiatric Association report that the current clinical version of SCID (SCID-5-CV) takes between thirty (30) minutes and two hours to administer, making it infeasible for UK primary medical care where between ten and fifteen minutes are given for each consultation (American Psychiatric Association).

Other structured and semi-structured tools available for use in community settings are the General Health Questionnaire (GHQ), the Composite International Diagnostic Interview (CIDI), the Mini-International Neuropsychiatric Interview (MINI), the Primary Care Evaluation of Mental Disorders (PRIME-MD), and the Global Mental Health Assessment Tool for Primary Care (GMHAT/PC). The General Health Questionnaire is not free for use in primary care. There are four versions with the twelve and the twenty-eight question versions probably most suitable for primary care. It is a self-administered tool which eases the pressure on the healthcare worker but there are questions about the tool's discriminatory power (Goldberg, D, 1978), (Willmott, Boardman et al., 2004). To further undermine its utility in primary care, the GHQ reveals only the probable existence of a mental health disorder and even then is limited to depressive or anxious complaints (Lecrubier, Sheehan et al., 1997). The CIDI was developed in 1998 but it is no longer supported due to a lack of

funding for further refinement and the development of other tools (Kessler, Ronald C, Andrews et al., 1998), (Kessler, R. C., 2007). Lecrubier reports in a study of three hundred and fifty (350) participants that the mean interview time for the Mini-International Neuropsychiatric Interview (MINI) was twenty-one minutes, with a range of between six and fifty minutes (Lecrubier, Sheehan et al., 1997, p.228). Use of the MINI is subject to the payment of a licensing fee. The CIDI and the MINI are both structured interview tools which limits the holistic completeness of the clinical picture obtained by either tool. The Primary Care Evaluation of Mental Disorders (PRIME-MD) is a two-stage tool, with the patient completing the first part, and the healthcare worker completing the second. It is limited in its scope to depression, anxiety, alcohol issues and eating disorders. Its use in primary care has been limited (Spitzer, Robert L., Kroenke, Kurt et al., 1999).

The primary care version of the Global Mental Health Assessment Tool (GMHAT/PC) is a computer-assisted semi-structured mental health interview tool (Sharma, Vimal K, Lepping et al., 2004). It detects both common and serious mental health disorders and has a mean interview time of thirteen (13) minutes. The tool has been translated into Arabic, Dutch, German, Chinese, Spanish, Marathi, Kannada and Hindi (Sharma, V, Durrani et al., 2013), (Tejada, P, Jaramillo, L E et al., 2016), (Tendolkar, Behere Sr et al.), (Sharma, Vimal K, Jagawat, Savita et al., 2010). It has been used in research to assess mental health problems associated with physical disorders, such as respiratory disorders, cardiac disease or general ill-health (Sharma, B B, Singh et al., 2013), (Krishna, Lepping et al., 2009a), (Tejada, P A, Jaramillo, L E et al., 2016), (Shah, V, Sharma et al., 2017), (Bhaware, Quazi et al., 2014) and has been used in doctor training as part of a suicide prevention strategy (Poole & Robinson). GMHAT/PC is free to use in any setting. The comprehensive assessment offered by GMHAT/PC makes it suitable for consideration as a support tool for use in UK primary care.

Running on Windows® and Android® platforms, GMHAT/PC comprises several distinct functions:

- A database to maintain a list of patients and their interview scores and reports. The database is secured from unauthorised access by a password.
- The semi-structured interview. The number of questions in a basic interview is twenty-four (24). Additional questions are included depending on the symptoms detected. The maximum number of questions is forty-five (45) in the (unlikely) event that the patient had every symptom under consideration.

- The interview report - GMHAT/PC includes a validated expert-rule based decision aid to postulate diagnoses. The tool provides a report detailing the presenting symptoms, the symptoms scores and the algorithmically calculated probable diagnoses.
- Care pathways to support healthcare workers without formal mental health training in the initial management of common mental health issues.

In clinical use, the healthcare worker adds the patient’s details to the program’s database. The program then leads the healthcare worker through a semi-structured mental health interview covering pertinent symptoms or problems including anxiety, phobia and panic, mood, suicidal risk, sleep, eating disorders, obsessions and compulsions, mania/ hypomania and thought disorder. See Figure 7 on page 41 for a screenshot illustrating the questions exploring the symptom of hopelessness. The healthcare worker puts each question in turn to the person presenting with mental health symptoms. Where the healthcare worker determines that the patient has a particular symptom, they rank its severity as “mild”, “moderate” or “severe”.

**Figure 7: Hopelessness question in GMHAT/PC**

The screenshot shows a software window titled "View Interview". At the top, it displays "Name : Test, Patient" and "Reg. No.: 1004". The main heading is "Hopelessness" in green. Below this, the question is "How do you see the future? Do you feel hopeless?". There is a text input field below the question. Underneath the input field is a section titled "Rate hopelessness" in green, followed by a vertical scale from 0 to 9. Each number is next to a description of the symptom's severity. At the bottom of the window, there are three buttons: "End Interview", "<--Previous Question", and "Next--> Next Question". At the very bottom, it says "Current Date : 14/02/2017 - Selected Language : ENGLISH".

Rate	Description
0	No evidence of presence of symptom
1	Symptom present and mildly distressing or disabling
2	Symptom present and moderately distressing or disabling
3	Symptom present and severely distressing or disabling
8	When interviewer is unsure about the presence or absence of symptom
9	Not applicable or not asked

At the end of the interview process, the list of probable diagnoses is algorithmically calculated from the symptoms detected and the ratings given to their severity by the healthcare worker. GMHAT/PC provides a report which should be printed and included in the patient's medical record. It can also be appended to any referral to specialist mental health services. An example of the interview report is shown in Figure 8 on page 43.

The healthcare worker shares the outcome of the interview with the patient and continues with appropriate clinical care. GMHAT/PC continues to support the clinician in providing for the patient's care by providing information about "pathways of care" – see Figure 9 on page 44.

**Figure 8: GMHAT/PC Report**

GMHAT/PC - Interview Report

Page 1 of 1

**GMHAT/PC Interview Report**

Interviewed by Dr Testdoc on This Date

*If you need to refer your patient, you may attach this report to your normal referral letter.*  
 (GMHAT/PC is presented as an aid to healthcare professionals for a quick mental health assessment. It is not a substitute for a detailed clinical assessment)

Client Details

**Nigel Testpatient [11/11/1963]**

**Background detail**

*Been a bit low. Not been himself since his partner left him suddenly about 3 months ago.*

**Duration of present problems :** 3 months

**Past problems :** No.

**Family :** No.

**Personal and Social :** Owns his home; no financial worries but not been going to work and employer on his back.

**Reported :** No Abuse

Symptoms based on GMHAT/PC Interview

**Concentration impairment :** Severe

**Depression :** Severe

**Alcohol :** Yes

Drug misuse : No

Personality issues : No

Risk assessment (Self Harm) : Mild

**Symptom ratings...**

Anxiety (0-12)	0	Obsession (0-3)	0	Disorientation (0-9)	0
Concentration (0-3)	3	Phobia (0-9)	0	Memory (0-6)	0
Depression (0-36)	18	Mania (0-6)	0	Eating disorder (0-18)	0
Psychosis (0-9)	0	Hypochondriasis (0-3)	0	Sleep difficulties (0-3)	3

**GMHAT main diagnosis** *Depression*

Other possible diagnosis *Alcohol abuse*

**Clinical Judgment**

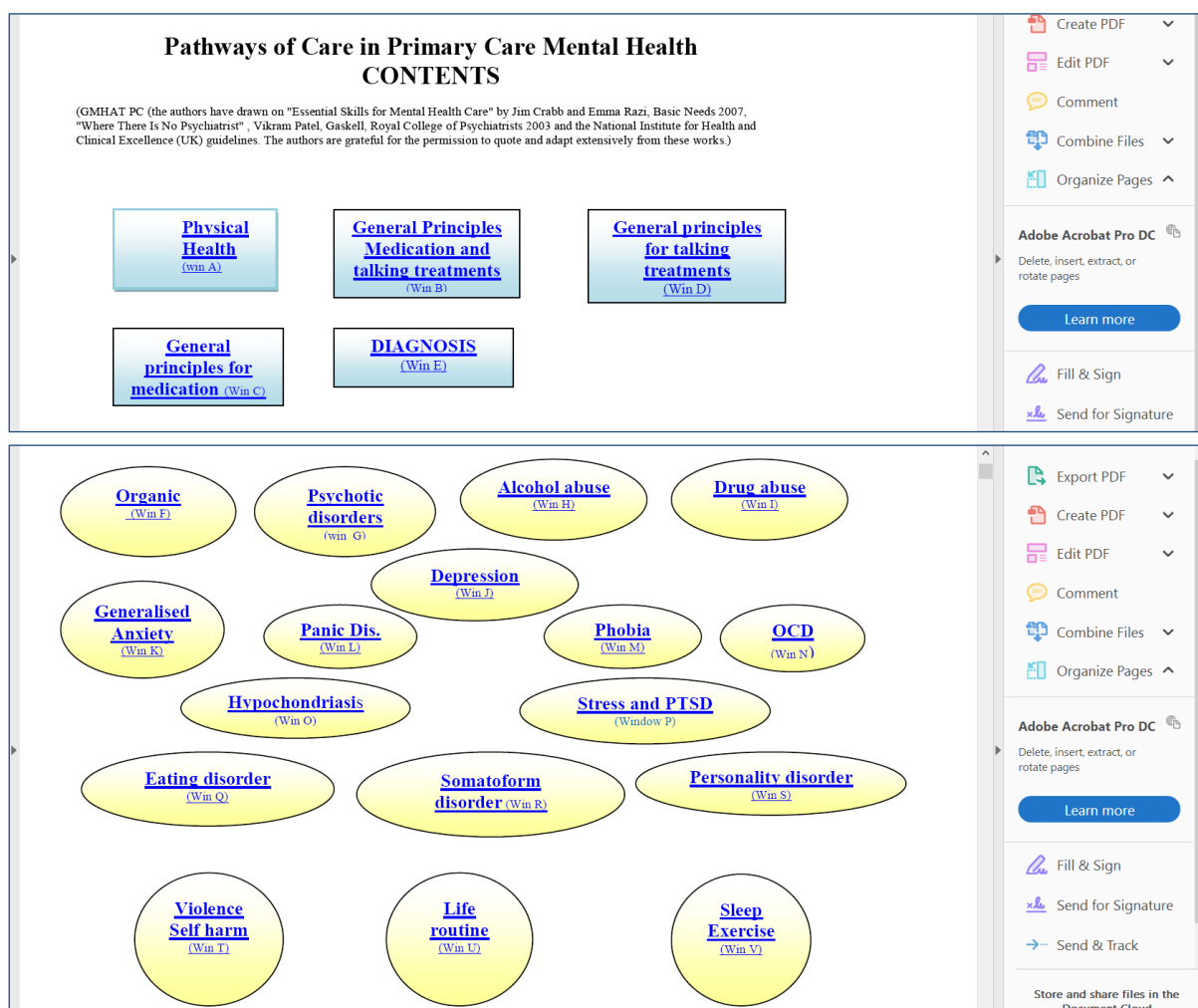
*Depression + alcohol abuse*

Printed on This Print Date

This File Name

This Print Date

**Figure 9: GMHAT/PC Care Pathways**



Quantitative assessment of mental health symptoms tasks Rogers, Zimmermann et al and Kroenke et Unutzer (Zimmerman, McGlinchey et al., 2008), (Kroenke & Unutzer, 2017). Describing the diagnosis of mental disorders in primary care as a 'hit or miss' proposition, Rogers notes the poor diagnostic accuracy of major depression by primary care physicians. Recognising the confirmatory bias behaviour of clinicians, where they look for and overvalue data that supports their diagnostic hypothesis and ignore or downplay data that undermines it, Rogers opines that "*structured interviews differ fundamentally from traditional interviews through their standardization of clinical inquiries, the sequencing of these inquiries, and the criterion-based ratings of symptom severity*" (Rogers, 2003, p.222). Continuing with this theme, Zimmermann et al view the general lack of quantitative symptom measurement in mental health practice as inadequate. They note that clinical opinion in other aspects of

healthcare is generally supported by a numerical measurement, e.g., blood pressure, cholesterol value or glycosylated haemoglobin, and to not include these measurements in a patient's care would be regarded as inadequate or incompetent. Standardised outcome measures are available for many mental health disorders and yet they are not routinely used in practice.

In a later paper, Zimmermann et al are critical of the care of people with depression (Zimmerman, Chelminski et al., 2011). Despite the prevalence of the condition, impact on the patient's physical, mental, and social wellbeing and the related high consumption of healthcare resources, the standard of care is based on "*unquantified, non-standardised, clinical impressions*". They maintain that without systematic measurement, patients may report clinical improvement, and physicians and patients jointly miss the presence of ongoing or residual symptoms. Treatment is then perhaps stopped inappropriately, allowing recurrence of the initial more severe symptoms, or setting the stage for a chronic persistent low-grade depression and all that implies for the patient's mental and physical wellbeing, their relationships and their roles in the workplace and society. They opine that measuring outcomes should be an essential element in the iterated evaluation of patients with mental health symptoms.

Kroenke and Unutzer defined "*Practical Strategies for Smaller Primary Care Practices*" which includes, as item number one, the "*use [of] self-administered measures not only for screening but also to monitor and adjust therapy*", which in addition to the use of "measures" to assess responses to any therapeutic intervention, also proposes the use of these tools in "screening"<sup>2</sup> (Kroenke & Unutzer, 2017). They make the same point as Zimmermann that "*measurement-based care*" of laboratory tests and clinical examination applies to many conditions and that the "*patient-reported outcomes [using tools/ measures] are the predominant measure guiding therapy*" in depression and anxiety.

GMHAT/PC does store the patients' symptom scores, and these can be used to longitudinally assess patient progress, in conjunction with patient feedback and physician opinion.

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<sup>2</sup> This might be better described as "case-finding" (Dobrow, Hagens et al., 2018; Wilson, J M G, Jungner et al., 1968)

## 1.6 Summary

At the beginning of this chapter, we knew we were going on a journey but the why, how, and where to were unknown. The 'why' of the journey became clearer when we were unsettled by the three patients who had endured undiagnosed mental disorders for years, and then we realised that, despite general practitioners regarding the diagnosis and management of common mental illness as falling safely within their clinical remit, their training does not, as a rule, equip them satisfactorily for the task.

Then, we considered what could be done to help healthcare workers better recognise and diagnose people with mental health symptoms. The considerations included national strategies and then we looked at what could be done to help the healthcare worker at the clinical coalface, what could be done to support them when someone presents with mental health symptoms? This gives us the journey's 'where' – we are going to journey towards a place where we better understand if support tools would help primary care healthcare workers. We will identify 'how' we travel later.

The Global Mental Health Assessment Tool for Primary Care is free for all to use. It is a semi-structured interview tool that assesses for a wide scope of mental health disorders which allows for a more comprehensive review of the patient's presentation. In studies the mean administration time was 13 minutes.

GMHAT/PC's validity as a diagnostic tool has been shown. What has not been demonstrated to date is whether it is feasible to use it in primary care. Neither is it known whether its use in primary care would have any effect on the healthcare workers' ability to perform a mental health assessment. Could the use of a support tool mitigate the consequences of insufficient training in psychiatry? Would the use of such a tool be acceptable to patients? This must be one of the early steps in the journey - to look for the evidence that considers whether the use of tools in the assessment of mental health symptoms is acceptable to patients.

I look at that question in the next chapter with a systematic literature review of the published evidence.

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## Chapter 2 The Acceptability of Mental Health Assessment Tools: A Critical Review of the Literature

The use of mental health assessment tools has increased in UK primary medical care. The driving force for the use of these tools was the Quality and Outcomes Framework (QOF). The QOF, introduced to the UK's primary care in 2004 as part of revised contracting arrangements with general practitioners, incentivised the use of the Whooley questions to screen for depression in patients with diabetes, and the PHQ-9 or HAD tools to support the diagnosis of new cases of depression (Whooley, Avins et al., 1997), (Kroenke, Spitzer et al., 2001), (Zigmond & Snaith, 1983).

In the previous chapter, I considered what could be done to help healthcare workers working at the clinical coalface to better recognise and diagnose people with mental health symptoms. The considerations included whether the use of support tools such as mental health assessment tools could mitigate the consequences of insufficient training in psychiatry and then posed the question, would the use of such tools be acceptable to patients? Is there any evidence to say whether these tools are acceptable or not?

Aveyard highlights the need to consider all the published evidence on any topic to "*build up a consistent picture of a particular area that you would not get by looking at one piece of information alone*" and so in this chapter I will review systematically the published evidence for the acceptability of these tools to patients (Aveyard, 2014, p.6).

Mental health assessment tools are standardised and validated instruments that are used in some aspect of the diagnosis or management of mental health problems. They can be used for case-finding, as in the PHQ-2 (Kroenke, Spitzer et al., 2003) or the *Distress Thermometer* (Roth, A J, Kornblith et al., 1998), or, with the PHQ-9 (Kroenke, Spitzer et al., 2001) or HAD (Zigmond & Snaith, 1983), for the diagnosis and monitoring of common mental health conditions, such as anxiety and depression.

The generic term “tools” can include scales, checklists and interview schedules, clinical system templates, or more sophisticated computer-assisted semi-structured clinical interviews, such as the Global Mental Health Assessment Tool for Primary Care (GMHAT/PC). Reflecting on the availability of these tools and their incentivisation in primary care’s Quality and Outcome Framework leads us to the review question – what evidence is there that the healthcare worker’s use of these tools in primary care is acceptable to their patients? Hulley opines that review questions should be feasible, interesting, novel, ethical and relevant (Hulley, 2013, p.17). This question is feasible. The answer should be interesting to the developers of mental health assessment tools and the healthcare workers that use them. It is novel in that it has not previously been considered in any depth. The question is ethical in that it poses no harm to patients and could endorse appropriate care if it shows that tools are acceptable to patients or prevent unethical care if the converse is shown. The question is highly relevant given that seven in eight patients presenting in primary care are not managed appropriately (Wittchen, Mühlig et al., 2003).

To help the researcher to phrase the review question in a structure that facilitates the literature search, it is restructured in PICOT format (Thabane, Thomas et al., 2009). This process dissects the question into its key components relating to the population of interest, the intervention to which they are exposed, any comparators, the outcomes of interest, and the time frame under consideration – see Table 2 below.

**Table 2: The review question in PICOT format**

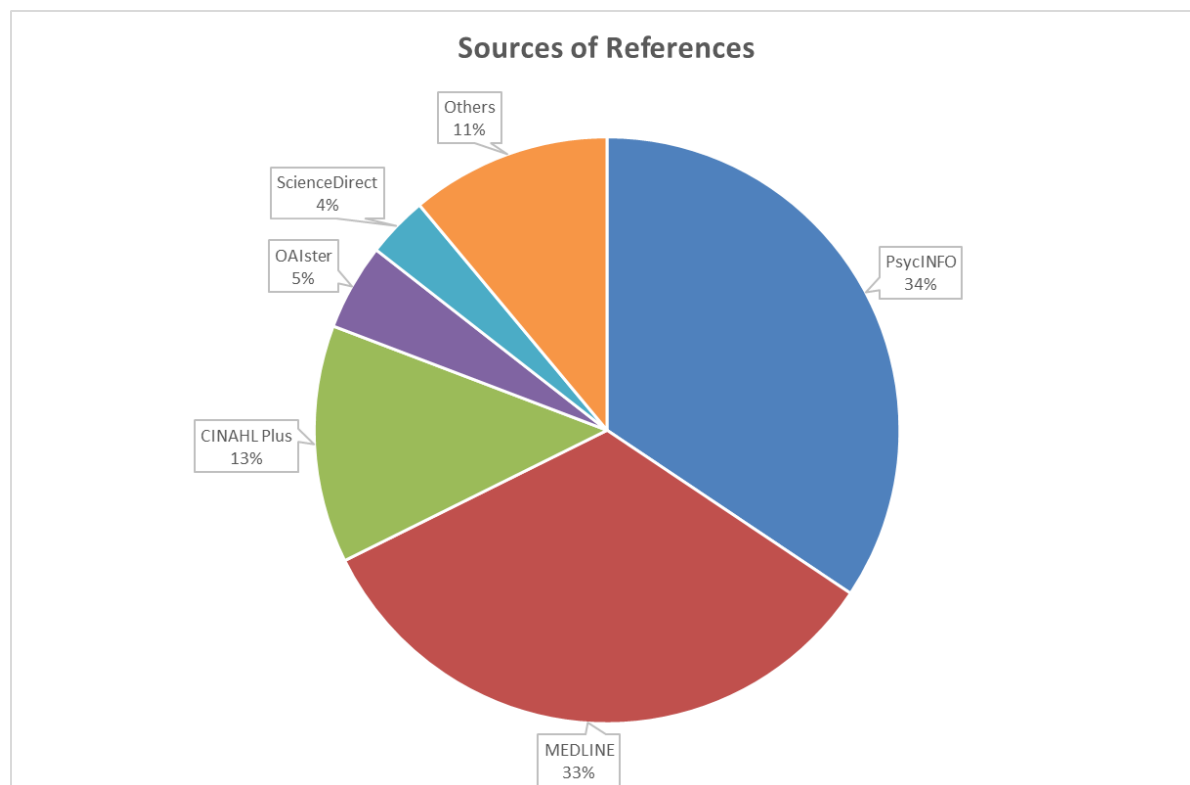
Patient population of interest	Persons with mental health or a mental illness issue.
Intervention	The use of a mental health assessment tool in primary care.
Comparator/ control	No specific search terms will be used to look for comparators or controls.  The search terms to be used will include various mental health tools which may or may not find published papers reporting research that include comparison groups.
Outcome	The search terms will include papers with the words “accepta*” <sup>3</sup> .
Time frame	It is anticipated that researchers will only report a measurement of acceptability at one point in their research. It is anticipated that acceptability will be reported at the time the mental health tool is deployed or shortly afterwards.

<sup>3</sup> The asterisk is a search wild card. E.g., searching for ‘accepta\*’ will find ‘acceptable’, ‘acceptance’, ‘acceptability’.

To avoid excluding evidence that might be pertinent, there is no search term for “primary care”. Care provision in other countries may not include a primary care setting comparable to the UK model and different terms may be used. Papers from in-patient hospital settings will be excluded in the next phase of the literature review. No timeframe or language constraints were applied to the search to avoid excluding significant evidence. All published evidence up to 20<sup>th</sup> September 2020 was included in the review.

The EBSCOHOST Discovery platform (<https://www.ebscohost.com/discovery>) was searched using the search terms detailed in Table 3 on page 50. The numbers of papers found for each search term are shown below, along with the results of specific combinations of these yields. The search yielded 12,227 references from a variety of sources as shown in Figure 10. “Endnote” © was used to manage the list of references. *Endnote*’s functionality was used to identify and delete duplicate references. Further manual deletion was then required as the software did not identify all duplicates. 3861 references remained after this process.

**Figure 10: Sources of references**



[This graph shows the databases from which the references were retrieved]

**Table 3: Search terms and their yields**

<b>Search term</b>	<b>Results</b>	<b>Combined</b>
“mental health”	2,203,860	
“mental disorder”	54,985	
<b>Population count</b>		<b>2,253,712</b>
questionnaire*	3,167,105	
interview	3,379,578	
Scale	7,527,351	
Tool	5,831,189	
phq*9	38,837	
"beck depression inventory"	85,369	
"beck anxiety inventory"	11,512	
gmhat	59	
gad*7	1,848	
"ptsd checklist"	6,437	
<b>Intervention Count</b>		<b>18,129,837</b>
NO COMPARATORS		
Accepta*	1,021,039	
<b>(Population Count) AND (Intervention Count) AND ["Accepta*"]</b>		<b>12,227</b>

The papers were reviewed to determine whether they met the inclusion criteria and none of the exclusion criteria – see Table 4 on page 51. No papers were excluded because of

language. I am grateful to Yan-Ru Lin MSc for her translation of one paper in Mandarin Chinese. Other papers in Spanish and French were translated by the author with the support of Google Translate.

One hundred and fifty-seven (157) papers were considered appropriate for further assessment. Of these, a further eighty-one (81) were excluded. While many papers included some acceptability component, for most this related to the validity of the tool under consideration, and not to acceptability of the tool to adult patients in a community or primary care setting. The remaining seventy-six (76) met the inclusion criteria for the critical review. In a second supplementary search in January 2021, a further one hundred and sixty-one (161) papers were reviewed, yielding a further five papers for inclusion in the critical review, bringing the total number of papers included in the review to eighty-one (81). Details of the analysis of the 81 papers is shown in Table 6 on page 58.

#### **Table 4: Critical review inclusion and exclusion criteria**

##### **Inclusion Criteria (all must be met)**

- The paper must refer to the use of a tool used in the diagnosis or assessment of mental health symptoms or a mental health disorder.  
The tool could relate to a single clinical domain such as detecting alcohol abuse or diagnosing depression, or it could be a more sophisticated tool looking at a wider spectrum of mental health.
- The research participants must be adults. Where younger patients are included in the research, those aged eighteen and over must form the predominant group.
- The tool must have been used in primary care or a community setting.
- No timeframe constraints are applied.
- No language constraints are applied.
- No restriction in methodologies is applied.

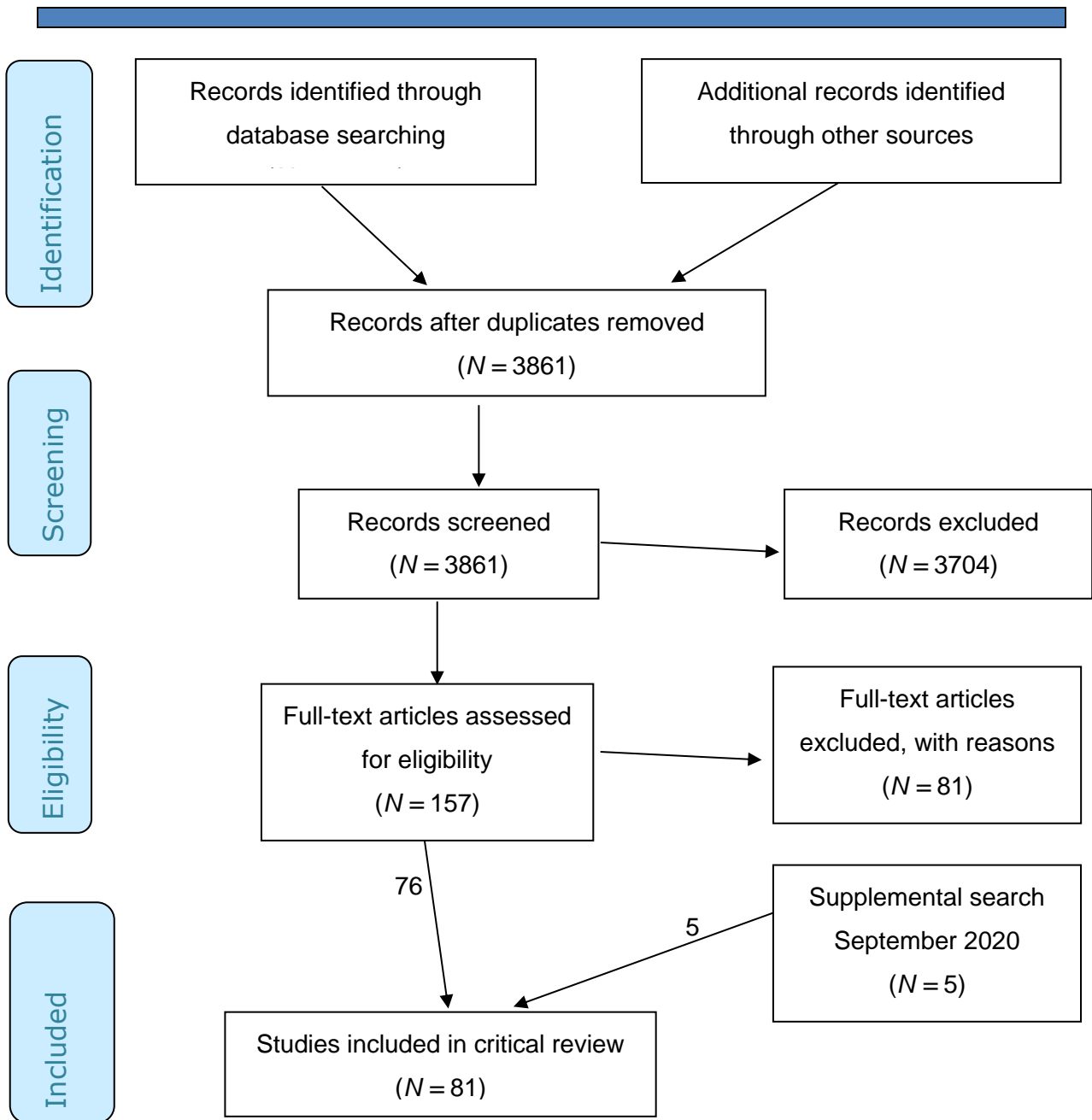
##### **Exclusion Criteria (Meeting any one criterion will exclude the paper)**

- The participants were based in an in-patient clinical setting.
- The participants were predominantly aged under eighteen years of age.
- There was no consideration of the acceptability of the tool to the participants.

A Cochrane Library search for the terms “accepta\*” AND (“mental health” OR “Alcohol” OR “Depression” OR “Anxiety”) occurring in review abstracts revealed one hundred and fifty-two (152) matches. None of these related to the acceptability of tools in the assessment of mental health symptoms. A search of the World Health Organisation database for the terms “accepta\*” and ‘mental health’” yielded forty-three (43) publications. None were pertinent to this literature review.

The review process is summarised in Figure 11 below.

Figure 11: Prisma Diagram



## 2.1 Critical review

This critical review of the eighty-one (81) papers meeting the requirement of reporting on the acceptability of a mental health tool to adult patients in a community or primary care setting will identify how the researchers measured or assessed acceptability, and then detail and discuss the key themes recognised in the review process.

In medical practice, an essential consideration in every step of a patient's care is whether the proposed action or interaction is acceptable to the patient. The UK's Medical Research Council (MRC) published guidance in 2008 on the evaluation of complex interventions (Craig, Dieppe et al., 2008). Deployment or utilisation of mental health diagnostic or assessment tools in primary care could be viewed as a complex intervention in that it constitutes a major paradigm shift for the healthcare worker, adding to their learning needs and changing their working practices and also for the patient, changing their interaction with their healthcare worker from an established familiar model to a collaborative effort working through the tool.

The MRC recognises that the feasibility of a proposed change is often undermined by problems of acceptability and uses a case study from Zimbabwe to illustrate how cultural norms inter alia rendered a planned change to adolescent sexual health education unacceptable and consequentially infeasible (Moore, Audrey et al., 2015). By implication then, acceptability is an essential component of feasibility. While this guidance makes several references to acceptability and uses case studies to illustrate its value, it does not make any effort to define the concept of acceptability.

While acknowledging that acceptability should be considered in the design of health interventions, Sekhon et al note that the literature "*offers little guidance on how to define or assess acceptability*" and that the Medical Research Council's 2015 advice "*offers examples of how patients' acceptability may be assessed quantitatively, by administering measures of acceptability or satisfaction, and qualitatively, by asking probing questions focused on understanding how they are interacting with the intervention. Nevertheless, it fails to offer a definition of acceptability or specific materials for operationalising it. Without a shared understanding of what acceptability refers to it is unclear how intervention developers are to assess acceptability for those receiving and delivering healthcare interventions*" (Sekhon, Cartwright et al., 2017, pp 1,2).

For their part, Sekhon et al described acceptability as “a *multi-faceted construct that reflects the extent to which people delivering or receiving a healthcare intervention consider it to be appropriate, based on anticipated or experiential cognitive and emotional responses to the intervention*”. A pragmatic medical model might define acceptability as a continually assessed state of assent to a proposal or situation in an environment of trust and fully informed consent (General Medical Council, 2020). This lack of consensus on the definition of acceptability is reflected in the papers included for consideration in this review.

Classification of the methods used by researchers to determine acceptability of the tool used to participants is summarised in Table 5 below.

**Table 5: Methods of determining acceptability in papers reviewed**

<b>Measure of Acceptability</b>	<b>Count (% of total)</b>
<b>Inference.</b> The participant turned up for the intervention. The participant took the telephone call. The participant filled in the tool.	32 (39.5%)
<b>Analysis.</b> Researchers checked how well the participant completed the form.	2 (2.5%)
<b>Interview.</b> Researchers interviewed the participants in a qualitative exercise.	15 (18.5%)
<b>Questionnaire.</b> Participants filled in a questionnaire.	32 (39.5%)

### 2.1.1.1 Acceptability by Inference

Thirty-two (32) authors reported participant acceptability by inference – the authors inferred acceptability from the participants’ implied consent, e.g., they turned up for their appointment for the intervention, accepted the researcher’s telephone call, or completed the tool. Several authors simply included statements in the papers that their process was acceptable to participants without clarifying how that acceptability was assessed (Banerjee, Shamash et al., 1998; Jingsheng, Xinqing et al., 2004; Maruff, Wood et al., 1994; Roth, M, Tym et al.,

1986). Some others simply took the participant's completion of the tool as a measure of acceptability (Ayuso-Mateos, Vázquez-Barquero et al., 1999; Edwards, Galletly et al., 2008; Gunatunga, 2012; Huxley, Reilly et al., 2000; Ibrahim, Kelly et al., 2012; Kishore, Kapoor et al., 1999; Rait, Burns et al., 2000; Rose, Skelly et al., 2010; Smith, P, 1998; Tennant, Joseph et al., 2007; Thorley, Hettiarachchi et al., 2012; Vassilas, Nicol et al., 1995).

For Anthony and McFadyen, assessing prisoners' mental health needs, the measure of acceptability was that the prisoners had "*little problem in reading the instrument*" (Anthony & McFadyen, 2005). Blanc et al, looking at the effect of incarceration on prisoners' health, including mental health, reported simply that their tool was "*well accepted by the inmates*" (Blanc, Lauwers et al., 2001). Ritchie et al do not disclose how they assessed acceptability but report that their computerised cognitive examination tool had high acceptability in their elderly participants, with many wanting to repeat the test (Ritchie, K, Allard et al., 1993).

For Bowen and Muhajarine, the absence of visible distress in their participants was the proxy indicator of acceptability. They were looking at deployment of the Edinburgh Post-Natal Depression Scale in Toronto and reported that "*None of the participants appeared disturbed or upset when completing the tool*" (Bowen & Muhajarine, 2006). A possible weakness in their assertion of acceptability is that 22% of the women meeting the inclusion criteria declined to participate.

#### 2.1.1.2 Acceptability by analysis, interview, or questionnaire

Two (two) researchers gauged acceptability by analysis. For example, Spijker et al gauged acceptability of depression screening in first generation labour migrants in Western Europe by determining how well the participants completed the tool, calculating the percentage of items unanswered (Spijker, Van der Wurff et al., 2004). Adams and Stevens investigating whether participants were more likely to answer alcohol questions in a masked questionnaire compared responses to a specific alcohol questionnaire to those from a general health questionnaire that contained alcohol-related enquiries (Adams & Stevens, 1994).

Forty-seven (47) researchers assessed participant acceptability by asking them to complete a questionnaire or to participate in a post-intervention interview. This review will focus on

published evidence that assessed participant acceptability by analysis, questionnaire, or interview. Each paper will be critiqued and then the major themes will be discussed.

**Table 6: Critique of papers included in systematic review**

Published papers meeting the inclusion criteria of using a mental health tool on an adult age-group in a non-inpatient setting, and then assessing the acceptability of the tool to participants by any method other than inference will be reviewed. The objective of this critique relates to the assessment of acceptability and not to the main theme or thrust of the paper.

Published Research	Critique
<p>Cognitive Interviewing Methods for Questionnaire Pre-Testing in Homeless Persons with Mental Disorders (Adair, Holland et al., 2012).</p>	<p>The authors investigated the utility and relevance of items from existing assessment tools in homeless people with mental health disorders in Canada.</p> <p>They deployed six tools, the Colorado Symptom Index, the GAIN Substance Problems Scale, the Vocational Time-Line Follow-Back Questionnaire, the Comorbid Conditions list, the Community Integration Scale, and the Health, Social, Justice Service Use Inventory.</p> <p>Two cognitive interviewing techniques were deployed to determine, inter alia, the feasibility and acceptability of the tools in this setting.</p> <p>This paper illustrates the merits of a qualitative research approach in drawing out the nuances of participant opinions of the various tools used. It also illustrates the importance of tailoring the wording of tool questions to suit the setting in which they are to be deployed. See also Cultural issues on page 93.</p>

A pilot with computer-assisted psychosocial risk–assessment for refugees.  
(Ahmad, Shakya et al., 2012).

The secondary outcome of this research was to determine patient participant acceptance of a newly developed tool (CaPRA) to assess the psychological wellbeing of Afghan refugees in Canada. The tool was delivered on an iPad in the participant’s choice of Dari/Fasi or English language. After completion of the CaPRA tool, participants completed the Computerized Lifestyle Assessment Scale to determine how acceptable the use of the tool had been to them. Twenty-five (25) participants completed the exit survey.

The authors found the user-friendly, self-administered iPad-based tool useful for overcoming barriers to mental health assessments in this group.

This paper underlines the importance of tailoring the intervention to the group being researched. Vogt recognised the importance of ensuring that tools in research measure the constructs they are intended to measure and that not doing so may undermine the validity of any findings (Vogt, King et al., 2004).

In the post-COVID age, shared computerised tablets will need to be provided in waterproof housings that can easily sterilised after use.

Performance of a Self-Administered Mailed Version of the Quality of Well-Being (QWBSA) Questionnaire among Older Adults.  
(Andresen, Rothenberg et al., 1998)

The authors investigated the feasibility of using the Quality of Well-Being Self-Administered questionnaire (QWB-SA) in older adults. This tool includes questions about mental health. Participants’ responses were compared with the Sickness Impact Profile (SIP). The questionnaires were posted to the participants, with repeat postings and telephone calls to those who did not respond.

Participants were asked to rate their satisfaction with each questionnaire using a 5-point Likert-like scale. Sixty per cent of the 293 participants were very or somewhat satisfied with QWB-SA, with only nine reporting any dissatisfaction.

From a total of 430 people invited to participate, 301 participated in the research (70%). One possible weakness of this research is that loss of interest and demotivation are key symptoms of depression – all factors likely to have been at play in whether individuals participated in the research. The tool's delivery platform, the postal service, may have been burdensome for this group.

Screening and brief intervention for substance misuse in Thailand.

(Assanangkornchai, Balthip et al., 2013).

Reflecting on Thailand's problems with alcohol, tobacco, and illicit substance use, the researchers investigated the use of the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) and the linked brief intervention, ASSIST-BI, in primary care settings. The work included assessing the tool's acceptability by interviewing 23 patient participants and asking 75 to complete a self-administered questionnaire. The authors do not specifically report on the outcome of these interviews or questionnaires but do report that as a result of their findings the ASSIST-BI tool has been included in a national programme for substance misuse.

The authors recognised the risks of selection bias where people already motivated to change their habits are likelier to participate, and the cultural issues of obtaining feedback in Thailand where people find it hard not to show gratitude. Nonetheless, 5931 people agreed to be screened with 30% identified as moderate or high risk of AOD problems which in itself suggests a high degree of acceptability.

	<p>Alcohol and other drug (AOD) misuse is a significant problem worldwide, a considerable mental health issue in its own right or in association with other mental health problems (Thorley, Hettiarachchi et al., 2012), (Kessler, Ronald C, 2004).</p> <p>The authors illustrate the benefits of a mixed-methods approach to determining the acceptability of the ASSIST-BI in their community settings.</p>
<p>The Antenatal Risk Questionnaire (ANRQ): Acceptability and use for psychosocial risk assessment in the maternity setting.  (Austin, M P, Colton et al., 2013).</p>	<p>The authors set out a comprehensive analysis of the consequences of perinatal mental health issues for mothers and their children. In consultation with midwifery staff and mental health care workers, they devised the ANRQ tool. After completing the tool, participants completed a brief acceptability questionnaire with a 5-point Likert-like scale and an opportunity to identify any specific questions that they had found distressing.</p> <p>Of the 379 participants, 91.6% found the ANRQ “not at all distressing”. Eight identified issues with particular questions related to recent life events, availability of postnatal emotional support, past emotional abuse, or past physical or sexual abuse.</p> <p>Seventy-seven women declined participation. Elsewhere in this review the reduced acceptability of tools screening for peri-natal mental health issues to women suffering from such problems is discussed – see “Peri-natal depression” on page 101. By using a quantitative approach, the authors have been able to report on a narrow view of the tool’s acceptability. A mixed-methods research methodology would have provided a broader view.</p>

Quality of Life in Depression Scale (QLDS): Adaptation and evaluation of the psychometric properties of the Norwegian version.  
(Berle & McKenna, 2004).

Recognising that quality of life assessments specific to disease processes is needed to assess the patient's view of outcomes from interventions, the research team investigated the validity of the Norwegian translation of the QLDS. They assessed the tool's acceptability by asking participants to comment on its acceptability and whether any of the items were irrelevant to them or whether they thought that any important issues had been omitted.

The authors do not further comment on the outcome of the acceptability questions other than to report that most found the questionnaire easy to understand and complete. No participant opined that any of the questions were irrelevant, and none suggested that any other areas should be explored.

This paper provides a further illustration of the importance of tailoring the tool to the context in which it is to be deployed.

The properties of self-report research measures: Beyond psychometrics.  
(Blount, Evans et al., 2002).

Detailing the necessity for self-report tools in assessment outcomes in people with personality disorder, the researchers investigate the acceptability of several tools. Participants were sent a copy of each tool and a semi-structured evaluation form.

Considerable effort went into the design of the evaluation form, seeking the views of professional colleagues and some of the then current residents of the authors' hospital. It aimed to focus the respondents' minds on the content and structure of each tool under consideration, and its suitability for people with severe personality disorders.

Themes from their findings regarding tool acceptability are discussed in "Cultural issues" on page 93, and "Sensitivity of people's feelings" on page 97

The GPCOG: A New Screening Test for Dementia Designed for General Practice.

(Brodaty, Pond et al., 2002).

The authors tested the General Practitioner Assessment of Cognition (GPCOG) tool in Australian primary care. Patient participant satisfaction with the tool was assessed using anonymous self-completed questionnaires. There were 333 responses to the satisfaction survey, of which 76.3% liked the examination “a bit” or “a lot”. Only 2.1% disliked the tool.

Patient satisfaction with tools to diagnose cognitive difficulties can be problematic – see “Fear of negative outcomes” on page 96.

A Comparison of Videoconferencing and In-person administration of the Yale-Brown Obsessive Compulsive Scale.

(Bui, 2013).

Access to diagnostic services for mental health problems can be problematic in some communities due to distance from specialist psychiatric centres. Bui tested the validity and acceptability of the Yale-Brown Obsessive Compulsive Scale when delivered in a standard face-to-face clinical setting compared to a video-conference consultation.

After each assessment, the 33 participants completed a modified version of the Telemedicine Satisfaction and Acceptance Scale (Patient Version). Most participants had previous experience with videoconferencing. Bui concludes that videoconferencing is a reliable method of using this tool.

Participant satisfaction was high although many felt less comfortable asking clarification questions when using videoconferencing.

This work has pertinence during the current COVID pandemic for those with Internet access and the necessary proficiency with video-conferencing software. Consideration would be needed to avoid healthcare inequalities for those without video-conferencing capacity.

See also “The tool’s delivery platform” on page 97.

<p>National program for depression associated with childbirth: the Australian experience.  (Buist, Ellwood et al., 2007).</p>	<p>The authors investigated the acceptability of an Australian national program to improve the diagnosis of peri-natal depression. The “evaluation of screening” questionnaires were completed by 860 women.</p> <p>Women with an Edinburgh Post-natal Depression Scale (EPDS) score of greater than 13 were significantly likelier to report discomfort in completing or discussing the tool’s result.</p> <p>This result underlines the unacceptability issues of screening for post-natal depression in women with the problem as an EPDS score of 13 is the upper cut point to identify the diagnosis (Levis, Negeri et al., 2020). This finding fits with work from Shakespeare, and Cubison and Munro, who reported similar findings (Shakespeare, Blake et al., 2003), (Cubison &amp; Munro, 2005). This issue is discussed further in “Peri-natal depression” on page 101.</p>
<p>Acceptability of Using the EPDS as a Screening Tool for Postnatal Depression. Screening for perinatal depression.  (Cubison &amp; Munro, 2005).</p>	<p>Responding to reports that a group of severely depressed women had manipulated their answers to a post-natal depression screening questionnaire, Cubison et al interviewed nineteen women using a semi-structured schedule to investigate their experiences.</p> <p>Themes from this paper are further discussed in “Pressure from healthcare workers” on page 95, “Fear of negative outcomes” on page 96, and “Peri-natal depression” on page 101. The research methodology deployed in this paper demonstrates the value of a qualitative approach in eliciting subtleties pertinent to acceptability.</p>

Reliability and usability of an internet-based computerized cognitive testing battery in community-dwelling older people.

(Darby, Fredrickson et al., 2014).

Darby et al assessed the utility of self-administered, unsupervised computerised cognitive testing in a response to the need to find a simple inexpensive diagnostic tool for early cognitive decline, perhaps at a point where it might be amenable to intervention. They viewed a computer delivery platform as reducing staff resource issues.

Analysis of acceptability was assessed by the retention of participants which was itself calculated from an analysis of those completing the baseline, the 6-month, and the 12-month assessments. They also timed each test and compared these for each testing session.

A possible weakness of this study is that patient participants had to nominate a medical practitioner to be informed of their results and be willing to accept the potential risk that the tool might demonstrate a deterioration in their cognitive performance – see “Fear of negative outcomes” on page 96.

Real world deployment of computerised cognitive testing could create a healthcare inequality for people who do not have easy access to the Internet, or those whose technological skills do not extend to operating the assessment software.

Alcohol Use in Women of Childbearing Potential: A Report of the Primary Findings.

(Delrahim-Howlett, Chambers et al., 2011).

Reflecting on steps to reduce the incidence of foetal alcohol syndrome, the authors determined the acceptability of a web-based alcohol assessment tool in a deprived female population of reproductive age. Each participant ( $N = 150$ ) completed a satisfaction survey on completion of the computerised assessment and brief intervention. Nine women declined participation. All participants were comfortable using the software and found it easy to use. There was no qualitative research component.

	<p>Any possible healthcare inequality relating to computer access was reduced as participants accessed the required technology in the clinic. The issues relating to shared IT equipment in a post-COVID World were identified previously. Shared IT equipment obviates the issue of possible reduced access to technology and possible reduced IT skills in a deprived community. It does not obviate problems related to literacy and linguistic fluency.</p>
<p>Online Screening and Referral for Postpartum Depression: An Exploratory Study. (Drake, Howard et al., 2014).</p>	<p>Considering the underdiagnosis of post-partum depression and its impact on both mother and child, the authors investigated the feasibility and acceptability of an Internet-based version of the Edinburgh Post-natal Depression Scale. The women (<math>N = 18</math>) self-administered the test 2-3 months postnatally. The result was provided to the patient at the end of the test. Acceptability was assessed using mixed-methods methodology; participants keyed in responses to several open questions at the end of their assessment, and the authors conducted focus groups and interviews. The participants found the online EPDS easy to use.</p> <p>The Internet-based tool delivery brings with it the risk of healthcare inequalities. Healthcare organisations deploying such tools will need to consider how the inequalities can be managed. Issues related computer delivery of assessment tools have been identified above.</p>
<p>The acceptability of a depression screening tool in an urban, Aboriginal community-controlled health service. (Esler, Johnston et al., 2007).</p>	<p>Describing how mental health problems are the second leading disease burden for Aboriginal people in north-west Australia, Esler et al studied the acceptability of the PHQ-9 in that setting. In a qualitative exercise, the research team held four focus groups with local stakeholders. The data were thematically analysed.</p>

Themes from this paper are discussed in “Cultural issues” on page 93, and “Trust and relationship with healthcare worker” on page 101.

Assessing mental health in primary care research using standardized scales: can it be carried out over the telephone?

(Evans, Kessler et al., 2004).

Identifying the economic and logistical benefits of telephone interviews, Evans et al compared their acceptability compared to face-to-face assessments. The participants were interviewed on two occasions, one by telephone and the second face-to-face, using the General Health Questionnaire and the Revised Clinical Interview Schedule. The order of interviews was alternated with each subsequent participant.

Acceptability was assessed using a questionnaire that comprised 5-point Likert-like scales. This was posted to participants on completion of the interviews. Telephone interviewing was a reliable method for delivery of these tools. However, respondents ( $N = 52$ ) showed a marked preference for face-to-face interviews.

Additional themes from this paper are discussed in “Trust and relationship with healthcare worker” on page 101.

The authors conducted this research at a time when face-to-face consulting was the norm, with telephone consultations available, but much less used for mental health assessments. During the 2020/21 COVID pandemic, telephone consultations became the norm for most medical issues in UK primary care, including mental health initial consultations and reviews,

<p>Evaluating an automated mental health care system: making meaning of human–computer interaction.</p> <p>(Farzanfar, Frishkopf et al., 2007).</p>	<p>In this qualitative research, the authors investigate the utility and acceptability of weekly automated telephone reviews to patients with depression. Patient participants interacted with the system by pressing appropriate keys on the telephone or speaking directly into the receiver.</p> <p>Participants were interviewed three times to obtain their opinions of the tool. In keeping with Miller, the interviews were recorded and transcribed for analysis (Miller, W L, 1992). The qualitative methodology provided the researchers with comprehensive feedback on what participants liked and did not like and what they thought could be done differently.</p> <p>Automated telephone review systems are not common in UK primary care. They would provide one possible option to reduce healthcare inequalities for those without Internet access, provided that they had a telephone.</p>
<p>Screening for antisocial personality disorder in drug users - a qualitative exploratory study on feasibility.</p> <p>(Fischer, Haydon et al., 2003)</p>	<p>Noting that psychiatric co-morbidity in illicit drug users is disproportionately prevalent, the authors investigated the feasibility and acceptability of using the Structured Clinical Interview for DSM -III-R for antisocial personality disorder (SCID-II) in a population of opioid users.</p> <p>Acceptability was assessed through a post-intervention semi-structured interview. A second researcher noted the participant’s expressions, demeanour, silences and hesitation breaks, analysis of which was included in the thematic analysis of the interview.</p> <p>The methodology effectively elicited participants’ views and opinions on the tool. There were problems though - the tool caused some participants to feel distressed as they recalled sensitive memories and emotions. The research revealed that the tool was inappropriately tilted towards male patients, focussing on male sexual behaviour where males might boast about sexual activity; the</p>

authors felt that there was a deficiency in capturing female antisocial behaviour, and that there was inadequate consideration that females might have been the victim of sexual activity.

Applying new techniques to an old ally: A qualitative validation study of the Edinburgh Postnatal Depression Scale.

(Godderis, Adair et al., 2009).

Godderis et al used cognitive aspects of survey methodology (CASM) to interview nine pregnant and postpartum women to determine their views on the Edinburgh Postnatal Depression Scale (EPDS) (Collins, 2003).

This study brings a different view of research into the EPDS as they focussed on patients with mental health problems who had been referred for mental health care. Other research demonstrates how the tool is less acceptable to women who believe that they might have perinatal mental health issues (Cubison & Munro, 2005).

This paper demonstrates the efficacy of in-depth qualitative in gaining deep vibrant participant views. The interviewing technique allowed the researchers to discuss each question in depth with the participants. The nine participants' average literacy level was comparatively high and despite this, or perhaps because of this, they found difficulties with some of the language used in the EPDS.

The authors make the point that a further similar study would be required to identify what difficulties a more average or deprived population of women might identify.

The authors recommend that health care workers should not use the EPDS in isolation and that all women being screened for peri-natal depression should have a clinical discussion about any mental health concerns. This recommendation from Godderis and Adair places a considerable burden on a healthcare system that is already missing half of all cases of peri-natal depression (see "Peri-natal depression on page 101). Current midwifery staff would have to be given appropriate training in

	<p>mental health interviewing skills and/ or appropriately trained mental health staff would need to be placed on maternity wards.</p>
<p>Outcome Assessment via Handheld Computer in Community Mental Health: Consumer Satisfaction and Reliability. (Goldstein, Connolly Gibbons et al., 2011).</p>	<p>Goldstein et al compared the acceptability of a mental health assessment tool (BASIS-24) completed via pen and paper and via a handheld computerised device. Their participants (<math>N = 200</math>) were attending a community mental health centre.</p> <p>Assessment of acceptability was by completion of a questionnaire that included multiple questions with Likert-like choices. There was no qualitative aspect to the methodology. Seventy percent of participants found the handheld computer “much easier” or “somewhat easier” to use.</p> <p>The paper has relevance to the now established paradigm of an Internet-connected mobile telephone with its library of software programs (“apps”). The research shows that handheld, connected devices have merit as a delivery platform for mental health tools, with the caveat that alternative arrangements would be required for those without the necessary technology and the ability to use the required functionality.</p>
<p>Lifestyle screening: development of an acceptable multi-item general practice tool. (Goodyear-Smith, Arroll et al., 2004).</p>	<p>The authors compiled a lifestyle-screening tool using, where possible, existing short screening tools or key questions from longer questionnaires. The tool was either self-administered in the waiting room or administered by a nurse in a consulting room. Any problems identified by the tool were addressed either at the time, or in a subsequently arranged appointment.</p> <p>Acceptability was assessed using feedback forms. The forms allowed participants to make free-text comments which facilitated thematic analysis.</p>

	<p>The research demonstrates the value of tools in detecting previously unrecognised lifestyle risks such as smoking, alcohol excess, illicit drug use and gambling. The tool was very acceptable to the patient participants.</p>
<p>eCHAT for Lifestyle and Mental Health Screening in Primary Care.  (Goodyear-Smith, Warren et al., 2013a).</p>	<p>Goodyear-Smith et al revisited the theme of early detection of behavioural risks and mental health issues in primary care in their research into the acceptability of the eCHAT tool. eCHAT is a web-based tool to detect risk-associated behaviours and common mental health disorders. Participants (<math>N = 233</math>) completed the tool on an iPad in the waiting room, while they waited for their consultation. During the consultation, their healthcare worker had access to their responses.</p> <p>Acceptability was assessed using a mixed-methods methodology comprising a feedback form with quantitative aspects, and an area for free-text comments.</p> <p>One feature of this study was that the patient's responses were fed directly into their electronic patient record. This has administrative advantages, e.g., reducing the clerical burden, reducing the risks of transcription errors.</p> <p>Shared iPad use raises infection risk issues. Indeed, during this study participants did identify this risk. The issues of shared IT devices in a post-COVID World have been identified earlier. In a post-pandemic world, the idea of shared iPad usage in the setting of a primary care waiting room is going to be unacceptable.</p>

The SF-36 Health Survey  
Questionnaire: Is it Suitable for use  
with Older Adults?

(Hayes, Morris et al., 1995).

Hayes et al tested the UK version of the SF-36 tool with patient participants aged 65 and over in out-patient settings, a day centre for the elderly, and two primary care centres. Participants (N = 195) either self-administered the tool, or had it administered.

Acceptability was assessed by means of a semi-structured interview, immediately after completion of the tool.

While the tool was viewed as satisfactory by 91% of participants, many questioned the pertinence of some of the questions, e.g., questions about work, or vigorous activity. Questions about deterioration in health were viewed as negative.

This research illustrates the importance of tailoring tools to the target population. While this tool was amended to suit a UK audience, it was not specifically designed for the elderly population in this study. The authors recognised these issues and make suggestions for different wording of the questions.

Psychiatrists and a Computer as  
Interrogators of Patients with Alcohol-  
Related Illnesses: A Comparison.

(Lucas, R W, Mullin et al., 1977).

In this paper, Lucas et al reflect on Van Cura (see “Computer-based tools” on page 98) and their own prior work (Lucas, R, Card et al., 1976) to compare the quality of information given to a computerised interview and to two psychiatrists, each consulting separately. Participants were people referred by their general practitioner to an alcohol misuse clinic.

Acceptability was assessed by asking each participant ( $N = 36$ ) to post back an anonymised feedback form that explored their attitudes towards computer assessment and towards interviews with doctors. Sixty-four per cent (64%) of the participants returned their feedback questionnaires with 75% expressing positive views about computer-based interviews.

Lucas et al found that their participants reported alcohol consumption levels 30% higher than those reported to the psychiatrists. Social acceptability biases may cause the participants to report lower alcohol consumption in face-to-face interviews that might be replete with pejorative linguistics and body language.

The participants in this research were people whose alcohol problem had been diagnosed in primary care. A computer-based alcohol screening tool could be used for, say, an annual health check, to detect those early on their journey to alcohol-related physical, social, or psychological ill-health. The inequality issues related to only using computers as the delivery platform have been discussed earlier.

The TE4D-Cog: a new test for detecting early dementia in English-speaking populations.  
(Mahoney, Johnston et al., 2005).

In this paper, Mahoney et al research the sensitivity and specificity of the TE4D-Cog scale, a German language tool translated to English, in detecting mild cognitive impairment in people with Alzheimer's Disease. Participants ( $N = 178$ ) were aged 55 and over and had a diagnosis of Alzheimer's Disease. There was also a comparison group of 25 participants aged 55 and over, who did not have cognitive difficulties.

Acceptability was assessed by asking the comparator group to complete a questionnaire with a 5-point Likert scale ranging from "very unacceptable" to "very acceptable". This group found the tool mostly very acceptable (96%). This group had also been screened for cognitive difficulties prior to their enrolment in the comparator group.

Acceptability of dementia screening tools is further discussed in "Fear of negative outcomes" on page 96.

Acceptability of routine antenatal psychosocial assessments to women from English and non-English speaking backgrounds.

(Matthey, White et al., 2005).

Matthey et al investigate the acceptability of routine psychosocial assessments in an Australian setting. Women attending the ante-natal clinic for their first visit were recruited to the study. Participants ( $N = 110$ ) were provided with psychosocial screening at that point.

Acceptability was assessed by a 15-30 minute semi-structured telephone interview about two weeks after their first visit to the ante-natal clinic. Sixty-four per cent found the whole set of psychosocial questions acceptable. Seven per cent had generally negative views, with the remainder demonstrating mixed responses.

Of the initial 110 participants, 65 (62.5%) completed the research protocol with a second semi-structured telephone interview postnatally. Six had withdrawn from the study, 29 could not be contacted, two had lost their babies, and one had delivered elsewhere. This interview explored whether they recalled any of the questions they were asked at their first ante-natal appointment, and whether any of the questions had helped them adjust postnatally. The Edinburgh Postnatal Depression Scale was administered during both telephone interviews.

The qualitative methodology helped Matthey et al gain a wide view of the issues relating to the acceptability of perinatal psychosocial screening such as the personal nature of some questions, eliciting unhappy memories, privacy concerns, the unexpected nature of the questioning, and questions relating to domestic violence. Only 65% of the participants thought that most women would answer the questions honestly with only 31% believing that most women would answer the questions about domestic violence honestly – concerning findings for those wishing to improve the diagnosis of perinatal mental health problems.

Automated screening for depression - toward culturally and linguistically appropriate uses of computerized speech recognition.  
(Munoz, Gonzalez et al., 1995).

In this US study, Munoz et al compared the acceptability of a computer-delivered CES-D (Centre for Epidemiological Studies-Depression scale) interview with a pen and paper delivery with English-speaking ( $N = 19$ ) and Spanish-speaking ( $N = 19$ ) people attending a depression out-patients clinic. Participants completed both versions of the tool in their primary language. The computer version spoke the questions aloud and “listened” for the participant’s spoken responses.

Acceptability was assessed in a qualitative exercise. A research assistant interviewed the participants after they had completed both versions of the tool. A majority of participants preferred the computerised version, finding it easier and more understandable, interesting, novel and entertaining. Those preferring the paper version found it easier to concentrate when reading the questions and quicker to complete.

This research demonstrates the use of speech-enabled computerised assessment tools in reducing healthcare inequalities relating to language and literacy. Patient confidentiality would have to be protected, e.g., sound-proof doors, or the use of headphones.

Feasibility and Acceptability of Screening and Brief Interventions to Address Alcohol and Other Drug Use among Patients Presenting for Emergency Services in Cape Town, South Africa.  
(Myers, Stein et al., 2012).

Reflecting on the high prevalence of hazardous and harmful alcohol use in the Western Cape area of South Africa, Myers et al investigated the feasibility of introducing screening and brief intervention into emergency rooms.

There were several strands to this research. Patient acceptability was assessed in their responses to a questionnaire. Only participants who had completed their three-month follow-up interview were asked to provide feedback; 30 out of 1458 participants.

The feedback from the 30 was generally positive. However, these were participants who had engaged with the screening and intervention process and the low numbers completing the research protocol could suggest some problem with acceptability. Further research would be needed to determine what was unacceptable, the screening, the brief intervention, or the burden of scheduling a follow-up appointment, the fear of receiving bad news, or some other feature.

Integrating mobile-phone based assessment for psychosis into people's everyday lives and clinical care: a qualitative study.  
(Palmier-Claus, Rogers et al., 2013).

Palmier-Claus et al investigated the use of mobile-telephone technology to monitor the care of patients with schizophrenia and related disorders. They compared the use of mobile-telephone short message service (SMS or "texting") functionality to a specially developed smartphone program ("app") that ran on the Android © operating system.

The SMS functionality was viewed as not being constrained by the type of mobile telephone and whether it had Internet functionality. Each SMS message had one question to which participants ( $N = 24$ ) responded with a number, ranging from "1" (disagree) to "7" (agree). In each enquiry, participants received a series of SMS messages with different questions. The smartphone app had the advantage of a smoother flow of questions.

In this qualitative research, acceptability was assessed by interview with a framework analysis to identify themes. Themes identified in the initial interviews were used to guide interview questions in subsequent interviews. Participants preferred the smartphone app, viewing it faster and easier to use; sending multiple texts was viewed as awkward and burdensome.

One drawback of this study was that prospective participants needed to have access to a mobile phone, with a satisfactory signal, and, for the smartphone app, access to an Internet connection. The

smartphone app also demanded a more highly specified device. Some found the repeated questioning intrusive and repetitive. Some found it made them more concerned with their thoughts and elicited unhappy memories.

Organisations deploying SMS or app-based solutions must have an alternative offering for those without the required mobile telephone technology. One lesson from this study is that the intervention must not be burdensome to patients. Zimmerman et al opine that mental health tools should be minimally burdensome to patients to facilitate a shift to measurement-based care in mental health (Zimmerman, Galione et al., 2011).

Digging over that old ground: an Australian perspective of women's experience of psychosocial assessment and depression screening in pregnancy and following birth.  
(Rollans, M, Schmied, V et al., 2013).

In this qualitative ethnographic study, Rollans et al investigate the process and impact of psychosocial assessment and depression screening in pregnancy. On two occasions, at the first antenatal clinic attendance and six weeks postnatally, researchers observed participants in their interactions with healthcare workers, and then interviewed them to explore their views about the questions they were asked.

Thirty-one participants were interviewed in the ante-natal period. Some participants moved to other areas during the study, and some others withdrew, with the result that 20 participants were interviewed in the postnatal period.

The thematic analysis of the semi-structured interviews draws out the acceptability issues, allowing the researchers to identify the major themes relating to the psychosocial and depression screening. The ethnographic reporting adds to the depth of the exploration with detailed descriptions of changes in participant body language when asked particular questions.

Automated Screening for At-Risk Drinking in a Primary Care Office Using Interactive Voice Response.  
(Rose, Skelly et al., 2010).

Noting that case-finding for alcohol misuse in primary care is advised but infrequently used, Rose et al investigated the acceptability of a general health screen that included the AUDIT-C questions, using telephone interactive voice response (IVR) technology as the delivery platform.

Participants ( $N = 101$ ) used a dedicated telephone in the primary care waiting room to 'phone the IVR screening service. With their consent, a copy of their responses was made available to their clinician.

Participant acceptability was assessed using a questionnaire, completed after the IVR screen. One patient declined consent for their results to be shared with their clinician. Most (63%) had no complaints. Some suggested the screening could be expanded to include other topics. Thirteen had concerns about the alcohol questions, mainly relating to wording of the questions and the answer options offered, and one patient found the process "dehumanising".

To satisfy contractual requirements, UK primary care healthcare workers often must collect items of patient history unrelated to their presenting complaint. This paper illustrates how technology can be used to allow the patient to provide that information in a process separate from their consultation. In a COVID pandemic, the idea of a dedicated telephone line in the waiting room is unlikely to be acceptable, but a smartphone app for those with the necessary technology and capacity to use it, and a pen and paper format for others might be acceptable alternative delivery platforms.

Only patients attending the primary care clinic in this research project were offered this screening. To avoid healthcare inequalities, screening should be offered to all patients.

Loss and Grief in General Practice: The development and Evaluation of Two Instruments to Detect and Measure Grief in General Practice Patients.  
(Clark, 2003).

In this research paper, Clark developed two instruments to detect and measure grief in primary care patients. The main thrust of this paper is the development and evaluation of the internal validity of the grief assessment tools.

Acceptability to participants was assessed in two steps. First, by analysis of research assistant notes of participant sentiments about the tools, and then second, in a separate semi-structured interview.

The breadth of patient involvement in providing feedback on the tools gave the researcher a clear view of their acceptability in real life practice.

Acceptability of audio computer-assisted self-interview (ACASI) among substance abusers seeking treatment in Rio de Janeiro, Brazil.  
(Simões, Bastos et al., 2006).

Recognising that social desirability bias leads to patients not fully disclosing behaviours that might be socially embarrassing or illegal, Simões et al investigated the acceptability of the Audio Computer-Assisted Self-Interview (ACASI) mode of questionnaire administration. In ACASI, the interviewee listens to questions through headphones for privacy, and responds using a touch screen or keypad. This method facilitates the collection of standardised information and reduces barriers due to literacy and language issues.

Patients attending an alcohol and other drug service in Brazil completed the Risk Assessment Battery tool, delivered by ACASI.

Participants ( $N = 268$ ) completed a self-administered acceptability questionnaire after the ACASI assessment. Difficulty using the computer affected 9.3%; difficulty understanding the questions correlated positively with educational level.

This research shows the validity and acceptability of ACASI as a delivery platform for health questionnaires. This platform can be delivered using mobile phone and Internet technology. Pen and

	<p>paper, or interviewer-assisted questionnaires must be available as options to avoid healthcare inequalities.</p>
<p>Depression in first generation labour migrants in Western Europe: the utility of the Center for Epidemiologic Studies Depression Scale (CES-D). (Spijker, Van der Wurff et al., 2004).</p>	<p>The authors researched the utility and acceptability of the “Center for Epidemiologic Studies Depression Scale” (CES-D) in Turkish and Moroccan elderly migrants living in the Netherlands. Acceptability was assessed by “<i>calculating the percentage of items missing, the percentage of ‘never-and always-sayers’, the number of respondents who missed more than four CES-D items, the number or respondents who needed imputed data and the number of respondents with ‘zero scores’.</i>” (p. 540). This analysis was used to exclude participants who had missed more than four items or who replied “Always” to every question from further analysis.</p> <p>Themes from this paper are discussed in “Cultural issues” on page 93.</p>
<p>Validation and Utility of a Self-report Version of PRIME-MD: The PHQ Primary Care Study, (Spitzer, Robert L., Kroenke, Kurt et al., 1999).</p>	<p>In this paper, Spitzer et al research the validity and utility of a self-report version of the Prime-MD tool, the Patient Health Questionnaire (PHQ). They note that the time taken to administer the PRIME-MD tool had limited its use in clinical practice. Participants from eight primary care centres (<math>N = 3000</math>) completed the PHQ.</p> <p>Acceptability was assessed by a self-administered questionnaire in which they were asked how comfortable they felt answering the questions, and how helpful they believed the tool would be to their clinician in understanding and treating their problems. Eighty-eight per cent were “very” or “somewhat” comfortable answering the questions and a similar number believed that their responses would help their clinician in their management.</p>

This was a large-scale quantitative assessment of participant acceptability of a brief tool to detect depression. This work probably fed into the UK's National Institute for health and Clinical Excellence (NICE) considerations of indicators for depression in the Quality and Outcomes Framework. The high acceptability of this tool did not translate into widespread use due to feasibility issues. This issue is discussed later.

Clinical utility and incremental validity of brief screening for traumatic event exposure in female university health service patients.

Watson, S. B. (2006).

Reflecting on evidence that screening for traumatic life events, especially assaults, may have clinical and cost benefits, Watson evaluates the validity and utility in a primary care setting of a brief screening questionnaire about exposure to traumatic life events. Participants ( $N = 339$ ), female university students attending the university's health centre, completed the Traumatic Life Events Questionnaire (TLEQ), and the post-traumatic stress disorder module of the Structured Clinical Interview (SCID).

Acceptability was assessed by self-administration of a feedback form ( $N = 297$ ). Additionally, research assistant monitored each screening session (participant completion of the two tools) and recorded the time taken, how much assistance the participant needed and whether they showed any distress or other reaction. While not described as such, this study takes on hues of ethnography similar to that used by Rollans et al (Rollans, M, Schmied, V et al., 2013).

Twelve per cent of participants did not agree that clinicians should screen patients for exposure to traumatic events. One third reported feeling bad or remembering upsetting events, an observation noted by other researchers (Adair, Holland et al., 2012; Blount, Evans et al., 2002; Matthey, White et al., 2005).

Electronic Screening and Decision Support for Poststroke Depression: An Exploration of Doctors' and Patients' Perceptions of Acceptability. (White, Towers et al., 2013).

Noting that post-stroke depression often goes unnoticed in clinical settings, White et al investigated the acceptability of depression case-finding using the PHQ-2 tool as an initial screening test, followed by the PHQ-9 if screen-positive. The tools were delivered using a computer with a touchscreen interface. The process generated a report for the clinician with the tool's score, an interpretation of the score, and advice on referral options for those scoring five or more on the PHQ-9.

Following the intervention, participants ( $N = 62$ ) completed a pen and paper survey which allowed for free-text comments as well as quantitative survey data.

This paper was published eight years ago but it is worthy of note that 43.5% had never used a computer before, 95% found the touchscreen interface easy to use, while 16% preferred pencil and paper.

The authors do not comment on how many declined participation in the study. They report on a highly acceptable depression case-finding project using modern computer technology that the great majority could use easily, although a sizable minority would still prefer pen and paper.

A unique outcome feature of this study was the report delivered to the non-mental health clinicians, providing them with an interpretation of the patient's scores with advice on further management options. This is a strategy that could be deployed with any tool to support non-specialists, to assist them with interpretation of the data and to provide suggestions for management.

Patients' opinions of the use of psychiatric case-finding questionnaires in general practice.

In this qualitative study, the authors used focus groups to investigate participants' ( $N = 127$ ) opinions of mental health case-finding tools in general practice in Wales. Invitations to participate were sent to

(Wood, Pill et al., 2002)

1424 people in three age groups registered with ten GP practices in rural mid-Wales. The research used the General Health Questionnaire as the sample tool.

Twenty focus group meetings were held. The discussions were recorded and transcribed for thematic analysis. At the conclusion of their discussions, participants were asked how they would feel if asked to complete a mental health assessment tool prior to a consultation.

Participants were concerned about who would see their completed questionnaires, with some only content to complete a tool if it was anonymous. Some were concerned that admitting to emotional problems on paper was more dangerous than discussing it verbally, in terms of future employment and other undefined repercussions. Some saw tools as a useful way of helping the GP identify the patient's issues (a theme identified in Spitzer et al above), while others thought that a good GP shouldn't need such tools. Others felt that completing a mental health assessment tool could be stigmatising.

Employers are only entitled to medical reports if the patient is fully informed and signs an appropriate consent form. They can opt to see the report before it is sent to their employer's human resources management. Belief that a good GP shouldn't need such tools is not supported by the evidence discussed in Chapter 1. It is worrying that some patients might find completing a mental health tool stigmatising. Care providers must safeguard against this, perhaps by giving the questionnaire to everyone, or ensuring that individuals have a private environment to complete the tool.

Depressed Patients' Acceptability of the Use of Self-Administered Scales

Zimmerman et al are strong proponents of the use of tools in the assessment of mental health symptoms. Reflecting Baird et al, they recognise that healthcare workers are already overburdened,

to Measure Outcome in Clinical Practice.

(Zimmerman & McGlinchey, 2008)

and that recommending evaluations with complex tools is unlikely to meet with much success (Baird, Charles et al., 2016). They propose instead the use of self-report tools, suggesting that they are more efficient, correlate highly with clinical ratings, and are free of clinician bias. They compared the patient acceptability of the Beck Depression Inventory (BDI) with the Clinically Useful Depression Outcome Scale (CUDOS). The BDI was chosen as it is the most widely used tool in their clinical setting.

Participants ( $N = 50$ ) completed both tools and then a questionnaire asking which of the two measures took less time to complete, was easier to understand, less burdensome to complete, and more acceptable to complete at every follow-up appointment. They had no significant preference for either tool to be used for regular assessments but significantly more would prefer to use the CUDOS tool in their ongoing clinical evaluations.

Although one might argue that completing a self-report tool is involving the patient in their own care, and assisting their healthcare worker, the authors make the point that self-report tools are an imposition on the patient's time and the least burdensome tool should be used in clinical settings.

Similar studies in the UK could consider comparison with the PHQ-9 tool as, due to incentivisation by the Quality and Outcome Framework, it is possibly the most widely used tool in that setting.

<p>Depressed patients' perspectives of 2 measures of outcome: The Quick Inventory of Depressive Symptomatology (QIDS) and the Remission from Depression Questionnaire (RDQ). (Zimmerman, Galione et al., 2011),</p>	<p>In this paper, Zimmerman et al compared the acceptability of two self-report tools, the Quick Inventory of Depressive Symptomatology (QIDS) and the Remission from Depression Questionnaire (RDQ).</p> <p>Participants (<math>N = 102</math>) completed both tools and then a questionnaire exploring their views of the ease of use, the completion burden, the most appropriate to their clinical condition, and which tool they would prefer for their ongoing monitoring. There was no qualitative component in the research methodology.</p> <p>Participants viewed the RDQ as more reflective of their treatment goals, felt it more accurately indicated remission status, and preferred to use it to monitor their subsequent progress. Interestingly, although the RDQ has 41 items to the QIDS's 16, participants did not view it as more burdensome.</p>
<p>A primary care programme to improve identification and stepped-care support of Asians with mental health and lifestyle issues. (Shah, K, Corter et al., 2019)</p>	<p>Reporting that somatisation of mental health issues is common in Asian culture, and that related stigmatisation is often directed towards the whole family, Shah et al investigated the feasibility and acceptability of AsiaCHAT, a translated version of eCHAT (Goodyear-Smith, Warren et al., 2013a).</p> <p>Participants (<math>N = 277</math>) completed the tool on a computer tablet in their choice of Mandarin, Korean or English. They then completed paper-based questionnaires (<math>N = 244</math>) to feedback on the acceptability of the tool. The questionnaire included an area for free-text responses. The authors do quote some of the free text comments but there is no clear thematic analysis of these.</p> <p>This study shows the benefit of tools translated into patients' own language to case-find undiagnosed mental health, with 7% screening positive for depression, and 25% screening positive for an anxiety</p>

	<p>disorder, all of whom requested help. This study deployed shared-use computer tablets; this was discussed earlier</p>
<p>Validity and acceptability of Kimberley Mum's Mood Scale to screen for perinatal anxiety and depression in remote aboriginal health care settings.  (Marley, Kotz et al., 2017).</p>	<p>Marley et al note that most Aboriginal women find the language used in the Edinburgh Postnatal Depression Scale complex and confusing. Acknowledging that successful implementation of screening processes depends on acceptable tools and processes, the investigated the acceptability of the Kimberley Mum's Mood Scale, a tool designed to identify Aboriginal women at risk of perinatal mental health issues. Participants (<math>N = 97</math>) completed the tool.</p> <p>Acceptability was assessed in a mixed-methods qualitative exercise with a questionnaire on completion of the KMMS tool, and then a follow-up interview. Qualitative data from the questionnaires and the interviews were analysed for themes.</p> <p>This study presents an example of the difficulties presented by the use of a tool, in this case the EPDS, in a setting other than where it was devised. Marley et al were able to demonstrate that, inter alia, the KMMS was acceptable to the target population and as a result the tool was recommended in local guidelines,</p>
<p>Preferences for Mental Health Screening Among Pregnant Women.  (Kingston, Biringier et al., 2015).</p>	<p>Staying with the theme of mental health issues in pregnancy, Kingston et al observe that despite about 30% of pregnant women experiencing prenatal mental health issues, only 20% are routinely assessed for such problems. They further remark that there were no prior studies of pregnant women's views on prenatal screening for mental health issues.</p>

Participants ( $N = 460$ ) completed the Barriers and Facilitators of Mental Health Screening Questionnaire online to indicate their views of mental health screening. Fifty-one per cent (51%) ( $N = 237$ ) were screened for mental health issues; of these, 96.2% were comfortable with the screening. Of the non-screened group ( $N = 223$ ), 99.1% indicated that they would be comfortable with screening.

Participants were mostly (97.4%) content with their healthcare provider initiating mental health screening. Kingston et al suggest that this is more effective than non-standardised patient-initiated approaches, that it reduces barriers to screening, and that healthcare workers can be reassured about the acceptability of the process.

This study would suggest that nearly all pregnant women will be content to be screened for mental health disorders. This is in contrast to evidence from other researchers; see “Peri-natal depression” on page 101.

Are emergency department patients more likely to answer alcohol questions in a masked health questionnaire?  
(Adams & Stevens, 1994).

Adams and Stevens researched whether questions about alcohol consumption might be more acceptable to people attending an Accident and Emergency Department if they were included in a general health questionnaire. They asked participants ( $N = 154$ ) to complete either the World Health Audit Questionnaire (AUDIT) or the Health Screening Survey (HSS). The AUDIT tool asks only questions related to alcohol consumption and the HSS asks questions about general health issues that include alcohol consumption.

Acceptability was assessed on the basis of a comparison of the number of completed forms returned for each questionnaire. There was no statistical difference, and the authors conclude that masking

questions related to alcohol use amongst health and lifestyle questions does not increase their acceptability.

The issue of questions about alcohol is further discussed in “Stigma related to Alcohol and Other Drugs (AOD)” on page 92.

Integrating behavioural health services into a university health center: Patient and provider satisfaction.

(Funderburk, Fielder et al., 2012)

Funderburk et al, reflecting on the high rates of mental health issues on university campuses, set up an integrated behavioural health primary care program at their college. Participants ( $N = 66$ ) were screened for depression using the PHQ-9, alcohol issues with the AUDIT-C, sleep problems with an abbreviated Insomnia Severity Index, and tobacco use.

Acceptability was assessed by a self-administered anonymous web-based questionnaire. The questionnaire addressed more issues than the acceptability of the tools using in the case-finding process, such as overall satisfaction with the consultations at the student health clinic, and the consultations with the behavioural health workers. As a result, there was only one question about acceptability. For this question the authors deployed a 5-stage Likert-like question. The authors report on the modal response (“4” on the ordinal 1-5 scale) and the mean (3.5), but do not give the numbers finding it acceptable or unacceptable.

There was no qualitative assessment of acceptability.

The use of shortened versions of tools as screening tools should have merit in everyday practice but evidence from Wood, Pill et al above suggests that, in a general primary care setting, such an approach will not find universal acceptance.

Is Large-Scale Community Memory Screening Feasible? Experience from a Regional Memory-Screening Day.  
(Lawrence, Davidoff et al., 2003).

Noting that many people with symptoms of dementia go undiagnosed, Lawrence et al investigated the feasibility of large-scale cognitive testing in 10 community centres in Massachusetts USA. They used the “7-minute screen (7MS)” tool.

To assess acceptability, 73 participants completed an anonymous questionnaire. Of these, 72% found the educational element of the assessment helpful; a further 20% found the diagnosis, early detection, or reassurance helpful. Eight per cent (8%) reported that there was nothing helpful about the intervention.

Only 73 out of 659 people screened (11%) completed the satisfaction questionnaire. While researchers might not wish to prejudice participant involvement in other aspects of the research by making elements compulsory, it does cause one to wonder what the views of the other 89% might have been.

This paper is discussed further in “Fear of negative outcomes” on page 96.

Structured Clinical Interview for DSM-IV (SCID): Persian Translation and Cultural Adaptation.  
(Sharifi, Assadi et al., 2009).

Sharifi et al translated the Structured Clinical Interview for DSM-IV axis-I disorders (SCID-I) into Farsi for use with an Iranian population.

Acceptability was assessed in a quantitative exercise by asking participants ( $N = 299$ ) to complete a questionnaire after they completed the translated SCID-I tool. The questionnaire was completed by 83.9% of participants.

In general, they found it easy to complete. Some preferred not to answer some questions, and others felt upset by certain questions; the nature of these questions are not specified. There was no

qualitative component to further explore issues relating to acceptability.  
This paper is further discussed in “Cultural issues” on page 93.

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### 2.1.2 Key themes in acceptability

There is no suggestion in this review that the use of tools to assess mental health symptoms in adult patients in primary care or community settings is generally unacceptable to patients. However, it would not be correct to say that all tools are universally acceptable to all patients. This review identified factors that influence acceptability of tools. These are listed below in Table 7. I will discuss each factor and identify the relevant research.

**Table 7: Factors affecting acceptability of mental health tools**

- Stigma related to alcohol and other drugs (AOD)
- Stigma related to abuse and domestic violence
- Stigma related to suicide and self-harm
- Social Circumstances
- Cultural issues
- Language issues
- Pressure from healthcare workers
- Fear of negative outcomes
- Sensitivity of people's feelings
- The tool's delivery platform
- Trust and relationship with healthcare worker

Goffman defined stigma as an “*attribute that is deeply discrediting*”, that reduces the stigmatised person “*from a whole and usual person to a tainted, discounted one*” (Goffman, 1963, p.3). Link and Phelan defined stigma as the convergence of four interrelated components, distinguishing and labelling differences, associating these differences with negative attributes, using the differences to separated “us” from “them”, with resulting loss of status and discrimination (Link & Phelan, 2001, p.377). Not all stigmatisation is imposed by others; several authors have reported on the issue of self-stigmatisation, (Karidi, Stefanis et al., 2010), (Latalova, Ociskova et al., 2013), (Brouwer, 1998), (Corrigan & Rao, 2012). Yang et al suggest that stigma is fundamentally a moral issue where a stigmatised issue threatens what is at stake for sufferers (Yang, Kleinman et al., 2007).

### 2.1.2.1 Stigma related to Alcohol and Other Drugs (AOD)

Research participants seemed sensitive to questions related to alcohol and illicit drug behaviour. Lucas et al compared participants' responses to questions about alcohol consumption given first to a psychiatrist and then to a computer program. Participants reported levels of alcohol consumption to the computer 30% higher than those reported to the psychiatrist suggesting they modified their self-reporting. Lucas et al suggest that the participants may have modified their reports to the psychiatrists to seem more socially acceptable, a reflection of social stigma related to alcohol and other drugs (Lucas, R W, Mullin et al., 1977). Dyches et al researching the acceptability of a touch-tone telephone-based alcohol and other drug usage study in the US found that most preferred answering such questions using the telephone compared to face-to-face interviews or written questionnaires (Dyches, Alemagno et al., 1999). These two papers also highlight the different levels of acceptability with the different platforms, i.e., face-to-face v. computer, touch-tone keypad v. face-to-face. Adams and Stevens, Thorley et al, and Goodyear-Smith et al all had similar findings (Adams & Stevens, 1994), (Thorley, Hettiarachchi et al., 2012), (Goodyear-Smith, Arroll et al., 2004).

Johnson et al and then Edwards et al found a similar reluctance to disclose alcohol and other drug misuse. Johnson and his colleagues found that males were less likely to report illicit substance use during telephone interviews (Johnson, Hougland Jr et al., 1991). They interpreted this as men being more reluctant to "*reveal themselves in an undesirable manner*" (p.676). Later, Edwards et al, investigating associations between psychosocial risk factors and antenatal depression, found that one in five women did not answer the questions about substance abuse (Edwards, Galletly et al., 2008).

Not everyone is sensitive about questions relating to alcohol and other drugs. In Adair et al's work with homeless people in several centres in Canada, participants reported that not only were questions about substance misuse acceptable but that they were important to ask so that individuals could be signposted to appropriate help (Adair, Holland et al., 2012).

### 2.1.2.2 Stigma related to abuse and domestic violence

The evidence about the acceptability of asking women about domestic violence is variable. Stenson et al found that 97% of her participants found it acceptable to be asked questions about domestic violence. Sensitivity to psychosocial questions was not dependent on

whether the woman was experiencing such issues at that time or not (Stenson, Saarinen et al., 2001). Webster had similar findings, reporting that most women were pleased to be asked such questions (Webster, Linnane et al., 2000). On the other hand, Goodyear-Smith noted a low response rate for questions related to abuse and anger issues (Goodyear-Smith, Coupe et al., 2008).

### 2.1.2.3 Stigma related to suicide and self-harm

Adair et al also found that questions about suicidal ideation were acceptable to participants, all of whom were known to have a mental health problem (Adair, Holland et al., 2012).

### 2.1.2.4 Social Circumstances

Adair et al's work with homeless people raised issues about including questions about social wellbeing such as employment, being part of a community, contact with friends and family, community activities, the use of the word "*begging*", and criminal activities (Adair, Holland et al., 2012). Some participants found them insensitive or upsetting. They make the point that "*It is also critically important that research instruments be designed, in the first place, to be appropriate to vulnerable and under-served populations*" (p.50). On a similar theme, Matthey et al's research revealed that the word "*husband*" was more acceptable to Arabic speaking women than "*partner*" (Matthey, White et al., 2005).

### 2.1.2.5 Cultural issues

Several researchers found that the cultural setting was a significant factor affecting a tool's acceptability. Spijker et al looked at depression in labour migrants in Western Europe and found that 10-15% of Moroccan participants were unwilling to respond to questions about interpersonal issues (Spijker, Van der Wurff et al., 2004). Males seemed to find it embarrassing to give any ranking to statements such as "*people were unfriendly*" and "*I felt that people disliked me*". Female participants were unwilling to answer questions about enjoying life. Turkish interviewers and participants both seemed to find it challenging to talk about one's mood. Although participants were advised of their right to refuse participation, Spijker found that Turkish women were unlikely to do so directly because this would be considered by them to be too assertive and discourteous. For them, a more acceptable method of refusal was to answer questions with "*do not know*".

Kishore et al looked at the use of a Hindi translation of the Composite International Diagnostic Interview in Northern India (Kishore, Kapoor et al., 1999). There were several problems with acceptability, the first relating to language – there were no simple Hindi synonyms for “*keyed up*”, “*being on edge*” and “*thought racing*”. Repeatedly asking non-alcohol users about alcohol also proved problematic. Third, asking unmarried women about their sexual practices also affected acceptability. Finally, questions about personality disorders and sexual dysfunction had to be omitted because of concerns about maintaining participants’ confidentiality, particularly for females.

Linguistics were also a problem for Blount et al and Sharifi et al. Blount et al found that their UK participants objected to tools containing “slang, Americanisms or language not transparent to ethnic minorities” (Blount, Evans et al., 2002, p.160). Sharifi et al, investigating a Farsi translation of the Structured Clinical Interview (SCID-I), found problems with various translations, such as the words “panic” which has no proper equivalent in Farsi, and “body” which does not always include the head, and “feeling guilty” which was translated to “religious guilt”. Assessing recreational disability was also problematic – gardening used as an example in the original SCID-1 is not a common recreational activity in Iran (Sharifi, Assadi et al., 2009).

Esler et al, researching the acceptability of the PHQ-9 to Aboriginal and Torres Strait Islander people, discuss the concept of “cultural equivalence” for psychological assessment tools which they define as a tool’s “*acceptability, reliability and validity with people who belong to a different cultural group from those with whom the tool was originally assessed*” (Esler, Johnston et al., 2007, p.259). The PHQ-9’s question 6, which asks the participant to rank “*Feeling bad about yourself - or that you are a failure or have let yourself or your family down?*” was unacceptable due to the importance placed on the family in that cultural setting. They conclude that an unmodified PHQ-9 is unacceptable in that setting. Their findings highlight “*the danger of applying a psychological assessment instrument in an ethnic or cultural group in which suitability has not been assessed*” (p.262) and they advise that validation and acceptability of a tool in one setting does not mean that it will be so in another.

Awareness of cultural issues in Sri Lanka, where people will show more satisfaction and happiness to an outsider to avoid stigma and to claim a better social status, helped Gunatunga achieve a 95% acceptability rate for a psychometric tool, self-administered and in private (Gunatunga, 2012).

Matthey et al's research, investigating the acceptability of routine peri-natal psychosocial assessments, included both English speaking and non-English speaking women, bringing the element of cultural diversity to their research. The feedback suggested that Arabic speaking women might be offended by questions regarding childhood abuse because such issues, especially sexual abuse, are "*private, sensitive and taboo subjects*". Similar concerns were expressed by Vietnamese mothers (Matthey, White et al., 2005).

Adair et al looking at a sub-culture of homeless people with mental health difficulties found that questions relating to employment, community involvement, and contact with friends and family were problematic for their participants (Adair, Holland et al., 2012).

#### 2.1.2.6 Language issues

Munoz et al's work with screening for depression in hispanophones poorly literate in English living in San Francisco underlines the link between acceptability and feasibility - a tool that is not feasible due to linguistic competency or literacy skills is not acceptable (Munoz, Gonzalez et al., 1995). On a similar theme Ginieniewicz and McKenzie looked at the acceptability of a battery of tools including the PHQ-9 to hispanophones living in Toronto (Ginieniewicz & McKenzie, 2012). To avoid linguistic difficulties the interviews were conducted in Spanish – a Spanish translation of the PHQ-9 had been validated in studies based in the USA and Honduras. The use of the tool was highly acceptable to the participants.

#### 2.1.2.7 Pressure from healthcare workers

Cubison and Munro and Rollans et al, researching screening for peri-natal depression, found that participants resented pressure from healthcare workers to complete a screening tool (Cubison & Munro, 2005) (Rollans, M, Schmied, V et al., 2013). Cubison and Munro's participants expressed concerns about issues related to insensitive or inappropriate pressure from healthcare workers such as asking for completion of the tool when the patient had visitors or feeling pressurised to complete the tool. As a result, she found that a group of severely depressed women had manipulated their answers to the tool, hiding or understating their difficulties.

In Rollans et al's work, some participants felt caught off-guard by the nature of the personal detail they were being expected to share, without any introductory preamble or warning, and said they would have liked appropriate information prior to the appointment. The participants said that the questions should only be asked by a trusted trained professional. Others said that the healthcare worker was more concerned about paperwork than checking them or their babies. Disturbingly but perhaps not surprisingly, those women who reported a negative experience of psychosocial assessment said that they would advise other women not to disclose personal information. I can imagine a situation where the most junior and/ or least experienced staff member is tasked to '*get the screening done*' and sets about the task, devoid of any finesse, with the results evidenced by these researchers.

#### 2.1.2.8 Fear of negative outcomes

In Cubison and Munro's work, the women expressed concern also about the consequences of being honest when completing the tool. Their concerns included fears of being taken away as "mad", their children being taken away from them, invasion of their lives, or the stigma of being diagnosed with mental illness (Cubison & Munro, 2005).

Fear of a positive diagnosis seems to have also played a part in Lawrence et al's research into the acceptability of large-scale screening for dementia (Lawrence, Davidoff et al., 2003). Their work revealed that screening for dementia was acceptable to the participants. However, they do report a low level of case-finding and speculate that people worried about their memory may have been reluctant to accept the screening invitation. When they followed-up the findings with the participants' physicians, they learned that some patients had declined further testing and that other patients who tested positive had changed to another medical practice. In this US setting there is no automatic transfer of medical records, and the new primary care physician would have no knowledge of the possible diagnosis. One possible interpretation of this is that screening for dementia might be most acceptable to those that do not have it and less so to those who fear they have it or did not know they had it.

### 2.1.2.9 Sensitivity of people's feelings

Blount et al investigating the acceptability of self-report tools for personality disorders found that the language used in the tools contained upsetting or depressing items – so much so that both clinician and non-clinician respondents opined that their mood could change while completing them. Some other respondents noted that the tools were upsetting because they asked relevant and useful questions, key to the diagnosis of personality disorder. The authors recommend that self-report measures should be administered, sensitively, with support such as a debriefing interview or, at the very least, a warning that some may find the questions upsetting. This work has themes in common with the findings from Rollans et al (Blount, Evans et al., 2002), (Rollans, M., Schmied, V. et al., 2013).

### 2.1.2.10 The tool's delivery platform

The classical paradigm of a healthcare worker, generally a senior highly qualified healthcare worker, being consulted by a patient in a comfortable oak-panelled office, perhaps chaperoned by a nurse in a starched uniform, is fast becoming medical history. One of the factors driving this change is the pace of development in telecommunications.

## The telephone

Despite being invented in 1876, the telephone has only really been accepted as a platform for healthcare delivery in the last 20 years or so. The introduction of keypads and touch-tones allowed developers to link telephones to computers for call automation (Car & Sheikh, 2003). Several authors looked at the acceptability of assessing mental health by telephone. The first of these considered here is Evans et al who found that participants preferred face-to-face interviews (Evans, Kessler et al., 2004). An interesting finding was that the use of the telephone was acceptable to those reluctant to allow interviewers into their home. Farzanfar et al researched an interactive automated telephone system to monitor patients with depression in Boston USA (Farzanfar, Frishkopf et al., 2007). They found that the deployment of the TLC-Depression tool on this platform was very acceptable to participants. However, some found the system responses over-exuberant and inappropriate as it responded with expressions such as “*Good job!*” or “*That's great!*”.

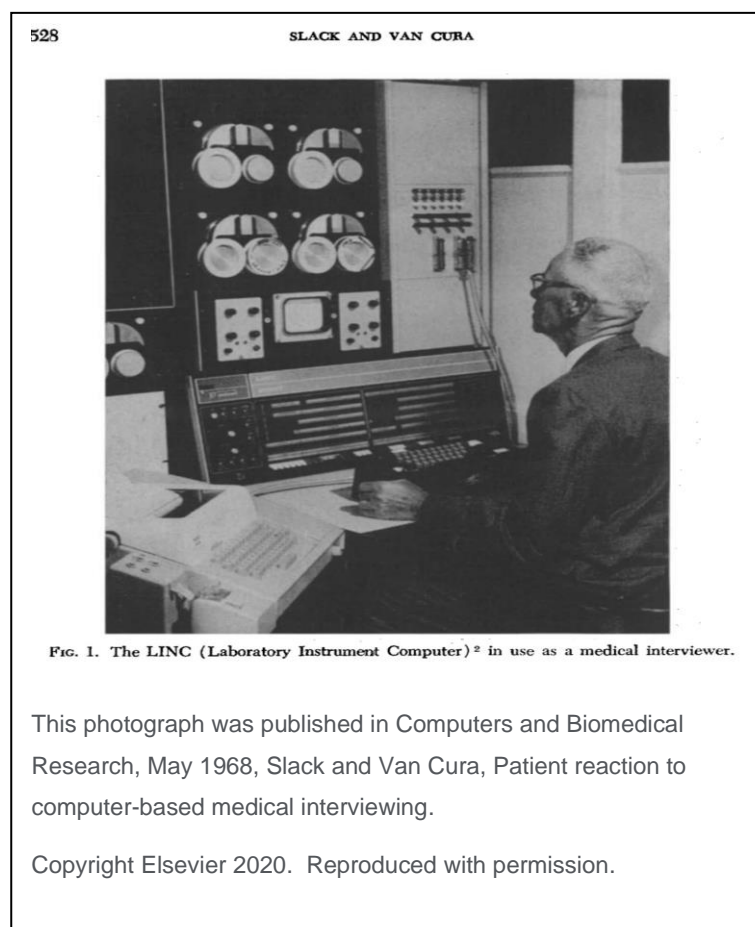
Revisiting the theme of alcohol misuse, Rose et al used an automated telephone platform to screen for at-risk drinking (Rose, Skelly et al., 2010). All but one of the participants found it acceptable. Rose et al found slightly higher prevalence rates than previously published and opine that this supports the idea that people more freely admit heavier drinking habits to impersonal telephone-based screening systems than to face-to-face interviews or written questionnaires.

## Computer-based tools

The advance in computer technology and the widespread ownership of computerised devices offers the potential for a significant paradigm shift in healthcare delivery. Writing in 1967, fourteen years before the milestone launch of the IBM Personal Computer®, Slack and Van Cura looked at the acceptability of taking general medical histories by computer. They opined that *“information which the patient has difficulty telling but wants the doctor to know about is, according to these patients, more easily presented (and more likely to be given accurately) to the computer”* (Slack & Van Cura, 1968). Fritz et al compared computerised against standard clinician medical interviewing for 45 patients attending a Stuttgart hospital.

The program looked for various health issues including mental health problems. The participants were highly satisfied with the history collected by the computer with most believing that the process would enhance their medical care (Fritz, Braun et al., 2008).

While Slack et al's and Fritz et al's work related mostly to general medical interviewing, their work illustrates the generally high acceptability of computer-based tools to patients.



Returning to the problems of assessing mental health symptoms in people who speak a different language (page 95), Munoz et al found that a computer-based platform that read the questions aloud in Spanish and allowed research subjects to speak their responses was acceptable to the hispanophonic participants who were poorly literate in English (Munoz, Gonzalez et al., 1995).

Tools delivered by computer, completed by the patient in private, without an observer present, or completed at home at a moment of the patient's choosing, seem to be highly acceptable to patients. Computer-based tools seem to have particular utility in addressing the reduced acceptability of exploring alcohol and other drug issues – see “Stigma related to Alcohol and Other Drugs (AOD)” on page 92.

Looking at alcohol issues, Lucas et al found that participants found it more acceptable to respond to questions about alcohol issues from a computer than a psychiatrist, corresponding to Rose's findings with a telephone-based platform (Lucas, R W, Mullin et al., 1977). Delrahim-Howlett et al's use of a web-based tool assessing alcohol abuse also proved acceptable (Delrahim-Howlett, Chambers et al., 2011). Perlis et al found that users of illicit drugs found a computer-assisted self-interview acceptable (Perlis, Des Jarlais et al., 2004). They also found greater reporting of potentially stigmatising drug, sex, and HIV risk behaviours, and suggest that interacting with a programmable computer and removing the inter-personal dynamics of a face-to-face interaction, along with the removal of any real, anticipated or feared interviewer inappropriate condemnatory responses, voluntary or involuntary, reduces social desirability bias.

Richie et al found that their computerised cognitive screening was very acceptable to their participants – in contrast to Lawrence et al's findings above (see “Fear of negative outcomes” on page 96). They report that the participants found the use of the computer interesting and less demeaning than paper and pencil techniques. Lawrence et al had used tools delivered face-to-face by healthcare workers (Ritchie, K, Allard et al., 1993). Bradford and Rickwood investigated the acceptability of the *myAssessment* mobile telephony app and found it widely acceptable to the young adults (Bradford & Rickwood, 2015). Additionally, their work showed the importance of the vehicle used for the assessment, showing that the participants reported higher rates of risky behaviours relating to alcohol and other drugs and sexual activity which the authors attributed to the participants feeling more comfortable in the

online computerised setting. This is perhaps due to a reduced need to seem socially acceptable online, reflecting the online user's perception of anonymity (Graf, Erba et al., 2017).

Computer programs seem to have a place in screening for and monitoring mental health issues such as depression and peri-natal depression. Participants in Cook et al's research studies found the use of tablet-based tools acceptable and easier to use than the same tool with pen and paper (Cook, Balasubramani et al., 2007). Drake et al found that asking participants to complete an online version of the Edinburgh Post-Natal Depression Scale (EPDS) was acceptable for most participants (Drake, Howard et al., 2014). Their qualitative study suggests that computerised screening for perinatal mental health issues using the EPDS is acceptable for most participants suggesting a possible response to issues identified earlier in this review of managing pressure from healthcare workers, and perhaps less so, the fear of negative outcomes (see page 95). Similar results came from Ahmad et al screening for mental health symptoms in refugees, and Goodyear-Smith et al who screened patients waiting in a doctor's waiting room (Ahmad, Shakya et al., 2012) (Goodyear-Smith, Warren et al., 2013b). Findings from Kingston et al build on this theme, showing that women's comfort with the method of perinatal depression screening strongly influenced whether they would be honest about any mood problems. In that study, paper forms or computerised tools were more acceptable and telephone interviews least acceptable (Kingston, Biringer et al., 2015).

## **Mobile telephony**

The increasing use of mobile telephones with larger touchscreens and increasing mobile internet speeds has opened another platform for patient engagement in healthcare issues.

Palmier-Claus et al used mobile telephony in patients with non-affective psychosis to monitor their mental health wellbeing (Palmier-Claus, Rogers et al., 2013).. The use of the monitoring tool in this way was generally acceptable. In this group, there was a high acceptability of the idea of using the mobile telephony technology in their everyday life – the devices were regarded as normal in everyday society and non-stigmatising.

### 2.1.2.11 Trust and relationship with healthcare worker

Several authors showed that participants' trust in and relationship with their healthcare workers was an essential component of whether they found the use of a tool acceptable in screening for or assessing mental health symptoms.

For example, Matthey et al's post-natal participants reported that a significant degree of healthcare worker/ patient working relationship was required before they felt it appropriate to answer questions about their psychological health (Matthey, White et al., 2005). Similarly, Esler et al opined that "*They will only answer your questions if they know you and trust you*" (Esler, Johnston et al., 2007, p.261). Evans et al found the same thing with their research team reporting anecdotal comments that "*agreeing to the telephone interview was dependent on having first met and established a degree of trust with the interviewer*" (Evans, Kessler et al., 2004, p.162). Trust played a key role too in the acceptability of Palmier-Clause et al's work - some participants did not believe that their clinicians could help them and were more negative about the use of the mobile telephony application (Palmier-Claus, Rogers et al., 2013).

## 2.2 Main findings of the review

While there is no evidence that the use of tools to case-find, diagnose or monitor mental health issues is generally unacceptable to patients, screening for perinatal mental health issues and domestic violence seems especially problematic. Also, stigma and social desirability issues influence the acceptability of questions in tools relating to alcohol and other drugs, affecting the willingness of patients to answer such questions, most noticeably to human interviewers, and, in some instances, call into question the total honesty of the responses given.

### 2.2.1.1 Peri-natal depression

Screening for peri-natal depression seems fraught with problems affecting acceptability. Shakespeare et al looked at the use of the Edinburgh Post-Natal Depression Screening (EPDS) tool to screen for post-natal depression (Shakespeare, Blake et al., 2003). Only fifty-four per cent (54%) of their participants reported that the use of the tool was unacceptable to them. Their results were echoed by Cubison and Munro who reflected that

*“willingness to complete a questionnaire is not synonymous with its acceptability”* (Cubison & Munro, 2005, p.159)

The NHS’s 2015 review of perinatal mental health services reminds us that perinatal mental illness affects at least 10% of women and that about 50% of these cases go undetected, giving an estimated annual post-natal depression caseload of 70,000 in England alone (*Improving Access to Perinatal Mental Health Services in England – A Review*, 2015). Hearn et al found a similar prevalence and diagnostic rate eighteen years earlier (Hearn, Iliff et al., 1998).

The Confidential Enquiries in Maternal Deaths 2015 reports that *“almost a quarter of maternal deaths occurring between six weeks and one year after the end of pregnancy were due to psychiatric causes”*, underlining the need for competent perinatal mental health screening and diagnosis (Knight, Tuffnell et al., 2015). With such low levels of case recognition deployment of tools such as the EPDS is highly suitable. However, the papers reviewed here suggest that the tool is not entirely acceptable to those who already recognise that they are depressed and that women adjust their responses to understate any difficulties they might be experiencing, perhaps to avoid seeming a failure as a mother or fearing that their child might be taken from them. This review identified pressure from healthcare workers and fear of negative outcomes as factors affecting acceptability of screening using a tool.

Drake et al’s online delivery of the EPDS would seem to address many of the acceptability issues seen in other research in that it allows the patient to complete the questionnaire in the privacy of their own home at a time of their choosing and repeat it as often as they like – an example of how a change in the delivery of a tool may increase acceptability, findings reflected in Kingston et al (Drake, Howard et al., 2014) (Kingston, Biringier et al., 2015).

### 2.2.1.2 Alcohol and Other Drugs

Thorley et al note that *“alcohol misuse in the UK is a major public health problem, which is responsible for considerable psychological and physical morbidity”* (Thorley, Hettiarachchi et al., 2012, p.585). One of the problems for medical services is recognised by Shivani et al who note that *“heavy drinking associated with alcoholism can coexist with, contribute to, or result from several different mental health syndromes”* – in other words alcohol misuse can

be the cause or the consequence of other mental health disorders, including other drug misuse (see Kessler), a so called 'dual diagnosis', each element of which merits treatment in its own right (Shivani, Goldsmith et al., 2002, p.90) (Kessler, Ronald C, 2004).

This review found that fear of stigmatisation, loss of face and fear of social undesirability affected the acceptability of screening tools. Tools delivered by automatic telephone systems or computer were more acceptable. Acknowledging the impact of alcohol and other drug misuse on patients' mental health helps us appreciate the importance of finding an effective tool for screening, and an effective method of delivering the tool.

### **2.3 The next step – the research questions**

As discussed earlier, GMHAT/PC is a validated tool for the assessment of mental health symptoms in the UK setting. The unresolved issues relate to its acceptability to patients in UK primary care and whether its use by primary care healthcare workers is feasible within their working paradigms and these matters form the basis for the first two research questions.

There was a repeating theme in my background reading about primary care's training in assessing mental health symptoms. Various researchers considered how to improve the recognition of mental health disorders in primary care. Goldberg et al demonstrated that with four sessions of individual instruction, their doctor participants improved their performance in more accurately assessing their patients' symptoms, evidenced in the research by analysis of videoed consultations (Goldberg, D P, Steele et al., 1980). And later, Howe set out a "*self-directed educational package that could be deployed without intensive expert training or outside expertise*" (Howe, A, 1996, p.409). The process outlined by Howe included distributing GHQ28 questionnaires to patients in the waiting room, videoing the consultations with the requisite need for obtaining the patient's consent both before and after the consultation, analysis of the GHQ28, viewing the video preferably with a peer, and the necessary reflection.

Goldberg et al's approach is most appropriate for relatively small groups working together in a protected learning environment, probably over several days, while Howe's package is

suitable for practitioners developing their skills, possibly alone but preferably with at least one colleague. While both approaches demonstrate improvement in the doctors' abilities to conduct a mental health interview, they are both resource intensive in terms of the capital expenditure for the equipment required perhaps but most especially in respect of the time required for implementation. This leads to a third research question - if primary care healthcare workers use GMHAT/PC in their everyday practice, what effect would this have on their ability to conduct mental health assessments? The three research questions are set out in Table 8 below.

**Table 8: The Research Questions**

1. Is the use of GMHAT/PC in primary care acceptable to patients in the assessment of their mental health symptoms?
2. Is the use of GMHAT/PC feasible in UK primary care?
3. What is the impact of using GMHAT/PC on the healthcare workers' ability to carry out mental health assessments?

## **2.4 Summary**

The plans for the research journey were made when we reflected on the missed or delayed diagnosis of mental health disorders in primary care. We then considered the use of support tools to support primary care healthcare workers and then reflected on whether these tools would be acceptable to patients.

This critical review of the literature found studies where direct questions were asked about acceptability through questionnaires or interviews. While no studies suggested that the use of tools to case-find, diagnose or monitor mental health issues is not acceptable to patients, there are areas of sensitivity relating to perinatal mental health, domestic violence and alcohol and other drug issues that reduce their acceptability.

The Global Mental Health Assessment Tool for Primary Care (GMHAT/PC) supports the healthcare worker to carry out a comprehensive mental health assessment and is designed for use in routine primary care. However, its effective deployment is dependent on whether it is acceptable to primary care health professionals and their patients.

The next step in this journey is to answer specific questions about the acceptability and feasibility of the Global Mental Health Assessment Tool for primary care (GMHAT/PC). An additional reason for the journey is to find out if using GMHAT/PC has any effect on the ability of healthcare workers to assess their patients' mental health symptoms.

These questions form the basis of this study.

This critical review was the subject of an oral presentation and poster at World Congress of Psychiatry conference in Berlin in October 2018.

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# Chapter 3 The Research Methodology

## 3.1 Introduction

Three research questions have been identified:

1. Is the use of GMHAT/PC in primary care acceptable to patients in the assessment of their mental health symptoms?
2. Is the use of GMHAT/PC feasible in UK primary care?
3. What is the impact of using GMHAT/PC on the healthcare workers' ability to carry out mental health assessments?

The answers to these questions are important to primary care clinicians as they seek to maximise the care they provide to their patients, and to educators as they seek to ensure healthcare workers are fit to provide that care. There has been much emphasis since about the mid-1990's on evidence-based medicine which Sackett et al described as "*the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients*", where the clinical expertise is combined with the best external evidence from systematic research (Sackett, Rosenberg et al., 1996, p.312). Answering the research questions and defining that best evidence requires a structured approach, the research methodology.

The choice of methodology is governed by the research questions, ethical considerations, and the anticipated outcomes. The three research questions lend themselves to both quantitative and qualitative methodologies. Nelson and Quintana opine that "*qualitative methods emphasize verbal analyses, rather than mathematical analyses, and are particularly suited to research by clinicians, who are skilled at listening and making sense of people's lived experience*" (Nelson & Quintana, 2005, p.344). Combining qualitative and quantitative approaches allows for a blending of statistical analysis with the depth and colour of drilling down into the subtleties of eliciting participants' opinions, biases, and conceptions.

## A mixed-methods approach- quantitative and qualitative research

Table 9 below details the research methods most likely to address the research questions, identifying that a mix of quantitative and qualitative tools are required. Quantitative methods such as questionnaires lend themselves to statistical analysis, while qualitative methods such as interviews allow for more subtle in-depth exploration of participant opinion with analysis of the main themes elicited.

**Table 9: The research methods most likely to address the research questions**

Research Question	Participants	Research Methods
Is the use of GMHAT/PC in primary care acceptable to patients in the assessment of their mental health symptoms?	Patients	Questionnaire (Quantitative).  Analysis of any free text comments added to the questionnaire.  Semi-structured interview (Qualitative).
Is the use of GMHAT/PC feasible in UK primary care?	Healthcare workers	Semi-structured interview (Qualitative).
What is the impact of using GMHAT/PC on the healthcare workers' ability to carry out mental health assessments?	Healthcare workers	Self-rating questionnaire of confidence and competence (Quantitative).  Semi-structured interview (Qualitative).

Yoshikawa et al assert that “*the world is not inherently qualitative or quantitative*”, and go on to describe quantitative research as “*methods of inquiry that analyse numeric representations of the world... (e.g., counts, levels, or Likert-format responses)*”, and qualitative research as “*information that has been collected not in numeric form but in texts, narratives, or observations (including pictures and video), ... that do not rely on numeric representation*” (Yoshikawa, Weisner et al., 2008, p 344-345). Onwuegbuzie and Leech outline the initial dichotomy between proponents of quantitative and qualitative approaches as separate and distinct disciplines and argue that “*monomethod research is the biggest threat to the advancement of the social sciences*”. They contend that quantitative and qualitative methods are not opposite poles of a positivist – hermeneutic continuum, and

recommend instead that, as both approaches have their own strengths and weaknesses, researchers should use both methods to understand social phenomena. Drawing a contrast between purist and pragmatist, they assert that “*pragmatists ascribe to the philosophy that the research question should drive the method(s) used, believing that ‘epistemological purity doesn’t get research done’*”. They maintain that “*in any case, researchers who ascribe to epistemological purity disregard the fact that research methodologies are merely tools that are designed to aid our understanding of the world*” (Onwuegbuzie & Leech, 2005, p.375, 377). Miles and Huberman also assert that they “*no longer adhere slavishly to one school of thought, or practice solely within the boundaries of one particular philosophical approach*”, echoing Sandelowski’s assertion that pragmatic qualitative research can take on hues or casts of other philosophies (Huberman, Miles et al., 2014, p.9), (Sandelowski, Margarete, 2000).

Howe wrote in 1988 that “*over approximately the last 20 years, the use of qualitative methods in educational research has evolved from being scoffed at to being viewed as useful for provisional exploration, to being accepted as a valuable alternative approach in its own right, to being embraced as capable of thoroughgoing integration with quantitative methods*” (Howe, K R, 1988, p.10). He describes how there were at that time researchers who were cautious of the increasing coming together of the two methodologies, identifying them as proponents of what he called “*the incompatibility thesis*” – a belief “*that the compatibility between quantitative and qualitative methods is merely apparent and ultimately rests on the epistemologically suspect criterion of ‘what works’*”. Howe’s “incompatibilists” would contend that the positivist paradigm (where scientific knowledge is exclusively based on logic and free of metaphysical influence) supports quantitative methods, and the interpretivist paradigm (which holds that metaphysics cannot be disregarded; research cannot ignore psychological elements) *supports qualitative methods*. He asserts that the incompatibilists would argue that “*therefore, quantitative and qualitative methods are, despite the appearance that research practice might give, incompatible*” (p.13). He goes on to suggest that the incompatibilist’s stance restricts the scope of his possible research, comparing it to a drunk who has dropped his door key, looking for it under a light where he can see rather than some distance away in the darkness where he dropped the key – implying that the incompatibilist does not look for evidence where he cannot see where it might be.

Howe opines that intransigent observance of a single research paradigm will not advance research, matching Onwuegbuzie and Leech in this view. He contends that “compatibilism” does not assert that social research must deploy any special type of subjective understanding – thus conceding some theoretical ground to the positivist. But he describes positivism as a moribund philosophy and, while accepting that compatibilism “*blurs methodological lines*”, he suggests that researchers need “*at least a rudimentary understanding of what alternative approaches can provide and, accordingly, they should bring a collaborative (rather than paradigm-clique) attitude to research*” (p.15).

Sandelowski, writing in 1996 about the use of qualitative research in intervention studies, notes that “*interest in qualitative research across the social science and professional disciplines appears to be ‘on the crest of a wave’*” (Sandelowski, Margarete, 1996, p.359). She notes that, at that time, qualitative research was viewed as “*the antithesis of the clinical trial*”, failing to satisfy positivist views of validity and objectivity. She notes that research with statistically significant results may have limited clinical practical significance or “*real-life importance*” for patients and healthcare workers. She suggests that, when proposing new clinical interventions, qualitative techniques to explore the research participants’ points of view can enhance the significance of the quantitative findings, producing information that will inform about feasibility and the burden imposed on the patient by the intervention. Qualitative techniques facilitate an understanding of the intervention in its real-life setting, showing how patients and healthcare workers experience it – attributes directly pertinent to this study’s research questions. She describes how qualitative and quantitative techniques can be used in combination for triangulation, to substantiate results and increase a study’s internal validity (the fundamental relationship between the research’s variables). Onwuegbuzie and Leech suggest that “*the debate between qualitative and quantitative is divisive*” as ideological purists from both disciplines focus on the dissimilarities and disregard what both have in common (Onwuegbuzie & Leech, 2005, p.375). They and Howe agree on the idea that researchers should recognize the value of both approaches (Howe, K R, 1988).

Moore et al., reporting the Medical Research Council’s guidance on complex interventions, suggest a combination of methodologies, a mixed methods approach, appropriate to the research questions, using “*quantitative methods to measure key process variables*” and “*qualitative methods to capture emerging changes in implementation, experiences of the intervention* (echoing Sandelowski) *and unanticipated or complex causal pathways, and to*

*generate new theory*” (Moore, Audrey et al., 2015, p.4). Moore et al defined complex interventions as those comprising multiple interacting components. This research, with its different types of research participants and multiple output data types, is a complex intervention. The intervention in this research is not directly therapeutic for patients, e.g., in the same way as giving an evidenced-based medication. It should however be indirectly therapeutic by introducing the multiple interacting components of the training and the standardised assessment method of the semi-structured interview tool. In line with Moore et al’s suggestions, the quantitative and qualitative analyses in this research will build on each other to support each other’s findings.

Having considered the issues, mono-methodology’s threat to advancement of social science, the moribund status of positivism, the need to achieve rigour and the use of qualitative research in understanding how patients and healthcare workers view interventions, the conclusion is that a mixed quantitative and qualitative methodology will be most appropriate for this study. This choice is underpinned by Sandelowski’s assertion that a mixed-methods strategy promotes triangulation and internal validity, and underlined by Miles and Huberman, who declare that “*we have to face the fact that numbers and words are **both** needed if we are to understand the world*” (Huberman, Miles et al., 2014, p.42).

With a mixed-methods approach selected, deliberations now shift to how one might analyse the individual data types generated in the study, and which research methodology is most appropriate.

### 3.1.1 Analysis of the data

The quantitative data generated will be subjected to graphical presentation and statistical analysis. The type and depth of the analysis will depend on the data types, nominal, ordinal, interval, or ratio. Where statistical significance can be investigated, the outcome will be significant if  $p < .05$ .

Qualitative data lends itself to thematic analysis and consideration of that data from a particular research lens or philosophical stance (Savin-Baden & Major, 2013, p.84). The challenge is to identify how one will view the data. It is worth considering the context of the research to understand its possible influence on the selection of the philosophical

framework.

I am a general medical practitioner with some 36 years of practice behind me. When I read papers recognising primary care's deficits in diagnosing mental health, I am at first disappointed that this is so – disappointed that my profession is criticised and that I am being criticised by inference. With reflection, however, I recognise and accept the oft-repeated findings. Psychiatry is not the only speciality badly taught – dermatology, renal medicine and ophthalmology could easily be included in the same list as the emphasis of medical undergraduate training is heavily weighted towards physical internal medicine.

Combine my nascent awareness of primary care's performance in the diagnosis of mental health with my knowledge of what information technology can do, and the paradigm shift of easily accessible knowledge and support tools made possible by information technology, and the reader is some way forward in understanding my interest in this research project. Next, let us look at where the research is set. The setting is real-world suburban general practice where patients present seeking remedies to cure or manage their varying symptoms and difficulties. For the purposes of this study, we are especially interested in those presenting with mental health symptoms. In this real-world project, some of these patients become participants in the research. Other participants in this research are the various healthcare workers, the doctors, nurses, healthcare assistants, the medical students, physician associates, attached to the participating practices. Robson identified several features of "real-world" research that resonate with this project – see Table 10 below (Robson, 2002, p.12).

**Table 10: Robson's features of real-world research**

- The emphasis on solving a problem rather than purely gaining knowledge.
- Looking for robust results and not for statistical relationships between variables.
- Prioritising actionable factors, where changes are feasible.
- Research set in the outside organisation, UK primary care in this case, and not a laboratory or research institution.
- Time constrained.
- Financial constraints.

The focus of the research is on determining:

- What the patient participants think about the acceptability of the use of GMHAT/PC in their assessment.
- What the healthcare worker participants think about the feasibility of using the tool in primary care.
- The impact of using the tool on the healthcare workers' ability to assess mental health symptoms. This will be measured by changes in the healthcare workers' confidence and self-rated competence.

This research does not propose to be inductive – it does not propose to derive or define new theory. Instead, it sets out to understand a problem, collect and analyse related data and consider whether an intervention could, in some part, remedy the problem.

### **3.2 Critical review of relevant qualitative research methodologies**

Teherani et al describe qualitative research as “*systematic inquiry into social phenomena in natural settings*” (Teherani, Martimianakis et al., 2015, p.669). They describe how different qualitative research approaches are used as frameworks to shape the methods of data collection and how that data is analysed and how the qualitative approach must align with the research questions.

The qualitative research methodologies considered as possibly suitable for this project are:

- Grounded theory.
- Case study.
- Pragmatic qualitative research.
- Phenomenology.
- Ethnography.
- Narrative Approaches.

There is a summary table of the methods reviewed on page 122.

### 3.2.1 Grounded Theory

Savin-Badin and Major propose that “*grounded theory allows the researcher to engage in a step-by-step, systematic procedure, to formulate a hypothesis based upon concepts and to test this hypothesis by constantly comparing cases*”. The premise is that nothing is known about any possible outcome and the ideas or hypotheses are generated by examining each research event and building on the hypotheses as the research progresses. They go on to suggest that “*researchers should choose grounded theory when they hope to generate a theory through inductive and deductive reasoning that can explain a process, action or interaction, regardless of time and place. Researchers who want to stay close to the data and who do not necessarily seek ‘truth’ but rather a conception about what is taking place in a particular situation will benefit from a grounded theory approach*” (Savin-Baden & Major, 2013, p.184).

Charmaz describes grounded theory as “*a logically consistent set of data collection and analytic procedures aimed to develop theory*” (Charmaz, 1996, p.33). She suggests that grounded theory is suitable for “*individual processes, interpersonal relations and the reciprocal effects between individuals and larger social processes*” (p.34). She describes constructivist ground theory where researchers and their participants construct their own view of their realities, while acknowledging always that these interpretations are in themselves only constructions.

Hunter et al write about the task of theory development with constant comparison, the emergence of a core category and inclusion of self and engagement with participants. They identify that “*grounded theory is ideally suited to areas of research where there is little understanding of the social processes at work*” (Hunter, A, Murphy et al., 2011, p.7).

**Assessment:** Grounded theory is not a suitable methodology for this project. There is an understanding of the processes at work and the possible outcomes. Developing conceptions about what is taking place belongs more appropriately to research relating to consultation skills.

### 3.2.2 Case Study

Savin-Badin and Major (Savin-Baden & Major, 2013, p.153) quote Adelman, who wrote in 1980 that “*case studies are not easy to do (some of our best friends are presently trapped inside case studies, trying to get out. Almost none will escape unscathed)*”. They describe how there are several interpretations of case study in the literature with differing views. They quote the principal viewpoints:

- The term “case study” simply means the way in which the case is delimited.
- It is a specific approach to research.
- A case study is the final product of a qualitative study.

The viewpoint of case study as a specific approach seems most appropriate to this project. Stake and Smith agree that researchers should view case study as bounded systems and inquire into them as objects in themselves rather than processes to be studied (Stake, 1995), (Smith, L M, 1978).

Yin provides a twofold definition of case study (Yin, 2014, p.16). First, he describes it as “*an empirical inquiry that investigates a contemporary phenomenon (‘the case’) in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident*”. The second part of his definition is that “*case study inquiry copes with the technically distinctive situation in which there will be more variables of interest than data points*”, that it “*relies on multiple sources of evidence, with data needing to converge in a triangulating fashion*”, and that “[*it*] *benefits from the prior development of theoretical propositions to guide data collection and analysis*”.

**Assessment:** While the initial idea of case study seemed to fit with the idea of each patient being a case, the philosophical lens does not fit well with this project. An alternative view with GMHAT/PC as “the case” does not feel a good fit with this research either – this is not proposed to be a dissection of GMHAT/PC but rather views GMHAT/PC as a vehicle to bring about other change in the assessment of mental health symptoms.

Yazan’s view of a single entity with boundaries does not fit with the context of this research project where the potential numbers of patient participants and healthcare worker participants have no boundaries. The core activity of this project is a process – the process

of helping healthcare workers to deliver comprehensive mental health assessment to their patients. The idea of viewing the research event moments as objects one might inspect is a poor fit for this project. Yin's definition of case study does not alter the assessment when he suggests that the boundaries between the phenomenon and the context of that phenomenon are ill-defined. This does not reflect the well-established paradigm of the patient consulting their physician – the boundaries are defined, no matter the competence of the assessment.

### 3.2.3 Pragmatic Qualitative Research

Thorne notes the increased use of qualitative research in the health sciences and that it has entered the mainstream of the acceptable science in health. She suggests that frontline practitioners accept and readily implement results from good qualitative research and that *“the richness and passion of a well-crafted narrative may have considerably more ‘truth value’ to the clinician than does a well-controlled and effectively orchestrated clinical trial”* (Thorne, 1997, p.288).

Caelli et al responding to the challenges of reviewing manuscripts not aligning to particular qualitative paradigms, notes too that such research is becoming more common in clinical settings and does not consider it likely that this trend will reverse (Caelli, Ray et al., 2003). Savin-Baden and Major acknowledge that certain research projects call for a more practical style, most notably in professional fields, where such an approach may be more appropriate to provide the descriptive information that can enlighten practice (Savin-Baden & Major, 2013, p.171).

Cooper and Endacott noted that all qualitative research studies in emergency medicine took *“a generic approach and rarely conformed to established qualitative approaches”*. They suggest that *“specialist qualitative approaches are less applicable for pragmatic clinical researchers who may be better placed to follow a general or generic template”* but go on to advise that researchers should guard their reflexivity (how they influence and interpret their data), choose relevant methods of data collection, include processes for establishing rigour and effectively discern and communicate their findings. They advise that researchers taking a generic stance should make their theoretical position clear and that methods should be clearly described to distinguish between them. They choose observation as an example and direct pragmatic researchers to describe their methodology sufficiently to differentiate it from ethnographic observation (Cooper & Endacott, 2007, p.818).

Sandelowski, noting that researchers can choose from a number of sophisticated methods, reflects that *“the increasing complexity of qualitative methods and the tyranny of method in nursing research that makes the rediscovery of qualitative description necessary”*. She goes on to define qualitative description as *“a method that researchers can claim unashamedly without resorting to methodological acrobatics”* (Sandelowski, Margarete, 2000, p.334,335).

**Assessment:** Several authors acknowledge the utility of pragmatic or descriptive qualitative research in professional fields. Sandelowski notably portrays qualitative description as *“especially amenable to obtaining straight and largely un-adorned (i.e., minimally theorized or otherwise transformed or spun) answers to questions of special relevance to practitioners and policymakers”* (Sandelowski, Margarete, 2000, p.337). A pragmatic stance could be a suitable vehicle for this research.

### 3.2.4 Phenomenology

Creswell and Poth define a phenomenological study as describing *“the meaning for several individuals of their lived experiences of a concept or a phenomenon”* (Creswell & Poth, 2016, p.57). They go on to explain how phenomenologists *“focus on describing what all participants have in common as they experience a phenomenon”*, seeking to analyse the experience. Having a mental health assessment could be labelled as a phenomenon although Savin-Baden and Howell (Savin-Baden & Major, 2013, p.215) suggest that the phenomenon is *“typically a concept such as love, care, hate”*.

Husserl’s **transcendental phenomenology** requires that the researcher should *“bracket out the world and personal biases in order to understand the essences of the phenomenon being studied”* (Savin-Baden & Major, 2013, p.218). Dowling expands on this idea of bracketing and suggests that *“it usually relates to the researcher examining their prejudices in order to allow them to include the views of the respondents”* (Dowling, 2007, p.136). Another component of transcendental phenomenology would be that the researcher should alter some element of the phenomenon being studied.

Heidegger developed **hermeneutic phenomenology**. Hermeneutics is the theory and methodology of interpretation, most classically applied to religious texts and wisdom in

general. Dowling opines that Heidegger's main focus is ontological, i.e., focussed on the essence of being or existence, relating to how people exist and relate to the world (Dowling, 2007). Savin-Baden and Major describe the hermeneutics as focusing as "*on shedding light on taken for granted experiences that then enable researchers to create meaning and develop understanding*" (Savin-Baden & Major, 2013, p.219).

Crotty et al argue that there is "*a world of difference between the phenomenology found in the traditional phenomenological movement and what generally passes for phenomenology today*" (Crotty, Willis et al., 1996, p.272). They assert that despite encouraging researchers to bracket their presuppositions and biases and to "*[put] oneself in the place of the other*", understanding of what is common and the meaning of common practice are key themes, and that much of the phenomenological research emerges as exploration of cultural understandings. They aver that the idea of putting oneself in the place of the other was not part of the original phenomenological philosophy.

There seems to be an assumption that what we know, or think we know, is the direct consequence of lived experience and that this idea permits the researcher to get insight into the lived experience of others. This ideological viewpoint however discounts the effect and influence of the individual's current physical and psychological context.

**Assessment:** When I consider the roles I will play in this project, lead researcher, training healthcare workers, a healthcare worker creating research event moments, interviewing patients, supporting other healthcare workers, I think it will be impossible and inappropriate to "bracket out the world". Dowling's idea of altering some element of the phenomenon to observe the impact on the participants also seems inappropriate in the clinical setting. These features suggest that a transcendental phenomenology lens would not be suitable for this research.

Hermeneutic phenomenology might have some role when considering patient participant responses to the question of GMHAT/PC acceptability, but an ontological interpretation is probably excessive to determine a patient's view on the acceptability of a 15-30-minute mental health assessment. This research proposes to assess the acceptability and feasibility of a method to assess mental health symptoms and so phenomenology seems a less suitable paradigm.

### 3.2.5 Ethnography

Hammersley describes ethnography as a social research method where the researcher participates in people's daily lives, watching, listening, asking questions and collecting whatever data is available to throw light on the question in hand (Hammersley & Atkinson, 2007). Ethnography has moved from descriptions of other or strange cultures, such as Malinowski's seminal work, to more local research settings such as communities within Western countries, even down to studies of clinical practice (Malinowski, 2013).

Examples of this shift might include Gabbay et al who observed clinicians in two general practices over a period of two years to determine how primary care healthcare workers derive their clinical decisions, and Williamson et al who used participant observation and interviews of five hospital advanced nurse practitioners to examine their roles in patient care and to assess their impact on patient care and nursing practice (Gabbay & May, 2004), (Williamson, Twelvetree et al., 2012).

Draper, writing in the Nursing Standard, reports that the use of ethnography is increasing in nursing and healthcare research. She describes how "*it is concerned with studying people in their cultural context and how their behaviours, either as individuals or as part of a group, is influenced by this cultural context*" and goes on to discuss how the people nurses encounter in their day to day work all have "*knowledge, histories, relationships and cultural experiences*" (Draper, 2015, p.36). While she is referring to nurses meeting patients in this context, I see the argument extending clearly to doctors and their patients, patients and their doctors and doctors with each other and their wider clinical teams. She depicts ethnography as following an interpretative paradigm – where there is no one single truth. She speaks about how the uptake of services offered to patients will be influenced by their "*beliefs, attitudes and [knowledge of their condition]*" (p.37).

Cruz and Higginbottom note that an ethnographic lens makes "*explicit and transparent the effect of the researcher, methodology and tools of data collection on the process of the research and the research findings*", which sits rather better with the proposed stance of involvement in the research, rather than face the difficulties of bracketing oneself out of it (Cruz & Higginbottom, 2013, p.42).

Draper discusses the methods of ethnography which include:

- The challenge of stepping back from the culture, “*making strange the familiar*” and viewing them in a new light, like a visitor arriving in a new country.
- Being an “*insider researcher*” – bringing one’s own knowledge, skills, and attitudes so that we can readily and easily describe the culture.
- Explicit data collection from participants, “*representatives of the culture under study*”.
- The researcher observes the participants. She describes how “*in contemporary ethnography, researchers are often members, insiders, of the cultures or sub-cultures they are investigating*”.

(Draper, 2015, p.39).

Reviewing the history of ethnography with its historical emphasis on immersive fieldwork in distant cultures and more recently social issues closer to home, I reflected on the relevance of this methodology to my field and the questions in hand. To help in the considerations I used the ‘library search’ functionality on the University’s ‘Portal’ to look for relevant material. The search string was “(ethnography) AND ((psychiatry) AND (primary care))”. Limiting the scope of the search to journal articles available online and published in the three years prior to 2016, yielded 345 papers. I reviewed the abstracts of these papers looking for pertinence to the matter in hand. I did not review studies featuring meta-ethnography or those based outside the UK. I picked out three papers that I viewed as having particular relevance to the planned research.

The first was a paper from Anderson et al who explored patient’s experiences in starting antidepressant treatment in a multi-centre study in the UK and Australia. They interviewed patients to obtain views on matters such as their attitudes to taking antidepressants, finding information about their medication and the influence of the prescribing doctor (Anderson, Kirkpatrick et al., 2015).

Obesity is an acknowledged issue for future health, a risk factor for cancer and linked inexorably to the rising prevalence of diabetes and big joint failure. Blackburn et al interviewed UK doctors and nurses to explore why this sensitive issue is infrequently discussed in consultations (Blackburn, Stathi et al., 2015) . They interviewed the healthcare workers using a “*flexible interview schedule*” and identified several barriers to engaging

patients in discussion about their weight, such as limited understanding of obesity management, concerns about negative consequences for the working relationship with the patient, and brief consultation time.

And finally, Alderson et al looked at depression case-finding in patients with chronic disease within a primary care setting. They looked at practice routines and consultations, reviewed patient records and interviewed staff and patients. Their study identified discordance between patient and professional agendas, probable inadequate professional training, reluctance to open a can of worms, patients being unaware that case finding was occurring and competing practice priorities (Alderson, Russell et al., 2014).

The use of ethnographic methodology seems to have worked well in the papers reviewed and the contexts of these studies have strong similarities with my proposed study. Wolcott, however, identifies the problem of “posturing” in qualitative research, where researchers feel obliged to label their work as conforming to one of the more rigidly described methodologies (Wolcott, 1992). Sandelowski describes this as “*methodological acrobatics*” (Sandelowski, Margarete, 2000, p.335). Reflecting further on the medical papers above, one might ask what they do really reveal about the cultural settings of the various healthcare workers and their patients. Where are the rich and thick descriptions of the dynamics of the settings? Instead, one might think that the papers reveal more about fear of medication, stigma of mental health problems, patient engagement in management of their health problems, the dichotomy of the practice’s priorities (recording quality and outcome framework data) versus the patient’s priorities (the reason why they attended the surgery and what they hoped to gain from the consultation), the healthcare worker’s consultation skills (explaining the anti-depressants, explaining the line of enquiry, tackling difficult subjects), none of which have any great bearing on ethnography.

Neergaard et al argue that posturing by researchers does not make any methodological or theoretical impact on knowledge and causes researchers to overlook qualitative description. They contend that, while some dismiss qualitative description as a valid methodology for being simple and devoid of rigour, it has a place in “*tailoring clinical interventions, scales, needs assessments and questionnaires in mixed method studies or in relation to small independent research projects*” (Neergaard, Olesen et al., 2009, p.52).

**Assessment:** Ethnography with its essential involvement of the researcher in the culture being studied has some merits for this study. However, while the study is taking place within the fairly well-defined sub-culture of UK primary care, the focus of the study is not on understanding the culture itself but rather on a small subset of interactions that take place within that culture and for these reasons ethnography is not the lens of choice for this study.

### 3.2.6 Narrative Approaches

*“Narrative inquiry is first and foremost a way of understanding experience”* writes Clandinin et al, who then go on to describe it as a vehicle to investigate the individuals’ experiences over time and define those experiences into a *“three-dimensional narrative inquiry space that allows for inquiry into both researchers’ and participants’ stored life experiences”* (Clandinin, D Jean & Connelly, 2000, p.542). The three dimensions of the narrative’s structure are place, time, and sociality, in other words the whole setting within which the research moment takes place.

Savin-Baden and Major (Savin-Baden & Major, 2013, p.237) say that in narrative-based research the person from whom the data has been collected is also the focus of the research. Clandinin et al build on this idea, defining narrative inquiry thus: *“People shape their daily lives by stories of who they and others are and as they interpret their past in terms of these stories. Story, in the current idiom, is a portal through which a person enters the world and by which their experience of the world is interpreted and made personally meaningful”* (Clandinin, D. Jean, Cave et al., 2017, p.90).

**Assessment:** A narrative approach does not fit with my research project. While the research is about the participants, the participants themselves are not the focus of the study.

**Table 11: Summary of methodologies reviewed**

<b>Research Approach</b>	<b>Characteristics</b>	<b>Advantages</b>	<b>Drawbacks</b>	<b>Relevance to this study</b>
Grounded theory	<p>Very little is known about the topic being researched.</p> <p>Close to the data.</p> <p>“All is data”.</p> <p>Generate hypotheses by examining each new research event – depends on iterative process.</p>	<p>Blank sheet – develop ideas as data generates the themes.</p> <p>Inductive process.</p>	<p>More suitable for social psychological issues.</p> <p>Need to be close to the data.</p>	<p>Seems limited.</p> <p>This project is looking at acceptability and feasibility – not seeking to generate new theory re these subjects.</p>

<b>Research Approach</b>	<b>Characteristics</b>	<b>Advantages</b>	<b>Drawbacks</b>	<b>Relevance to this study</b>
Case study	Bounded.	Flexible. Suitable for in-depth examination of study subjects.	Unclear terminology at present. Different expert viewpoints. Difficulty defining the boundaries of what is “a case”. Boundaries are defined.	Unsuitable as this project is looking more at process (and the participants’ opinion of the process).
Pragmatic qualitative research / Qualitative description	Lens-less (or simple glass?) Suitable to answer questions in professional settings	Provides descriptive information to inform professional practices.	“Low inference approach reduces ability to speak in general terms” (Neergaard, Olesen et al., 2009)	Neergaard suggests qualitative description is the method of choice when a description of an event is needed. Low inference approach is suitable. Seems suitable for professional setting.

<b>Research Approach</b>	<b>Characteristics</b>	<b>Advantages</b>	<b>Drawbacks</b>	<b>Relevance to this study</b>
Phenomenology	<p>Analysis of lived experiences.</p> <p>Focussing on commonality of experiences.</p>	Ontological approach for Heidegger's hermeneutics.	<p>Typically focusses on concepts such as love, care, hate.</p> <p>Can I bracket out when I am immersed in the culture?</p> <p>Assumes that all we know is the result of experience.</p>	<p>Bracketing out is problematic.</p> <p>Altering some element of the phenomenon is not possible.</p>

<b>Research Approach</b>	<b>Characteristics</b>	<b>Advantages</b>	<b>Drawbacks</b>	<b>Relevance to this study</b>
Ethnography	<p>“Grasp the native’s point of view.”</p> <p>Observe self and others.</p> <p>Understand mechanisms of social processes.</p> <p>Comprehend and explain why both actors and processes are as they are.</p>	<p>Immersive in culture.</p> <p>Focus on understanding the rules of the culture.</p> <p>My knowledge of primary care culture – some/ large degree of participation.</p> <p>Observation is key data collection method.</p>	<p>Risk of Hawthorn Effect.</p> <p>Risk of “going native” – over-immersion in culture.</p> <p>This research is not about primary care culture – only a small part of it.</p> <p>No major ethnographic focus in this study.</p>	<p>My role within the culture facilitates observation.</p> <p>Identify why people should do one thing and yet do something else.</p> <p>Possibly, some small ethnographic aspect in this study but not major focus.</p>
Narrative approaches	<p>A method to understand experiences, over time.</p>	<p>Participant stories are important.</p>	<p>3-dimensional view of research event – place, time, and sociality – not relevant to this research.</p>	<p>Research focus is on acceptability and feasibility of process – the participants are not the focus.</p>

### 3.3 Choice of research methodology

Sullivan-Bolyai et al champion the use of qualitative description in resolving health inequalities, generally seen in minority or vulnerable populations, including those with mental health problems. They identify that “*qualitative description is an especially useful approach for guiding intervention development because it enhances the internal validity of the study. It does this by collecting data directly from subjects about ways to manage a particular health issue (in his or her own words), thereby decreasing the likelihood that competing explanations are responsible for the relationship between the intervention and outcome variables*” (Sullivan-Bolyai, Bova et al., 2005, p.128). A distinct feature of qualitative description is highlighted by Sandelowski who advises “*The description in qualitative descriptive studies entails the presentation of the facts of the case in everyday language. In contrast, phenomenological, theoretical, ethnographic, or narrative descriptions re-present events in other terms*” (Sandelowski, Margarete, 2000, p.336).

A literature search, using the search string “(((pragmatic qualitative research) OR (qualitative description))) AND (((psychiatry) OR (mental health)) AND ((primary care) OR (general practice))) AND (GeographicLocations = ((UK) OR (United Kingdom)))”, to find research in primary care mental health using a pragmatic or descriptive qualitative methodology yielded 1,861 papers. As before, the scope of the search was restricted to journal articles available online and published in the three years prior to 2016. Excluding meta-analyses, the abstracts of these papers were reviewed looking for relevance to this project.

In the first of the papers considered, Howman et al looked at GP trainees’ experiences and attitudes towards patients with medically unexplained symptoms (MUS; symptoms with no clear organic cause) (Howman, Walters et al., 2016). They used questionnaires to explore the doctors’ attitudes to the management of MUS, their management strategies, their experience of managing the issue and their perception of the teaching they had received. They triangulated this data with in-depth interviews of about 20% of their participants. The work informs about junior doctor stresses regarding MUS and could guide medical educationalists in necessary adjustments to training schedules.

In the second paper, Haighton et al used a pragmatic qualitative methodology to explore service provision for alcohol related problems in mid to later life (Haighton, Wilson et al., 2016). The team interviewed 24 patients and used focus groups for triangulation. The

transcripts from the interviews and focus groups were analysed for themes. Their work informs about the attitudes of mid to later life patients towards alcohol and could guide those in public health or those concerned about health on an individual basis towards different case-finding and management strategies.

Finally, Langer et al used pragmatic qualitative methodology to study the impact of a brief intervention for patients with chronic obstructive lung disease (COPD) (Langer, Chew-Graham et al., 2014). Participants included healthcare workers and patients with COPD. Their study could guide the holistic management of COPD with benefits for the individual patient in terms of quality of life and engagement in disease management and for healthcare communities in terms of reduced demand on expensive secondary healthcare resources.

This brief review of the applications of pragmatic qualitative research methodology confirms its suitability as the most appropriate research lens for my project.

### 3.4 Pragmatic Qualitative Description

Savin-Badin and Major (Savin-Baden & Major, 2013, p.171) suggest that “*there are times ... (that) ... the situation calls for a more practical approach to answering a research question that allows for an eclectic set of methods. Particularly in professional fields, a more pragmatic approach to qualitative research may well be best-suited for providing the descriptive information that can inform professional practices*”. Pragmatic research has its roots in the Chicago School of the 1930’s, where researchers, in an early eschewment of positivism, followed a realist path, believing that an objective reality could be understood, albeit with reduced accuracy. The works of Sandelowski and Neergaard underline the shift with time to the wide use of pragmatic research in professional fields (Neergaard, Olesen et al., 2009; Sandelowski, Margarete, 1996, 2000).

Thorne notes her delight that “*in scholarly nursing and health science circles, qualitative research no longer reflects a radical fringe and has entered the mainstream of the science*” but she has concerns about “*slippage from the original objectives of the qualitative research*” (Thorne, 1997, p.288). She opines that some authors “*claim to pioneer in a field in which nothing is known and to have generated a new conceptualization of a clinical reality*” and

decries the use of enraptured terms such as “*feeling the difference*” or “*living the difference*” (p.289) – terms that might be better used to market a new soap powder. She expresses alarm that some researchers deliver their newly discovered constructs as if they are objective realities. She attributes these problems, first, to what Sandelowski called “*fortification against attack*” (Sandelowski, M., 1993, p.1), a situation where researchers emphasised methodological detail to ensure funding or publication. Second, she speculates that “*perhaps we have tipped the balance of democratizing professional scholarship too far and created the illusion that all thoughts deserve to be treated as significant contributions to fundamental knowledge*” (p.290). Finally, she questions the ego of the health professional, with their everyday life bedded in the routine and the mundane, researching only to find that people are indeed human, and seeking comfort in presenting their idiosyncratically named opus as unique in some way. Thorne goes to suggest some remedies for these ills, firstly to acknowledge that the outcome of qualitative health research “*is not a credible source of ‘truth’ about the universal or even the general*”, and secondly, to seek clinical significance rather than theoretical and scientific significance (p.291).

Asking “*whatever happened to qualitative description?*”, Sandelowski depicts it as “*as a method that researchers can claim unashamedly without resorting to methodological acrobatics*”, a useful tool that does not get the attention it deserves (Sandelowski, Margarete, 2000, p.335). She decries the posturers, those presenting their work as epistemologically more defined and failing to deliver. Their work, she asserts, might be better presented as a qualitative description with overtone of other qualitative methodologies. Her view of the design of qualitative description research is set out in Table 12 on page 129.

Proposing qualitative description as no easier, no less valuable, no less desirable, and no less scientific than other approaches, Sandelowski advocates that each has its merits appropriate for specific purposes. Identifying three main features of qualitative description, she first asserts that it exists on its own as an entity, albeit largely unacknowledged, and is not a new derivative of grounded theory, phenomenology, or ethnography. Second, she views it as less interpretive as researchers remain close to their results, and finally, maintains that researchers “*do not require a conceptual or otherwise highly abstract rendering of data*” (p.335).

Sandelowski asserts that all research involves description and that no description is free from the researcher’s decoding or transformation of the event through the lens of their own biases. However, she advises that implicit in qualitative description is a lower degree of inference or interpretation of the description – there is no deliberate effort on the researcher’s part “*to describe an event in terms of a conceptual, philosophical, or other highly abstract framework or system*” (p.335). In direct consequence, she asserts that this is likelier to result in the researchers finding greater consensus in their analysis.

Qualitative description has a generic naturalistic quality, relating to the study of something in its natural state. Sandelowski advises that “*there is no pre-selection of variables to study, no manipulation of variables, and no ‘a priori’ commitment to any one theoretical view of a target phenomenon*” - the researcher using qualitative description will present the target phenomenon as it would itself (p.337). She maintains that any qualitative research may take on hues of other approaches – in this paper she quotes as an example that one of her grounded theory studies adopted phenomenological and narrative ‘casts’.

**Table 12: Sandelowski (2000) Qualitative Description Design**

<b>Consideration</b>	<b>Specifics</b>
Philosophy	Pragmatic approach. May have overtones of other qualitative methods.
Sample	Purposeful sampling.
Data collection	Minimally to moderately structured interviews; open questions; individuals or focus groups.
Analysis	Interview content is coded; coding system relates to the data presented.  Can use descriptive statistics – a supplement to the content analysis.  Remain close to the data – low level interpretation.
Outcomes	Description of the data, structured to fit the data – chronologically, by topic, relevancy.

I previously identified Sullivan-Bolyai et al’s belief in qualitative description as a tool to ameliorate health inequalities, particularly as they are “*often embedded within an elusive cultural context which typically defies traditional quantitative methods*” (Sullivan-Bolyai, Bova

et al., 2005, p.128). Health inequalities prevail widely throughout the UK's health service affecting those with mental health issues, literacy problems, communication difficulties (including linguistic competence), learning difficulties and cognitive difficulties inter alia. Quoting Sandelowski, Sullivan-Bolyai et al define qualitative description as "*a distinct method of naturalistic inquiry that uses low inference interpretation to present the facts using everyday language*" (p.128). Sullivan-Bolyai et al iterate Sandelowski when they tell us that "*the goal of qualitative description is not thick description (ethnography), theory development (grounded theory) or interpretative meaning of an experience (phenomenology) but a rich description of the experience/event/process depicted in easily understood language*" (p.128).

Neergaard et al writing in 2009 refer immediately to Sandelowski's issues of "*posturing*" and "*methodological acrobatics*". Styling qualitative description as "*an empirical method of investigation aiming to describe the informant's perception and experience of the world and its phenomena*", they propose it's use in various fields, including tailoring clinical interventions and tools in mixed method studies, especially small independent research. Qualitative description differs from other qualitative methodologies in that it is focussed on understanding what the participants know already and not about understanding the phenomenology, or hermeneutically deriving a new view of that understanding. Neergaard et al address the question of whether qualitative description allows for positivistic analysis of the data, "pure description", but reason that the process involves "*low inference interpretation*" – "*description is the aim, but interpretation is always present*". Interpretation with all the hues, casts, and biases of the researcher (Neergaard, Olesen et al., 2009, p.52,53).

In 1993, Sandelowski considered the question of rigour in qualitative research. She feels that in the "*quasi-militaristic zeal to neutralize bias and to defend our projects against threats to validity, we were more preoccupied with building fortifications against attack than with creating the evocative, true-to-life, and meaningful portraits, stories, and landscapes of human experience that constitute the best test of rigor in qualitative work*" (Sandelowski, M., 1993, p.1) . She asserts that rigour in qualitative research is not so much about observance of procedures and more about "*fidelity to the spirit of qualitative work*" (p.2). She debates the issue about reliability in qualitative research and dismisses the idea that a valid work must be repeatable, stressing that "*the nature of the narrative data that are the mainstay of qualitative work is inherently revisionist*" (p.3), suggesting that, faced with the same qualitative task, no two researchers will produce the same result because of differing styles and methodical approaches.

She discusses “*member checking*” as a strategy to increase internal validity. Involvement of the member (research participant) as a co-analyst to check the accuracy of their interview transcript and the derived coding runs the risk that they recant what they said or disagree with an analysis. People’s presentations of events change with time, perhaps as they resolve associated emotions – Sandelowski gives the example of a life event previously presented as a tragedy that may be retold later as a romance. These changing perceptions with the sands of time present a further challenge to using participants to validate data.

Milne and Oberle also discussed rigour in qualitative description. They opine that the “*overall credibility of the study depended on the researcher’s ability to capture an insider (emic) perspective and to represent that perspective accurately*” (Milne & Oberle, 2005, p.413). They define a key difference between quantitative and qualitative research in that the former seeks to define “*truth*”, while the latter looks to “*describe and understand the nature of reality through participants’ eyes with careful and on-going attention to context*”. Labelling qualitative description as a “*stand-alone method that affords a comprehensive summary of human experience without an in-depth level of interpretation*” (p.413), they build on Whitemore et al to suggest measures to ensure rigour in qualitative description studies (see Table 13 on page 132) (Whitemore, Chase et al., 2001).

**Table 13: Achieving rigor in qualitative description (Milne and Oberle)**

Primary Criterion	Whittemore et al	Milne et al	Pertinence to this study
Authenticity	Does a representation of the emic perspective (the observer’s viewpoint) exhibit awareness to the subtle differences in the voices of all participants?	<p>Ensure participants are free to speak, to provide purposeful, flexible sampling. Data collection is driven by participant contribution.</p> <p>Hear participant voices to promote “richness” (depth) of data.</p> <p>Conduct focus groups to diminish researcher role.</p> <p>Truthfully represent participants’ views through accurate transcription and content analysis.</p>	<p>Patient participants will be able to express their views when completing study questionnaires, and those agreeing to participation in semi-structured interviews will be invited to identify what they see as benefits of the tool and to also identify the problems.</p> <p>Healthcare worker participants will be encouraged to identify the positive and negative aspects of using the GMHAT/PC tool in their consultations.</p> <p>The use of focus groups is not possible in this study due to patient confidentiality issues.</p>

Primary Criterion	Whittemore et al	Milne et al	Pertinence to this study
			Interview material will be transcribed verbatim and thematically analysed.
Credibility	Do the results of the research reflect the experience of the participants or the context in a believable way?	Capture and portray a true insider (emic) perspective.	<p>The design of this research will capture the authentic viewpoints of both participant types.</p> <p>The semi-structured interview schedules will include specific questions to draw out participant opinions of both positive and negative aspects of the use of GMAHT/PC in the assessment of mental health symptoms.</p>
Criticality	Does the research process demonstrate evidence of critical appraisal?	Reflect on the critical appraisal applied to every research decision.	Each research decision will be considered carefully to ensure research validity.

Primary Criterion	Whittemore et al	Milne et al	Pertinence to this study
Integrity	Does the research reflect recursive and repetitive checks of validity as well as a humble presentation of findings?	<p>Reflect on researcher bias, especial consideration of dual roles, e.g., interviewing as clinician/ researcher / interviewer, and researcher / analyser.</p> <p>Validation by participants (Member checking)</p> <p>Peer review triangulation.</p>	<p>Maintaining researcher integrity and managing the issue of researcher bias is key for this study.</p> <p>Participants will complete study questionnaires in private.</p> <p>Participant interviews will be stored safely for peer review and related reflection.</p> <p>“Member checking” is problematic as participants may recant what they said or disagree with interpretation – see Sandelowski</p>

### 3.5 Summary

In this chapter, I considered several qualitative research methodologies as potential research lenses for my research. Ethnography was reviewed in greater depth due to the greater inclusion of the researcher in the study experience and its apparent utility in the small number of papers reviewed. The issue of posturing was recognised - dressing up a study as following a more sophisticated philosophical approach when, in reality, it was a pragmatic study, perhaps with “hues” or “casts” of other approaches.

Sullivan-Bolyai et al’s view that “*[qualitative description] research provides a vehicle for establishing interventions that are acceptable and understandable to persons experiencing health disparities, as well as to clinicians who ultimately must translate findings into practice*” strikes a chord as pertinent to this research, resonating with the inadequate diagnosis and treatment rate in patients with mental health and for the healthcare professionals who need to be equipped to remedy this issue (Sullivan-Bolyai, Bova et al., 2005, p.132).

Finally, Sandelowski’s extensive and lucid publications, coupled with Neergaard’s additional perspectives, enabled me to select pragmatic qualitative research as the research approach, the “lens”, of choice.

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# Chapter 4 The Research Design

## 4.1 Introduction

In the previous chapter, I identified that a mixed methods methodology would be most appropriate to answer the questions of the acceptability and feasibility of GMHAT/PC in primary care and the impact on healthcare workers' ability to conduct mental health assessments.

This chapter considers how the chosen methodology discussed in Chapter 3 underpins the research design by:

- Summarising the research design in a flow-chart.
- Considering the ethics of research in general and of this project in particular.
- Aligning the questions with features of mixed methods.
- Detailing each step of the project design, identifying where data is generated and the types of those data.

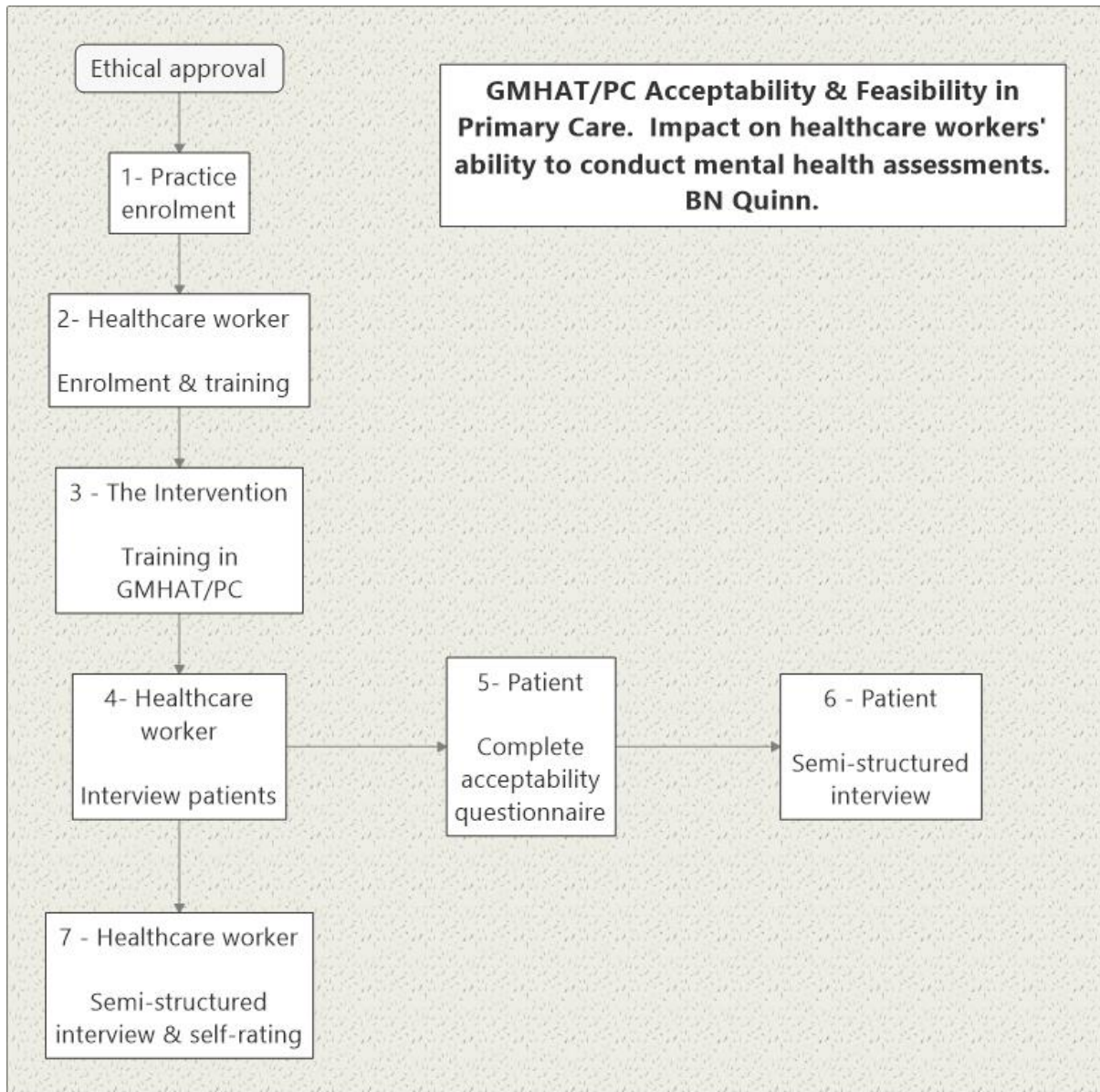
## 4.2 The study design

Figure 12 below describes the research design. This summary process reflects Moore's emphasis on the importance of process evaluation (Moore, Audrey et al., 2015). In simplistic summary:

- Healthcare workers complete an initial self-rating to provide a baseline assessment of their ability to conduct mental health assessments as measured by their confidence and self-rated competence. They are then trained in the use of GMHAT/PC.
- Healthcare workers identify that a patient is presenting with mental health symptoms and use GMHAT/PC in the assessment of those symptoms.
- The patient completes a questionnaire to determine their opinion of the acceptability of the use of GMHAT/PC in their consultation, with the option to add a free-text comment.
- Some patients are interviewed to further expand on their views of the acceptability.

- Healthcare workers complete a second self-rating and are interviewed to explore their view on feasibility and impact on their ability to carry out mental health assessments.

**Figure 12: Research design flowchart**



While Figure 12 might suggest an exploratory sequential design, this study will be a convergent or concurrent design where the quantitative and qualitative data are collected and analysed during a similar timeframe (Fetters, Curry et al., 2013).

### 4.3 Operationalising the research questions

Operationalising is how ideas and concepts are translated into measurable variables that can be measured and analysed. In Table 14 below, the research objectives are aligned with the most appropriate research method. The research project will have two types of participants, patients, and healthcare workers. With this alignment, one can then identify the resulting data types – see Table 15.

**Table 14: Aligning research questions with methodology**

Question	Participants	Method	
Is the use of GMHAT/PC in primary care acceptable to patients in the assessment of their mental health symptoms?	Patients	Questionnaire	Quantitative
	Patients	Free-text comments appended to questionnaire	Qualitative
	Patients	Semi-structured interview	Qualitative
Is the use of GMHAT/PC feasible in UK primary care?	Healthcare workers	Semi-structured interview	Qualitative
What is the impact of using GMHAT/PC on the healthcare worker's ability to conduct mental health assessments?	Healthcare workers	Self-rating questionnaire	Quantitative
	Healthcare workers	Semi-structured interview	Qualitative

**Table 15: Types of data generated in this research**

Participants	Quantitative	Qualitative
Patients	Ordinal data from post-consultation questionnaire	Free text comments from post-consultation questionnaire. Semi-structured interviews.

Healthcare workers	Ordinal data from initial and post-intervention self-ratings.	Semi-structured interviews.
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There is only one independent variable for the three questions – whether a healthcare worker used GMHAT/PC in their assessment of a patient’s presentation with mental health symptoms. For this study, the value of this dichotomous or Boolean variable is always true; GMHAT/PC was used in the assessment.

Looking at the first research question, “*Is the use of GMHAT/PC in primary care acceptable to patients in the assessment of their mental health symptoms?*”, the dependent variable is “patient acceptability” which will be measured quantitatively using a 4-stage Likert-like question in a survey. Data from this variable will be subjected to descriptive and probability statistics. The null hypothesis will assert that there is no statistically significance in the proportion of the patient participants finding the use of GMHAT/PC in their assessment very or somewhat acceptable, and that the probability that it has arisen by chance is 5% or more ( $p \geq .05$ ). The null hypothesis will be refuted if the proportion of patient participants finding GMHAT/PC very or somewhat acceptable is statistically significant and that the probability that it has arisen by chance is less than 5% ( $p < .05$ ). The data from the questionnaire will be triangulated with qualitative data from patient participant free-text comments in the questionnaire and from semi-structured interviews.

For the second question, “*Is the use of GMHAT/PC feasible in UK primary care?*”, the study will use the qualitative variable of “healthcare worker opinion”, a variable that will be measured in a qualitative sense, by the thematic analysis of data from semi-structured interviews. The semi-structured interview schedule will seek to explore healthcare worker views on the general medical templates on their clinical systems to provide a background against which one can observe their views on GMHAT/PC, investigate their opinion of the feasibility of using GMHAT/PC in primary care, and delve into what they see as barriers to the tool’s feasibility and what could be done to circumvent those barriers. The depth of this assessment will enable analysis to address this second research question.

For the third question, “*What is the impact of using GMHAT/PC on the healthcare workers’ ability to carry out mental health assessments?*”, the impact will be measured using the dependent variables “confidence” and “self-rated competence”. Data for these variables will

be collected from a questionnaire completed by the healthcare worker participants. Confidence will be measured on a numerical analogue scale, and self-rated competence will be selected from a range of rubrics describing competence from “cannot do it” up to “I can do this without assistance”. The null hypothesis will assert that any difference in the confidence or self-rated competence will have arisen by chance alone ( $p \geq .05\%$ ). Data from these two variables will be subjected to descriptive and probability statistics. The null hypothesis will be refuted if change in the confidence or self-rated competence is statistically significant ( $p < .05\%$ ). The quantitative data will be triangulated with qualitative data from interviews with the healthcare workers.

#### 4.4 Ethical Considerations

Ethics and the resolution of ethical dilemmas task healthcare professionals in their everyday work, with much call on resolution frameworks ranging from the simplistic postulations of the “*man on the Clapham omnibus*” or its modern variation “*The Daily Mail Test*”, through to Beauchamp and Childress’s more robust pillars of autonomy, non-maleficence, beneficence and social justice, or the Seedhouse Grid (Beauchamp and Childress, 2001) (Seedhouse, 2008).

The UK’s General Medical Council (GMC) has published “Good Practice in Research” which provides guidance for medical practitioners involved in research. This document recognises the essential role of research in improving care and reducing uncertainty for patients and sets out “*to protect participants and maintain public confidence in research*” and emphasises that “*it is important that all research is conducted lawfully, with honesty and integrity, and in accordance with good practice*” (General Medical Council, 2013, p.3).

The need for an ethical framework in research is underlined by several significant research atrocities that occurred within living memory. In the 1940’s, doctors in National Socialist Germany performed experiments on inmates in concentration camps. Subsequent assessments of these experiments led to the definition of the Nuremberg code (Savin-Baden & Major, 2013, p.323).

In the USA, the Tuskegee Syphilis Study had started in 1932 to determine the natural course of untreated latent syphilis in 400 black male tenant farmers and, despite the subsequent

publication of the Nuremberg code and the discovery of penicillin and its clinical effectiveness in treating syphilis, the study was allowed to continue into the 1960's with papers published every four to six years during that period– the longest nontherapeutic experiment on human beings in medical history. Many participants infected their spouses with syphilis, couples gave birth to children with congenital syphilis, and many died (Brandt, 1978). Thomas and Quinn assert that the Tuskegee study and the resulting mistrust in the Black American community hampered the development of HIV education programs in those communities (Thomas & Quinn, 1991). Their observations are echoed by Corbie-Smith who blames the Tuskegee study for the “*unsuccessful attempts at improving representation of minority patients in clinical trials*” (Corbie-Smith, 1999, p.5).

A little closer to home, in the 1990's it was discovered that several UK hospitals were keeping children's organs post-autopsy without consent. Hunter described the findings of the resulting inquiry as “*a catalogue of deception and malpractice by an unethical pathologist, compounded by severe management failings and an evasive and paternalistic attitude towards bereaved parents*” (Hunter, M, 2001). The resulting public outrage led to the UK's Human Tissue Act 2004.

In line with the Declaration of Helsinki (World Medical Association, 2001), the GMC reminds doctors that “*the safety, dignity and wellbeing of participants take precedence over the development of treatments and the furthering of knowledge*”. Researchers must ensure that “*foreseeable risks to participants are kept as low as possible*”, ensuring that the expected benefits prevail over the possible risk (General Medical Council, 2013, p.2,3).

Researching colleagues presents challenges. Potts notes that being a member of an organisation is no guarantee of access to colleagues for research purposes. He describes treading a careful path in his own research so as not to offend or neglect colleagues. He highlights difficulties in gaining full participation in his research where colleagues or the organisation could have been vulnerable to criticism had areas of under-performance become known. He reflects on how some colleagues freely volunteered research materials, while others became reluctant to disclose information in the research setting that had been previously informally discussed (Potts, 2008, p.161). When assessing the validity of his research material, Potts reports how he considered four issues, his role as researcher, his relationship with the colleagues he was researching, the situation, and the act of observation.

Floyd and Arthur identify the problem of “internal confidentiality” where research participants may be able to recognise themselves and others (Floyd & Arthur, 2012). They recognise internal ethical problems which they describe as “*below-surface, murky issues that arise during and after the research process linked to ongoing personal and professional relationships with participants*” such as insider knowledge, conflicting professional and researcher roles, and preserving anonymity. They list advantages of researching your own organisation, such as having privileged access and information, but also note the disadvantages that include the researcher’s position within the organisation acting as a constraint, stopping some from participating and limiting the involvement of others. Included in the disadvantages is the need for researchers to live with the consequences of their research in terms particularly relating to their relationships with their co-worker participants. Maintaining anonymity is a particular problem for insider researchers. By publishing, they reveal the identity of their institution which can allow others with knowledge of the institution to possibly identify participants. Quoting examples, they assert that a reader will identify the researched institution with minimal difficulty and that the insider researcher’s efforts should be focussed on protecting the anonymity of their participants.

Susanne Tietze notes a need to better understand the ties between researchers and the researched where researchers are studying their own organisation. She affirms the researcher as a research instrument and asserts that appreciating their role in the research process is “*vital to appreciating the trustworthiness and authenticity of [their] qualitative research and accounts*”. She describes how the ambiguity of roles, team member on one hand and researcher on the other, and the blurring of boundaries presents conflicts. She says that those researching others should include reflections on their own position, purpose, and source of power. She points out that “*establishing a deep relationship with the researched as people and agents in their own right is a key task for qualitative reflexive researchers*” (Tietze, 2012, p.53,55).

Tietze goes on to note that where the researcher participates in their research, as in this project, juggling the roles of worker and researcher requires some emotional and intellectual flexibility. Boundaries must be drawn between purposeful research interviews and informal ‘water-cooler’ conversations. She describes how organisations can be sensitive to the research collected and the subsequent analysis, how the researched can become defensive, wary, or nervous about the process, and how the researched may resent the interpretations as not truly reflecting their positions and context. She advises researchers to consider how

they will protect the researched. Protection of the identities of this study's participants must be a priority. Use of data received from participants will be screened so that no detail that might allow their subsequent identification will be published.

This proposed design of this research project was submitted for review by the Ethics Committee of the Faculty of Health and Social Sciences at the University of Chester – see Appendix A on page 279. Subsequently, it was also submitted to and approved by the NHS's Integrated Research Application System (IRAS) – Project ID 190943. See Appendix B on page 281.

## The Study Setting



### 4.4.1 Practice Enrolment

Before any individual healthcare worker can be enrolled to the research project, it is first necessary to enrol their practice. This is for several reasons:

- 1- To ensure that the practice's senior management team know that the research is taking place in their practice, and that their healthcare workers and patients will be enrolled as participants.
- 2- So that they understand the research process, and any adverse impact it might have on patient flow during the working day.
- 3- So that they understand any potential for patient harm, and what they should do if patient harm should be recognised.
- 4- So that they could help with the research, e.g., storing patient enrolment packs in a central location, for ease of access.

The practice's management team was provided with information (see Appendix C on page 289) and completed a consent form.

The practice's enrolment does not commit their clinical staff to participation and each healthcare worker working for or attached to the practice is subsequently approached individually and asked if they might wish to be part of the research.

## 4.5 Study participants



### Healthcare worker enrolment

A “healthcare worker” in the context of this project includes doctors, nurses, nursing students and medical students working in primary care or assigned to primary care for an educational attachment. During the research period, the practices engaged in the research hosted or employed two new types of healthcare workers, a GP Assistant and physician associate trainees. These new healthcare worker types were enrolled as participants.

Selection of healthcare workers is based on criterion-based purposive sampling, where the healthcare care workers meet the predetermined criterion of working in or being attached to a practice enrolled in the study (Patton, 2002, p.238). All healthcare workers permanently or temporarily attached to the participating practices were invited to participate. This led to the recruitment of a wide selection of different types of healthcare workers, reflecting real-world practice. Each healthcare worker was provided with written information (Appendix D on page 294) and those agreeing to participate provided written consent (Appendix E on page 299). For the purposes of analysis, the healthcare workers will be later stratified into three groups:

- those working towards their first healthcare qualification,
- those who have achieved their first healthcare qualification but who practise under supervision, and,
- those who practise independently.

#### 4.5.1.1 The Self-Rating Questionnaire

Each healthcare worker completed an initial questionnaire (Appendix F on page 303). The questionnaire asked about their current position, their mental health training or experience, and their confidence and self-rated competence when doing a mental health assessment.

#### 4.5.1.2 Current Position

Examples of “current position” include medical student, nurse, doctor in training or a trained GP.

#### 4.5.1.3 Training or Experience

To describe their mental health training or experience, they selected the option most appropriate to them from a set of word pictures. The options were:

- 1- Have worked in mental health post in a senior position, e.g., registrar, consultant.
- 2- Have worked in a mental health post, e.g., mental health nurse, junior doctor attachment.
- 3- Clinical contact with patients with mental health symptoms in non-mental health posts, e.g., Accident and Emergency, GP.
- 4- In an experiential teaching situation only – no clinical responsibility.
- 5- Theory only – no real face-to-face patient contact.
- 6- No previous teaching.

#### 4.5.1.4 Competency

Another set of word pictures describing varying levels of competency in undertaking mental health assessments were provided. The healthcare worker participant selected the option most closely matching their competency. The options were:

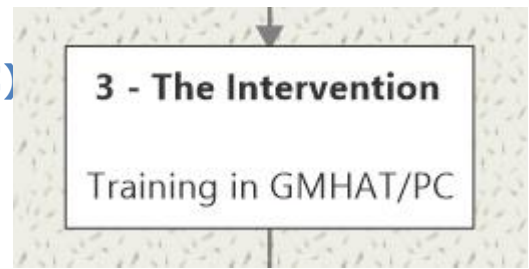
- 1- I cannot perform a mental health interview.
- 2- I can perform a mental health interview but require direct supervision or assistance.
- 3- I can perform a mental health interview with some supervision and assistance such as “senior” support available on site or readily available by telephone, being able to access a protocol or prompt sheet or some other support tool.
- 4- I can perform a mental health interview without assistance or supervision.

#### 4.5.1.5 Confidence

The healthcare worker was asked to indicate their confidence in mental health assessments on a Likert-like scale. The range of the scale was 0-10, where “0” is “not at all confident” and “10” is “completely confident”.

This initial self-rating provided initial nominal and ordinal quantitative data for each healthcare worker and was the baseline from which one could assess the impact of the training sessions provided to the healthcare workers, and the experiential gain of using GMHAT/PC in their day-to-day clinical practice.

## 4.6 The Intervention (GMHAT/PC)



Each healthcare worker was then provided with the intervention which was training in the use of the Global Mental Health Assessment Tool – Primary Care version (GMHAT/PC). The training was provided in small group settings where possible and on a one-to-one basis when necessary. The training was based on a standard GMHAT/PC training package and included:

- 1- A presentation covering:
  - a. The prevalence of mental health symptoms.
  - b. The published evidence relating to mental health training in undergraduate courses and early post-graduate years.
  - c. The published evidence relating to the accuracy of mental health diagnoses in primary care.
  - d. The societal impact of mental health.
- 2- A demonstration and review of the GMHAT/PC tool.
- 3- Role-play using the tool. This includes coaching on refining of questioning techniques and guidance on assessment of symptom presence and severity.
- 4- The process of identifying patients presenting with mental health symptoms and recruiting them in an ethical fashion to the research. This includes a discussion about the patients they should seek to enrol.
- 5- A review of the learning achieved.

This intervention provided the healthcare worker with initial training in the use of the GMHAT/PC tool and allowed them to acquire experiential learning and professional development as they used the tool in their clinical practice. This expectation of experiential learning is in keeping with the traditional “*tea bag steeping*” training model for healthcare workers (Hodges, 2010; Woodrow, Segouin et al., 2006).

## 4.6.2 Healthcare workers interview patients



### Patient participant enrolment

The healthcare workers then, in the course of their regular clinical duties, identified patients presenting with mental health symptoms, and invited them to enrol in the research project. The study used a typical-case purposive sampling approach to recruit patient participants. Patton describes typical-case purposive sampling as illustrating what is typical to those unfamiliar with the study setting (Patton, 2002, p.236). Sharma recognises that purposive sampling relies on the researcher’s judgement and opines that while that judgement is prone to bias, it “*is only a major disadvantage when such judgements are ill-conceived or poorly considered; that is, where judgements have not been based on clear criteria*” (Sharma, G, 2017, p.752). Palinkas notes that it is assumed that cases for qualitative research are generally assumed to be selected purposefully to provide information rich data (Palinkas, Horwitz et al., 2013).

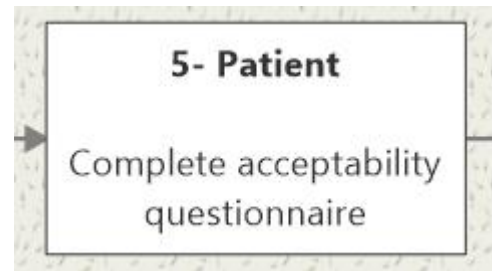
Sharma identifies that the subjective and non-probability-based nature of case selection can make it difficult to assert that the research achieves analytic generalisation; would the results have been the same had other cases been selected (Sharma, G, 2017, p.752)? This risk can be mitigated by using more than one research assistant. In this study multiple healthcare worker participants will be recruited.

While the emphasis in this style of sampling is on similarity as distinct from variation, healthcare workers were asked to consider all patients presenting with mental health symptoms in their routine clinical practice as suitable for inclusion in the study, subject to clinical appropriateness and clinical exigency.

Each patient was provided with information (Appendix G on page 305) and those willing to participate provided written consent (Appendix H on page 309), agreeing to complete a questionnaire at the end of their consultation. The consultation then proceeded with the healthcare worker using GMHAT/PC to assist them in the assessment of the patient’s mental health symptoms.

## 4.7 Assessments and Interviews

### 4.7.1 Patients complete acceptability questionnaires



When their consultation was concluded, the patient participants were asked to complete a questionnaire to explore their view of the acceptability of the use of the GMHAT/PC in their consultation (Appendix I on page 311). The questionnaire asked about:

- 1- Whether they found the computer assessment process helpful or not.
- 2- Whether it covered most of their mental health concerns.
- 3- Whether they found the questions easy to understand.
- 4- Whether they were happy with the time taken for the assessment.
- 5- Whether they found the consultation acceptable, or not.

The patient participant questionnaire responses generated nominal and ordinal quantitative data. There was also a space inviting the patient participants to add comments to expand on their responses. The comments provide data for qualitative thematic analysis, providing data for triangulation with their questionnaire responses.

Patient participants were also asked at this stage if they would be willing to participate in an interview about their views on the use of GMHAT/PC in their consultation with the doctor. For those declining to be interviewed, that marked the end of their involvement in the research.

### 4.7.2 Patient Semi-Structured Interviews



Patient participants willing to be interviewed about their views on the use of GMHAT/PC in their consultation with the doctor were provided with information about the nature of the interview and related additional facts – see Appendix L on page 318.

Those consenting to this step of the research were then interviewed using a semi-structured question schedule. They were reminded that the interview was not about their mental health symptoms or any medical or clinical outcome of the consultation, but that rather, it was about their opinion of the use of the GMHAT/PC tool in the assessment of their symptoms during the consultation. In particular, they were asked:

- 1- An open question about how they felt about the healthcare worker using the computer program during their consultation.
- 2- What they considered was “good” about the use of the program.
- 3- What they thought was “not good” or could have been better about the use of the program.
- 4- Whether they opined that the use of the tool had helped or hindered the healthcare worker.
- 5- What they thought could be done differently about the use of the program.

See Appendix M on page 322 for the full interview schedule. Conclusion of the interview marked the end of their involvement in the research project.

The interviews were recorded and transcribed in line with recommendations from Miller who suggested that this practice should “*reduce the possibility of lost information and enhance the ability of others to audit the data*” (Miller, W L, 1992). The interviews provided data for qualitative thematic analysis.

### 4.7.3 Healthcare worker interviews and self-rating.



At the end of their involvement in the research, healthcare workers completed another self-rating questionnaire (Appendix F on page 303) and were interviewed using a semi-structured question schedule (Appendix K on page 316).

The healthcare worker's self-rating questionnaire and interview provided the opportunity for continuous integrated collection of both qualitative and quantitative data. The questionnaire provided a second set of nominal and ordinal quantitative data that allowed statistical comparison with the first set to determine whether the training provided and the experiential use of GMHAT/PC in their clinical practice had any effect on their ability to carry out a mental health assessment.

Before describing the semi-structured interviews, the reader should have some understanding of the clinical system used by all but two of the healthcare worker participants. This clinical system provides rules-based screen messages as each patient's recorded is accessed, e.g., alerting that a monitoring blood test is overdue, or that the patient's last recorded blood pressure did not meet a set requirement.

Additionally, the system provides templates and logic-based protocols. These templates and protocols lead the healthcare worker through standardised items of patient history and clinical examination for a condition, e.g., diabetes or chronic obstructive pulmonary disease. When the clinical system recognises that some item of history or examination is missing from a patient's record, it can be programmed to automatically present a dialogue box to the healthcare worker, asking for the information to be recorded. This might be as simple as asking the healthcare worker to record the patient's smoking habits, or a lengthier annual dementia review.

Returning to the healthcare workers' interviews, they were asked:

- 1- *"How do you feel when you have to do a mental health assessment?"*. An open general question to elicit some initial thoughts.
- 2- *"Do you feel confident?"*. They were prompted to expand on their initial response with further questions such as *"Why do you say that?"* or *"Can you tell me more about that please?"*.
- 3- *"Do you feel competent?"*. Again, further questions were asked to encourage participants to expand on their response.
- 4- They were then asked how they feel about the various templates and protocols in their clinical system, what they opine is "good" about them and what they think is "bad".
- 5- They were then asked an open question about how they feel about GMHAT/PC., again with further questions to allow them to expand on their initial response and to define what they opine is "good" or "bad" about the tool.
- 6- They were asked whether they believe the use of GMHAT/PC in routine clinical practice is a feasible proposition. Where barriers to its use were identified, they were asked if they can consider any way of managing or circumventing these.
- 7- Finally, the healthcare worker was offered an opportunity to add any comment they might wish to make about the study. Their consent was checked for a final time, and they were thanked for their participation.

On review of some early healthcare worker interviews, there was some suggestion that use of GMHAT/PC had revealed diagnoses that had not been considered initially. Also, there was intimation that patients interviewed using the tool were receiving a more comprehensive assessment than those assessed without it. Because of these observations, two additional questions were added to the interview:

- 8- Healthcare workers were asked whether the use of GMHAT/PC had helped reveal any mental health condition that had not previously been considered or recognised.
- 9- They were asked what they thought about the comprehensiveness of the GMHAT/PC assessment and whether they thought that patients assessed using the tool had any different evaluation compared to assessments without using a tool.

These interviews were transcribed and thematically analysed to generate qualitative data. Completion of the second self-rating and participation in the semi-structured interview marked the end of the healthcare worker's involvement in the research.

In both patient participant and healthcare worker participant interviews, there was a preamble, where:

- They were asked if they had read the information leaflet and whether they had any questions about it.
- They were asked if they still consented to participation in the research and wished to proceed with the interview.
- The participants were told, "*You will not be identified in this research. However, if you were to tell me something that presents a serious risk to you or to someone else, I would have to disclose that information to an appropriate person.*"
- Any questions from the participants were addressed.

## 4.8 Summary

In this chapter, we mapped the key steps in the research design, which included the identification of the research participants and the intervention. The participants are healthcare workers in primary care and patients presenting with mental health symptoms. The intervention is the training of healthcare workers in the use of GMHAT/PC, and their subsequent use of the tool in their routine clinical practice, assessing their patients who present with mental health symptoms.

The views of both types of participants are essential to address the objectives of this study. Patient participants provide their opinion of the acceptability of the use of GMHAT/PC in their assessment. Healthcare workers provide their opinion of the feasibility of GMHAT/PC in general practice and an assessment of the impact of using it on their confidence and self-rated competence in mental health assessments.

Ethical frameworks were then considered with reflections on unethical research practice, and the impact of that on participants and subsequent research. This research was subjected to ethical review by an ethical committee at the University of Chester and the National Health Service's Integrated Research Application System, both of which found it acceptable.

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## Chapter 5 Findings and Analysis

### 5.1 Introduction

In this chapter we review the findings from the data accrued to address our three research questions. The questions to be answered are:

1. Is the use of GMHAT/PC in primary care acceptable to patients in the assessment of their mental health symptoms?
2. Is the use of GMHAT/PC feasible in UK primary care?
3. What is the impact of using GMHAT/PC on the healthcare workers' ability to carry out mental health assessments?

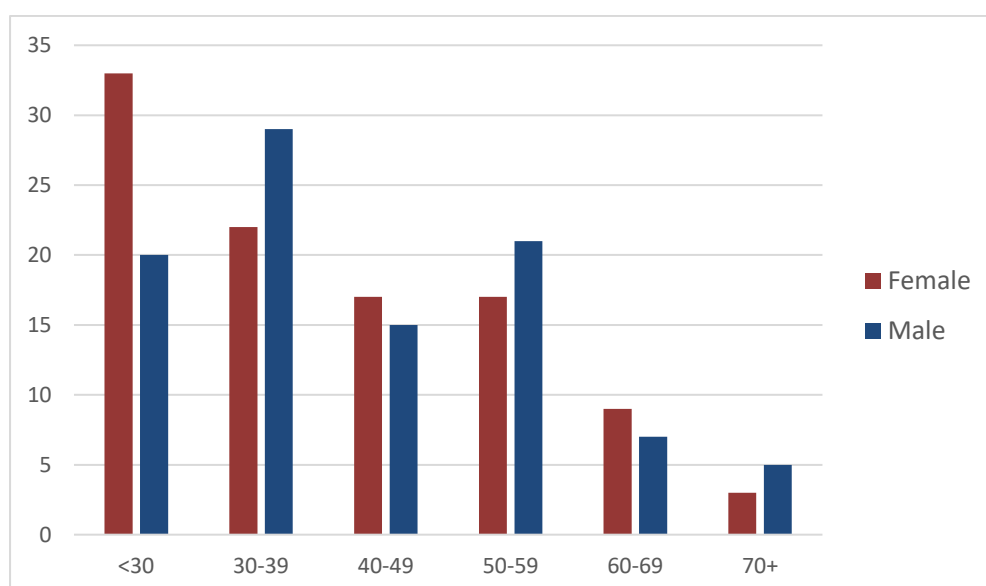
### 5.2 The Participants

#### 5.2.1 Patient Participants

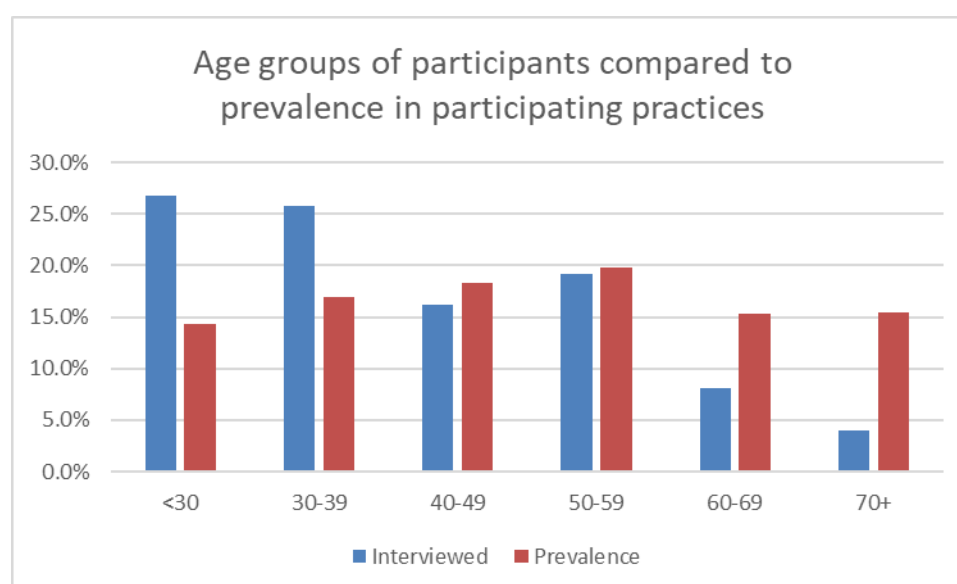
Patients presenting with mental health symptoms were recruited to the study by the participating healthcare workers, a typical-case purposeful sampling approach. There were one hundred and ninety-eight (198) patient participants, one hundred and one (101) female (51%) and ninety-seven (97) male (49%). The age groups of the patient participants are shown in Figure 13 below.

In Figure 14 below, the age groups of patient participants are compared to the prevalence of mental health by age-groups in the participating practices. Data relating to the incidence of new mental health problems during the study period is not available. The higher interviewing rate in younger patients may reflect their presentation with new symptoms of mental health issues (incidence), while the lower interviewing rate in older patients may reflect known or established disorders (prevalence).

**Figure 13: Patient participant age-groups & genders**



**Figure 14: Participant age-groups compared to prevalence in participating practices**



## 5.2.2 Healthcare Worker Participants

A total of sixty-seven (67) healthcare worker participants were enrolled to the research project. These included seven fully accredited general medical practitioners, one counsellor and one registered general nurse. Three of the lead doctors at two of the practices involved in the study have educational roles, providing training to general practice trainees (junior doctors in specialist training for general practice) and Foundation Year 2 trainees. These junior doctors would have been attached to the practices for between four and twelve

months. Additionally, one of the practices hosts medical students and physician associate trainees from local Universities. These students were attached to the practice for between four and eight weeks. For the duration of the study, all junior doctors and students hosted by the practices were invited to participate in the research. As a result of the participating practices' educational activity, twenty-seven (27) medical students and physician associate trainees, and nineteen (19) junior doctors participated in the study.

Twelve healthcare worker participants did not continue their participation in the project. Three doctors (two in training posts and one independent practitioner) did not complete their exit ratings. Nine medical students, one fifth-year, one fourth-year, and seven third-years, had some disruption to their clinical attachments during their involvement in the research and their involvement in the research was discontinued. The numbers and types of healthcare workers who completed their participation in the study are detailed in the following table:

**Table 16: Healthcare worker participant profiles**

<b>Healthcare Worker Count</b>						
<b>Age Group</b>	<b>18-25</b>	<b>26-35</b>	<b>36-45</b>	<b>46-55</b>	<b>55+</b>	<b>Total</b>
Counsellor	1					1
F2/ST	9	6	2			17
HCA				1		1
Medical Student	24	1				25
Physician Associate Trainee	1	1				2
Psychologist		1				1
RGN					1	1
Trained GP		2	2	1	2	7
<b>Grand Total</b>	<b>35</b>	<b>11</b>	<b>4</b>	<b>2</b>	<b>3</b>	<b>55</b>

Broad descriptors of professional status were allocated to the healthcare workers. These were:

- **“Undergraduate”**.  
This term is applied to those in training for their first healthcare-related qualification. Medical students and physician associate trainees are included in this group.
- **“Working under supervision”**.  
Those who have achieved their first healthcare-related qualification. They might be

in a training post, such as FY2 and GPST doctors, and working towards independent practice. This group also includes healthcare workers who, although they have achieved their first healthcare qualification, are able to work clinically only under the supervision of a fully qualified clinical manager such as a general practitioner. Healthcare workers in this category also include a practice nurse and a GP Assistant.

- **“Independent practitioner”.**

Those who have achieved the status of being allowed to practise independently in their chosen field. This group includes the fully certified general practitioners, a counsellor, and a psychologist.

The distribution of healthcare worker participants across these broad descriptors is shown in this table:

**Table 17: Healthcare worker distribution**

	<b>Count of Healthcare Worker No.</b>
Undergraduate	27
Works under supervision	19
Independent Practitioner	9
<b>Grand Total</b>	<b>55</b>

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## 5.3 Acceptability

### 5.3.1 Introduction

This section examines the outcome of data collected to answer the first research question, “*Is the use of GMHAT/PC in primary care acceptable to patients in the assessment of their mental health symptoms?*”. The study provides data from three sources:

1. The post-assessment questionnaires completed by each patient participant (see Patient Phase I Questionnaire on page 311).
2. The free-text comments added by patient participants when they completed the questionnaires. These comments are listed in Appendix J on page 312.
3. Seventeen (17) participants, all of whom had completed the Phase I Questionnaire, consented to participation in a semi-structured interview to further explore their views about their assessments.

### 5.3.2 The acceptability questionnaires

All one hundred and ninety-eight (198) patient participants consented to provide feedback on their consultation using the GMHAT/PC tool. Details of those who were invited and declined consent were not formally collected. Healthcare workers were asked whether they had formed any view why any patients had declined or whether the patients had volunteered any reason. They opined that most declined because of time pressure, with some of those offering to come back another day to participate. One patient had anxiety symptoms so great and so disruptive to the consultation that it was not feasible to run the tool; her consultation was over-dominated by drug-seeking behaviour, and she seemed little interested in any diagnostic process.

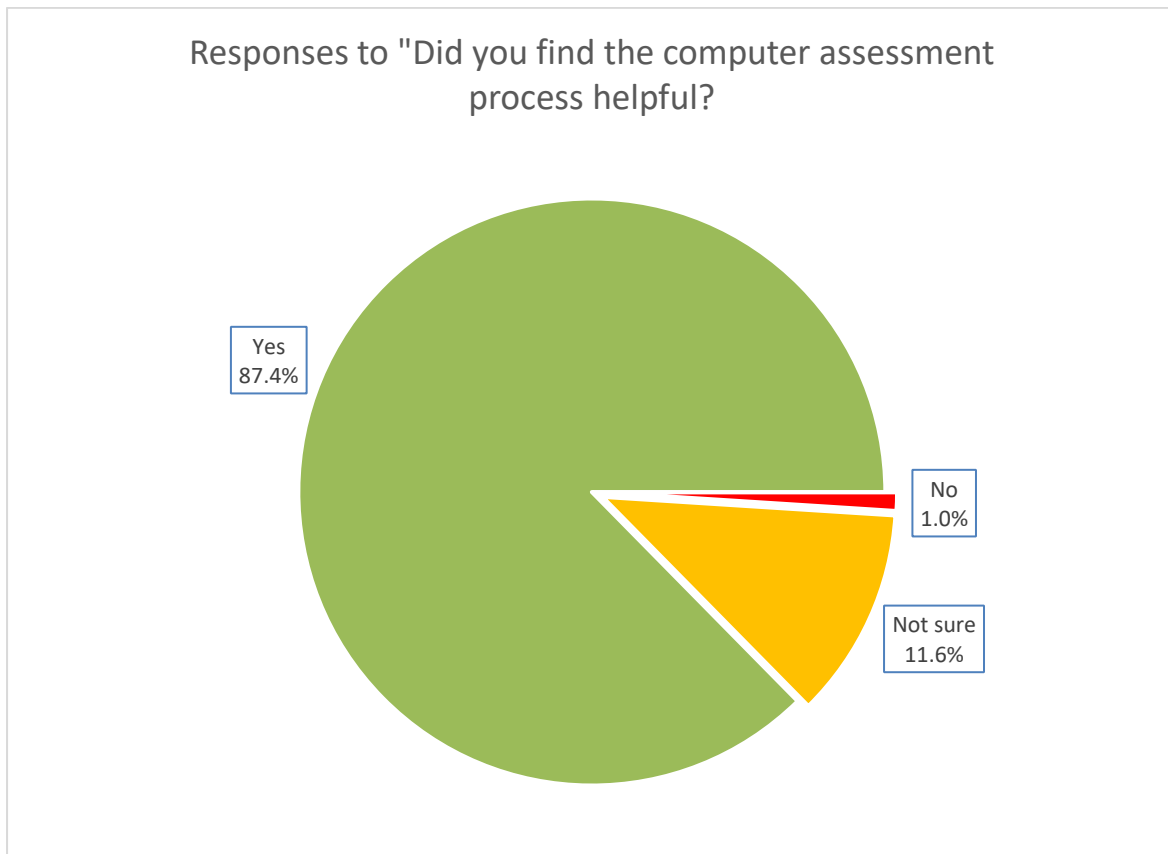
The questionnaire had five (5) questions. Questions one to four provided patient participants with tick boxes for three potential answers – “Yes”, “No” and “Not sure”. The fifth question asked them to rank the acceptability of the GMHAT/PC-guided assessment on a four-point ordinal scale ranging from “very unacceptable” to “very acceptable”.

The patient participant responses were transcribed to an Excel (Microsoft ©) spreadsheet and the software's pivot-table and pivot-chart tools used to analyse the data. The responses to each of the five questions are detailed below.

### 5.3.2.1 Question 1: Did you find the computer assessment process helpful?

One hundred and seventy-three (173) (87.4%) found the interview “helpful” and twenty-three (23) (11.6%) were “not sure” whether it was helpful or not. This is nominal data - data without an accepted or usual ranking or order.

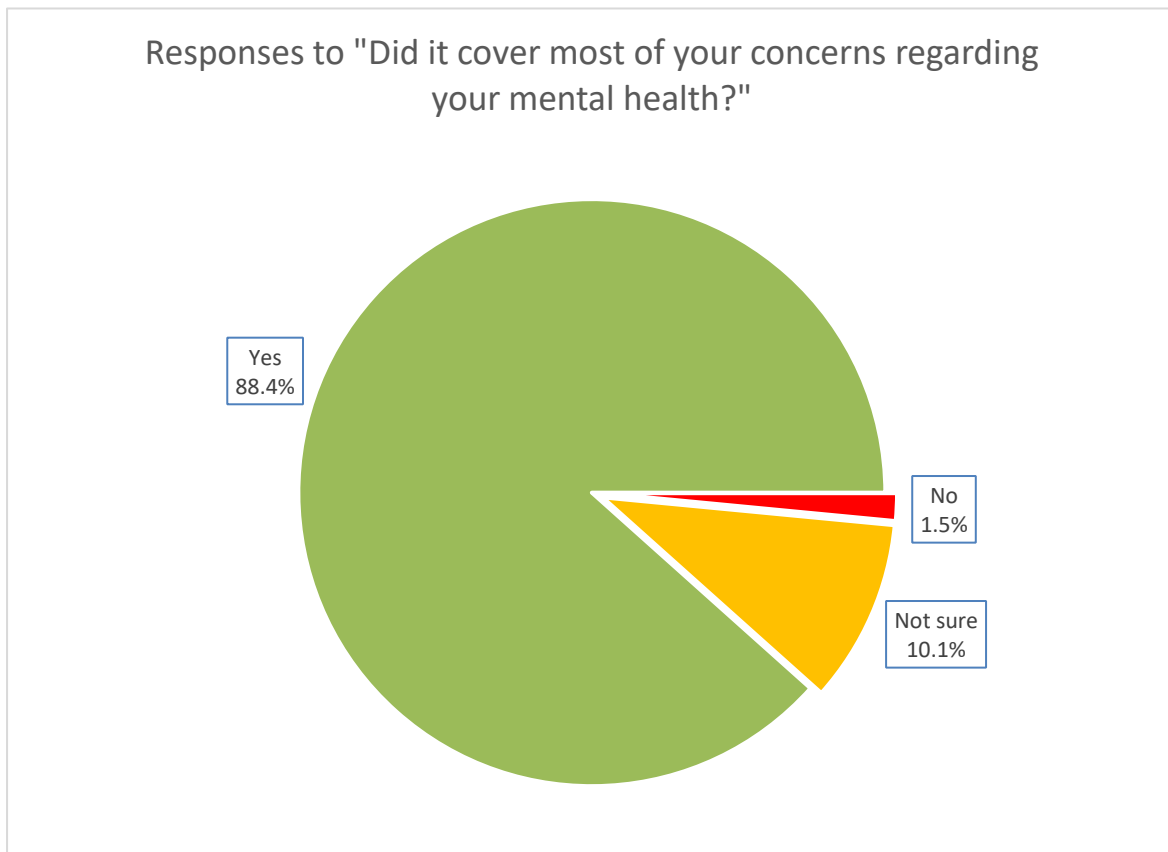
Two (2) (1%) did not find it helpful. Reviewing the other answers provided by these two participants, they still found the process “acceptable” or “somewhat acceptable”. Only one of the two added a free-text comment – “*Business-like and friendly 9/10*”.



### 5.3.2.2 Question 2: Did it cover most of your concerns regarding your mental health?

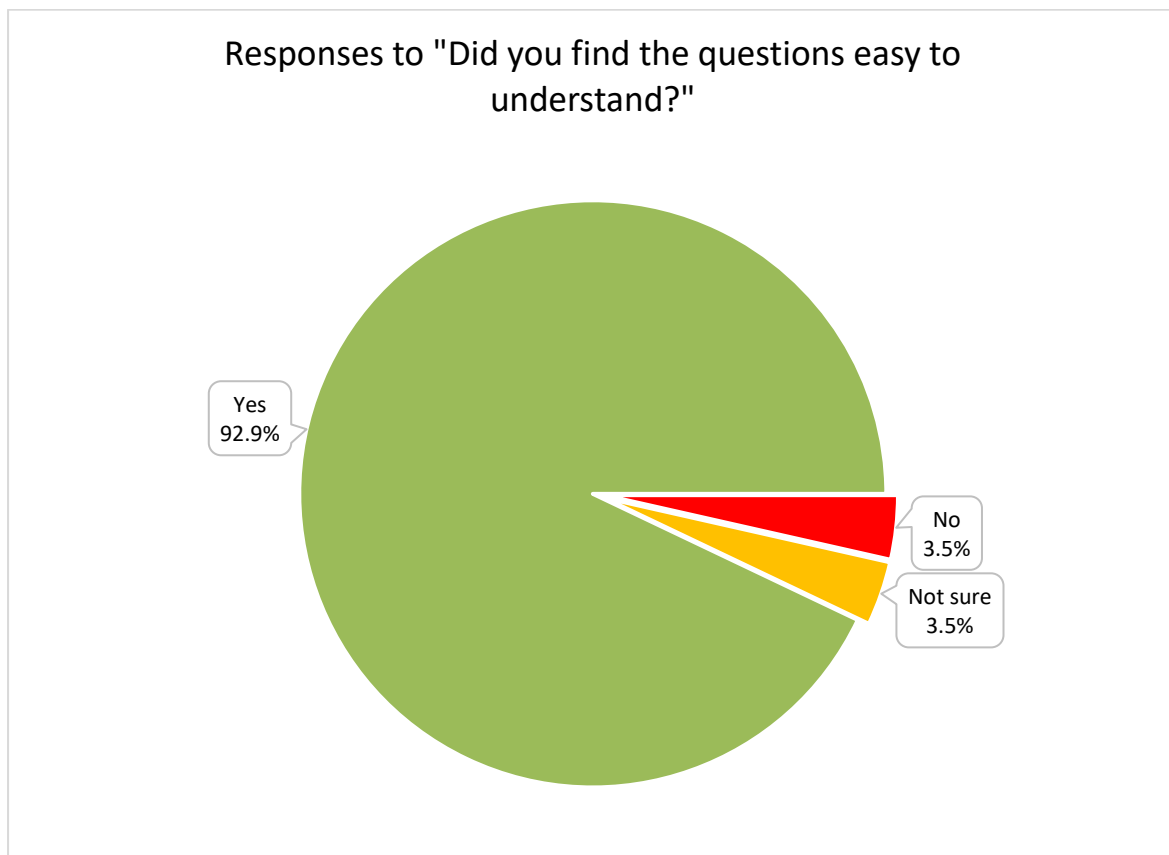
One hundred and seventy-five (175) (88.4%) participants responded that the GMHAT/PC interview had covered most of their concerns about their mental health. Twenty (20) (10.1%) were not sure, while three (3) (1.5%) felt it had not covered most of their concerns. This is nominal data.

Looking at the three (3) patients who responded that the assessment had not covered most of their concerns, two (2) ranked the process as “*somewhat acceptable*” and the other ranked it as “*very acceptable*”. Only one added a free-text comment which was “*Business-like and friendly 9/10*”.



### 5.3.2.3 Question 3: Did you find the questions easy to understand?

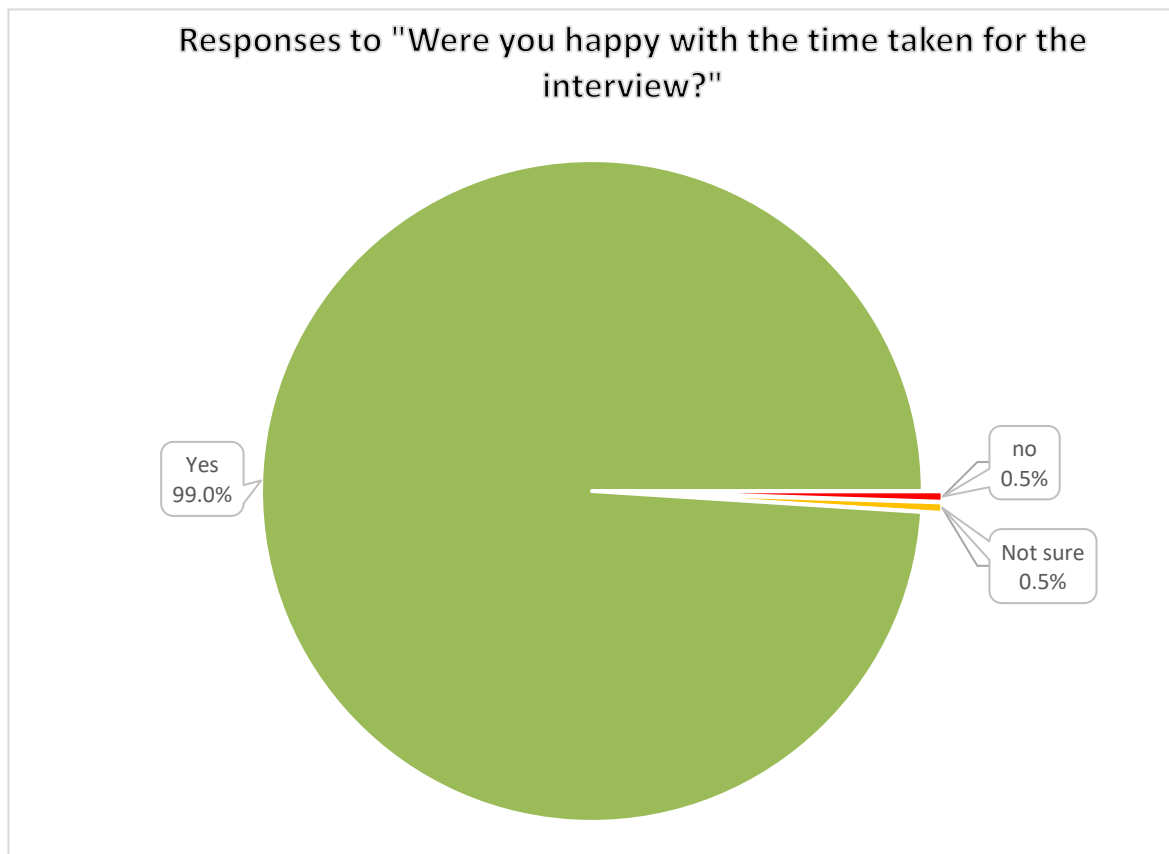
One hundred and eighty-four (184) (92.9%) patients found the questions posed by the healthcare worker during the GMHAT/PC assessment easy to understand. Seven (7) (3.5%) were not sure whether it was easy to understand or not. While one might have expected ease of comprehension to be a dichotomous state, this might reflect the patient participants' mental state at the time of the interview. This is nominal data.



Seven (7) (3.5%) did not find the questions easy to understand. All seven (7) found the process "very acceptable". Three (3) added free-text comments "It seemed alright; nothing intrusive or embarrassing", "It was fine" and "It was helpful to me".

#### 5.3.2.4 Question 4: Were you happy with the time taken for the interview?

One hundred and ninety-six (196) (99%) were happy with the time taken for the interview. One (1) (0.5%) was not sure if they were happy with the time taken and one (1) (0.5%) was not happy with the time taken. This is nominal data.

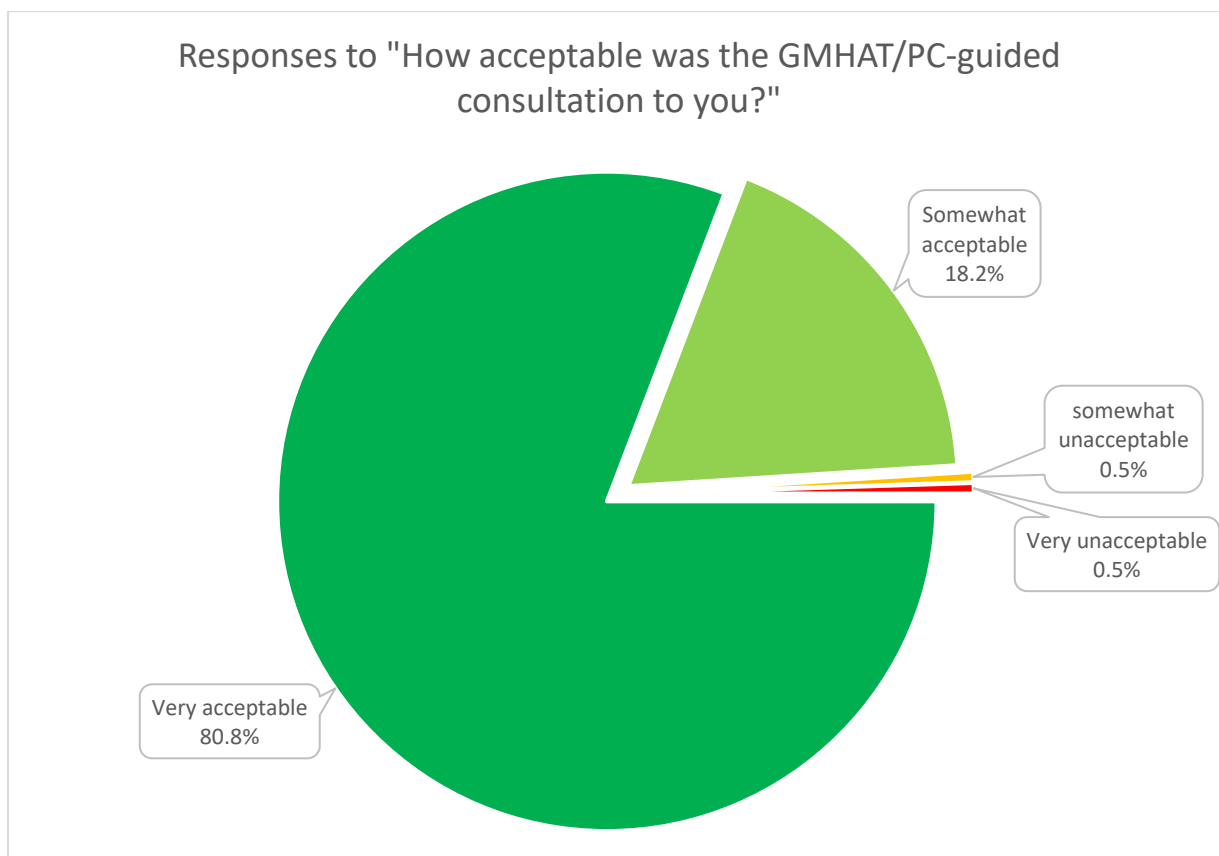


### 5.3.2.5 Question 5 : How acceptable was the GMHAT/PC-guided consultation to you?

For this question, participants were offered four options, “*Very unacceptable*”, “*Somewhat unacceptable*”, “*Somewhat acceptable*” and “*Very acceptable*”. Their responses are tabulated and graphed below. Ninety-nine percent (99%) found the assessment using GMHAT/PC either “*very acceptable*” or “*somewhat acceptable*”. This is ordinal data - responses to the question have no value that can be measured but the responses can be ranked in order from “*very unacceptable*” to “*very acceptable*”.

**Table 18: Questionnaire acceptability responses**

<b>Responses</b>	<b>Participant Count</b>	<b>Total%</b>
Very acceptable	160	80.8%
Somewhat acceptable	36	18.2%
Somewhat unacceptable	1	0.5%
Very unacceptable	1	0.5%
<b>Grand Total</b>	<b>198</b>	



### 5.3.2.6 "Somewhat unacceptable"

Patient participant #198 who found the assessment "somewhat unacceptable" had found the process "helpful" (question 1), responded that it covered most of her concerns (question 2), found the questions easy to understand (question 3) and was happy with the time taken for the interview (question 4). She added a free-text comment:

*"I am unsure whether only covering the mental health and discounting any physical symptoms shows the whole person and could give a fake reading. Having the tool is good though to feel as though you can explain symptoms with the doctor".*

This comment suggests that she was discontent not so much with the GMHAT/PC assessment but on the emphasis in the consultation on her mental health rather than her physical health.

There are two main clinical scenarios here:

- The healthcare worker may have misinterpreted the patient's presentation as suggesting mental health symptoms and discounted any physical health issues.

- The healthcare worker may have correctly interpreted the presentation, but the patient preferred to somatise their symptoms and was unwilling to accept a mental health aetiology.

Having identified this issue with this participant, I contacted her doctor and suggested another clinical review for her.

### 5.3.2.7 “Very unacceptable”

One patient found the assessment using GMHAT/PC “*Very unacceptable*”. He was “*not sure*” that the process had been helpful to him, did feel that it had covered most of his concerns about his mental health, found the questions easy to understand and was happy with the time taken with the interview. He did append a free-text comment, but the handwriting was illegible. He had consented to further participation which afforded me the opportunity to ask him some time later what he had written and to ask him to expand on why he had found the process unacceptable.

When he saw his completed form, he told me that “*It would seem as though I was in a worse place than I thought as the answer makes no sense!*”. His free-text comment was “*As questions are guided it will be universal*”. The patient interpreted his completed form as a reflection of the severity of his mental health at that time and by inference not a real measure of his opinion of the use of the GMHAT/PC tool in the consultation.

### 5.3.3 Statistical Assessment

Table 19 on page 169 summarises the patient participants’ responses to the first four questions on the acceptability questionnaire while Table 20 shows the proportions finding GMHAT acceptable in any way versus those who found it unacceptable to any degree.

Of the 198 patient participants recruited to this research project, 196 found the use of GMHAT/PC in the assessment of their mental health symptoms either “*very acceptable*” or “*somewhat acceptable*” and two found it either “*somewhat unacceptable*” or “*very unacceptable*”.

**Table 19 Summary of patient participant responses to questions 1-4**

Question	Yes	No	Not sure
1: Did you find the computer assessment process helpful?	87.4%	11.6%	1.0%
2: Did it cover most of your concerns regarding your mental health?	88.4%	1.5%	10.1%
3: Did you find the questions easy to understand?	92.9%	3.5%	3.5%
4: Were you happy with the time taken for the interview?	99.0%	0.5%	0.5%

**Table 20 Acceptability and unacceptability**

	Very or somewhat acceptable	Somewhat or very unacceptable
How acceptable was the GMHAT/PC-guided consultation to you?	99.0%	1.0%

From “Operationalising the research questions” on page 138, the null hypothesis ( $H_0$ ) asserts that there is no statistically significance in the proportion of the patient participants finding the use of GMHAT/PC in their assessment very or somewhat acceptable, and that the probability that it has arisen by chance is 5% or more ( $p \geq .05$ ). The alternative hypothesis ( $H_a$ ) asserts that the proportion of patient participants finding GMHAT/PC very or somewhat acceptable in their assessment is statistically significant and that the probability that it has arisen by chance is less than 5% ( $p < .05$ ).

Describing the use of Pearson’s Goodness of Fit test, Cochran describes how the expected frequency distribution of the test criterion (the proportion of the participants finding GMHAT/PC acceptable) required to satisfy the null hypothesis must be known so that tables of significant values can be constructed; in other words, there must be some consideration of

what proportion of the participants one might expect to find the use of the tool acceptable (Cochran, 1952) (Pearson, 1900). From the literature review we know that the use of tools in the assessment of mental health symptoms is generally acceptable to patients. Knowing this, it seems unreasonable to expect an even 50:50 distribution of patients finding it acceptable and unacceptable. However, GMHAT/PC is used in a face-to-face clinical setting, and includes questions about alcohol and drug usage, and memory problems which the literature review also tells us reduce the acceptability of assessment tools.

At an expected rate of acceptability of 95% and a rate of unacceptability of 5%, the Chi-Squared Goodness-of-fit test indicates that the number of patient participants finding the use of GMHAT acceptable in the assessment of their mental health symptoms is statistically significant ( $\chi^2(1) = 6.636, N = 198, p = .010$ ) (see Table 22 below), refuting the null hypothesis and instead supporting the alternative hypothesis ( $H_a$ ) that the proportion of patient participants finding GMHAT/PC very or somewhat acceptable in their assessment is statistically significant and that the probability that it has arisen by chance is less than 5% ( $p < .05$ ). The statistical significance increases with lower expected rates of acceptability. IBM'S SPSS © was used for the statistical analysis.

**Table 21: Observed v. Expected Acceptability**

<b>Acceptability</b>			
	Observed N	Expected N	Residual
Acceptable	196	188.1	7.9
Unacceptable	2	9.9	-7.9
Total	198		

**Table 22: Statistical assessment of Acceptability**

<b>Chi-Squared Goodness-of-fit test of Acceptability</b>		
Acceptability		
Chi-Square	6.636 <sup>a</sup>	a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 9.9.
Df	1	
Asymp. Sig.	.010	

### 5.3.4 Analysis of the optional free-text comments

At the foot of the acceptability questionnaire, patient participants were provided with a space to add comments. The prompt asked, “*Why do you say that please?*”. One hundred and twenty patients (120) (60.6%) added comments. The comments are listed in full in Appendix J on page 312. These comments are data that will be examined in line with guidance from Miles and Huberman, who set out the common features of analytic methods for qualitative data – see Table 23 (Huberman, Miles et al., 2014, p.16).

**Table 23 Miles and Huberman analytic methods for qualitative data**

- 1- Assigning codes to interview transcripts.
- 2- Shifting through these coded items to recognise “*similar phrases, relationships between variables, patterns, themes, categories, distinct differences between subgroups and common sequences*”.
- 3- Refining the data collection process to reflect patterns, commonalities and differences identified in the previous step.
- 4- Recording reflections and other observations.
- 5- Progressively defining a set of “*assertions, propositions and generalisations*” to recognise consistencies in the dataset.
- 6- Review the generalisations against existing knowledge.

The comments were thematically coded in NVivo 11 ©. Table 24 below details the themes identified and the number of instances in which those ideas were identified.

**Table 24: Themes analysed in patient comments on acceptability questionnaire**

### Analysis of patient comments in acceptability questionnaires

<b>Node / Theme Name</b>	<b>Description</b>	<b>Number of Coding References</b>	<b>Examples discussed on page</b>
Positive comment about presentation or format of the interview	The patient has made a positive comment about some aspect of the GMHAT/PC guided interview. The comment does not specifically relate to the scope of the interview. Neither does the comment suggest that the patient gained any insight into their condition nor gained any therapeutic benefit.	42	174
Positive comment about scope of interview	The patient’s comment recognises the comprehensive scope of the interview.	36	174
Patient felt interview provided insight	The patient’s comment suggests that the interview provided them with some new insight into their condition or had provided some therapeutic value.	23	175
Found process helpful	The patient’s comment suggests that they found the interview helpful in some way but is not explicit enough to suggest that they gained any insight or therapeutic benefit from it.	13	175
Cathartic	The comment suggests that the GMHAT/PC interview helped the patient unburden themselves or talk more freely about the nature of their mental health symptoms.	6	175

Found interview distressing	The patient found the interview distressing in some way.	3	175
Mental health important to patient	The patient's comment suggests that mental health is important to them, either generally or on a personal basis.	2	176
Patient felt difficulty disclosing symptoms	The patient's comment suggests difficulty in disclosing the extent, severity, or depth of their symptoms.	1	176
Concern about scope of interview	The patient's comment suggests that they felt the GMHAT/PC assessment was not sufficiently comprehensive.	1	177

#### 5.3.4.1 Positive comment about presentation or format of the interview

The greater number of comments reflected positive opinions about the interview overall. This is in keeping with the fact that 196 out of 198 patient participants found it either “very acceptable” or “somewhat acceptable”. Comments from this theme include “Very understandable and clear”, “Very quick and easy”, “Very direct and straight to the point. All good!”, “The questions were easy to understand, and didn’t take too long at all”.

#### 5.3.4.2 Positive comment about scope of interview

Thirty-six (36) patient participants gave positive feedback about the scope of the GMHAT/PC interview, such as:

*“The range of questions allowed me to communicate many aspects of my mental health which I may not have brought up myself – or forgotten to.”*

*“The questionnaire covers all aspects of depression and anxiety alongside other disorders. Physical and psychological symptoms covered.”*

*“The consultation touched on all aspects of my problem.”*

Comments from participants such as, “[The interview] even brought up some of my concerns”, “It covered a lot of questions I’d been asking myself but hadn’t had a chance to speak about out loud”, “The consultation covered a lot of areas that wouldn’t normally be spoken about”, “I think it asked the right questions, to help determine what help I need.”, and, “[The interview] covered areas not normally discussed directly”, suggest that the use of GMHAT/PC had acted as a vehicle, perhaps for the healthcare worker to ask the right questions, but certainly to facilitate an adequately detailed exploration of the breadth and depth of these patients’ symptoms.

One patient compared the GMHAT/PC assisted assessment favourably to other tools he had encountered, “I felt the questions were detailed and personal to me and not just a one-word answer response to a normal yes or no question. I found the questionnaire a step in the right direction to get the right support where needed and importantly the appropriate support for the individual.”. The patient was probably referring to a more commonly used tool such as the PHQ-9 tool (Kroenke, Spitzer et al., 2001).

#### 5.3.4.3 Interview provided insight or had therapeutic value

Twenty-three (23) patients reported that the interview had either given them insight into their mental health symptoms or condition, or had provided some therapeutic value. Examples of feedback provided include “*Very informative on my behalf about my health in understanding myself better*”, “*Useful to triangulate my thoughts and actions regarding my physical and mental health; helped to validate my feelings and actions*” and “*It was very therapeutic and enlightening*”.

#### 5.3.4.4 Interview was helpful

Thirteen (13) patients added comments indicating that the GMHAT/PC assessment had been helpful to them in some way. Generally, the comments are brief, simply detailing “*it was helpful*”, but a few go into greater detail with “*I felt it was helpful in the fact it addressed a lot of what is going on in my life*”, “*Hit problems dead on*” and “*Found it informative*”. Perceived benefit is obviously an element of acceptability and reflects the reported high acceptability of the GMHAT/PC interview.

#### 5.3.4.5 Cathartic

Six patient participants made comments suggesting that the assessment had allowed them to unburden their symptoms and the related concerns and anxieties, e.g., “*It was very easy to open up and get it off my chest*”.

Two patients suggested that the use of the tool facilitated this unburdening with “*I feel asking the questions helped me to open up more*” and “*May not have discussed in normal consultation*”, with the latter comment strongly suggesting that the patient would not have disclosed fully the breadth or depth of their symptoms in a standard consultation not using a tool like GMHAT/PC.

#### 5.3.4.6 Found interview distressing

Comments from three (3) patients indicated some degree of distress. One patient, participant #141, added the single-word comment “*painful*”. Looking at this patient’s responses on the acceptability questionnaire, she said the assessment was helpful, covered

most of her concerns about her mental health, found the questions easy to understand, was content with the time taken and rated the GMHAT/PC-guided interview as “very acceptable”, suggesting that the cause of the apparent distress was not related primarily to the tool used.

Patient participant #6 left the free-text note, “*Left comment suggesting not happy with questions about personality disorder*”. Looking at her responses on the acceptability questionnaire, she responded that the assessment was helpful, covered most of her concerns about her mental health, found the questions easy to understand, was content with the time taken and rated the GMHAT/PC-guided interview as “very acceptable”. Reviewing the clinical aspects of the assessment, the assessment was in line with previous clinical opinions.

Patient #198 was the third patient to add a comment suggesting that she had found the interview distressing in some way. She is discussed on page 167.

#### 5.3.4.7 Mental health important to patient

One patient added a comment, “*Mental health very much a passion to me*” and a second added “*I know mental health issues are very serious*”, suggesting that they recognised the general impact of mental health issues.

#### 5.3.4.8 Patient felt difficulty disclosing symptoms

Patient participant #80 noted that “*It’s very difficult to open up and be honest with [the healthcare workers] though because some of issues are extremely personal*”. Reviewing his feedback, he was “*not sure*” that the assessment process had been helpful or that it had covered his concerns about his mental health. He did find the questions easy to understand, was content with the time taken for the assessment and rated the assessment as “*somewhat acceptable*” overall.

#### 5.3.4.9 Concern about scope of interview

One patient, participant #195, opined that the interview “*Didn’t really address anything OCD-related*”. Reviewing her other written feedback, she was assessed by an experienced interviewer. Her feedback to the specific questions was that the assessment was helpful, covered most of her concerns about her mental health, she found the questions easy to understand, was content with the time taken and rated the GMHAT/PC-guided interview as “*very acceptable*”. The GMHAT/PC tool does include questions about obsessive compulsive behaviour and examples of questioning strategies were discussed in the training provided to each healthcare worker participant. However, this patient participant clearly did not feel that her OCD behaviours were adequately explored.

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#### 5.3.5 The patient semi-structured interviews

All patient participants, having completed their clinical assessment using the GMHAT/PC tool and completing their Phase I questionnaire, were asked if they would be willing to be interviewed to further explore their opinion of the use of GMHAT/PC in their consultation. Seventeen patients (17; 8.6%) consented to further involvement in this research project. This further involvement comprised a recorded semi-structured interview (see Appendix M on page 322). The recordings were later transcribed and encoded for themes using NVivo © software. The themes identified are listed in Table 25 below.

**Table 25 Themes from patient participant interviews**

## Themes identified in patient participant interviews

<b>Name</b>	<b>Description</b>	<b>Number of Sources Coded</b>	<b>Number of Coding References</b>	<b>Examples illustrated on page</b>
Tool assists healthcare workers	The participant expresses an opinion that GMHAT/PC assists the healthcare worker in some way.	13	16	180
Positive view of benefit to patient	The participant comments that the GMHAT/PC-guided assessment has helped in some way. Could be non-specific help or could have enhanced insight into their mental health symptoms or some perceived therapeutic benefit.	12	21	183
Positive comment about completeness of assessment	The participant expresses a comment about the completeness or comprehensive nature of the assessment.	11	23	188
Positive comment about facilitating discussion or disclosure	The participant says that the use of the tool helped them or talk about something they might not have otherwise mentioned.	5	7	191
Easy to understand	The patient reports that the GMHAT/PC interview was easy to understand.	5	6	192
General positive comment	The patient expresses a positive opinion. This is a catch-all coding for positive views not specific enough for other codes.	4	4	

Positive opinion of diagnostic accuracy	The participant expresses a positive opinion or view about the accuracy of the GMHAT/PC assessment.	3	3	193
Negative comment about the use of GMHAT-PC	The participant has expressed a negative view about the use of GMHAT/PC, or any aspect of IT in clinical use.	3	4	193
View of harm to patient	The participant comments that the GMHAT/PC-guided assessment has harmed them, or been distressing, in any way.	1	1	196
Tool hinders healthcare workers	The participant expresses an opinion that GMHAT/PC hinders the healthcare worker in some way.	0	0	196

### 5.3.5.1 The tool assists healthcare workers

Thirteen patients expressed views that the use of GMHAT/PC had helped their healthcare workers (HCW) in some way. This finding has been observed by other authors such as Spitzer et al who, in their validation study of the PHQ-9 tool, observed that “89% believed that the questions were ‘very’ or ‘somewhat’ helpful in getting their physicians to better understand or treat the problems they were having” (Spitzer, R. L., Kroenke, K. et al., 1999, p.1743).

Patient participant (PP) #102 opined that the use of the tool had helped the healthcare workers by its “standardised” or more structured approach. He also felt that, because he was involved in the rating of the symptom severity, it helped the HCW gain a better insight into his condition.

**Participant:** *I guess it’s standardised isn’t it. So it makes it easier...easier to interpret the results I guess if it’s a standardised erm...process, a tool.*

**Interviewer:** *So, it helps the [healthcare worker] because it’s standardised. Anything else that helps [healthcare worker] in the process do you think?*

**Participant:** *Understanding a bit more about your patient.*

**Interviewer:** *Mm.*

**Participant:** *And I guess...the fact that you’re trying to encourage me to grade myself gives you an insight into what I’m actually like.*

PP#108 also felt that using the tool helped his healthcare worker understand his situation better and put them in a better position to help him:

**Interviewer:** *Do you think [GMHAT/PC] helped the doctor at all?*

**Participant:** *I think it might have, yeah. Talking about, you know, what’s happened over the...you know, over the few years that I’ve been feeling down. You know, I feel like it has helped him [the healthcare worker] understand, you know, what might have, you know, caused me to feel depressed or, you know...uncomfortable...is best I can put it. I do feel like it has helped him understand what maybe going on in my life and how he may be able to help.*

In reply to the same question, PP#132 said that it is embarrassing to disclose mental health symptoms, but had a similar view to PP#108, opining that the GMHAT/PC interview process had helped their healthcare worker to draw out their symptoms:

**Participant:** *Because without you trying to either pull out how I actually felt...*

**Interviewer:** *Mm.*

**Participant:** *...or if I hadn't told...like I said it's quite embarrassing, you wouldn't have been able to get a full picture. Where with them questions I think you did and more.*

**Interviewer:** *Right, OK. So they helped me...it helped me to ask you the right questions?*

**Participant:** *Yeah, yeah.*

**Participant:** *I think just say like what I've already said because there was specific questions that you asked here I had to give a yes or a no, and you were able to pull things out of...out of that, I just felt it was a lot easier for you but most definitely a lot easier for me to explain how I felt.*

Her answer suggests that the rigour of a semi-structured interview tool compels both healthcare worker and patient to focus better on the identification and rating of symptoms and less on the impact of those symptoms. The responses also suggest that the use of the tool helped PP#132 overcome the reticence of embarrassment and more fully disclose her difficulties.

PP#137 recognises the frailty of her physicians and sees the benefit of a tool that doesn't forget to ask a question:

**Interviewer:** *And do you think it helped having the questions or having the prompts on the screen, do you think that helped the doctor?*

**Participant:** *Yes, I do.*

**Interviewer:** *Why? How?*

**Participant:** *Because we all have busy days, and some days we, you know, we've had bad nights and we're tired and we just could forget just that one little thing, couldn't you?*

PP#68 had similar views about aiding the healthcare worker in his or her job. He also shared opinions already aired that using GMHAT/PC helped his healthcare worker gain better insight into his condition:

*“That sort of computer program jogs the memory, if you’re not dealing with mental health issues all the time, the computer program would remind or jog you to perhaps ask questions of me in a particular way or in a different way or something like that. It will be beneficial to the medical health professional as well as the person who is being interviewed as part of the consultation.*

PP#68 went on to compare the GMHAT/PC interview with his previous experiences with what he called “*questionnaires*” - a reference to other tools more commonly used in primary care, such the PHQ-9. He seems to have valued the use of the tool as a vehicle for better interaction with him and providing deeper insight into his difficulties:

*I can’t think of anything specific other than the use of such software would give you a chance to probe a little bit deeper, but also, you can get through by talking to somebody. You can get through more questions using that than you’d get using the questionnaires because you are actually interacting with me, asking me the questions, listening to my response, and forming an opinion. Whereas, if I was writing it down on a questionnaire, you would get the questionnaire and you wouldn’t see my interaction, you wouldn’t see my nonverbal signals, you wouldn’t see anything like that. All you’d see is writing on a piece of paper and you’ve then got to try and use that to aid your diagnosis. Whereby, if you’re asking the questions in person, as well as being able to go down different routes from the questions, you can also see how those questions interact with the patients. You can see if they get upset, you can see if they don’t get upset, or you can see the emotional state of the person, rather than just reading a piece of paper. You don’t get emotions from a piece of paper.*

He went on to talk about the prevalence of mental health problems in Society, and how the management of most of these falls to primary care. He felt the GMHAT/PC interview was:

*... a better way to get to the bottom of or assist the patient or gets to the roots of the problems and aid you in making a diagnosis. That is the important thing because mental health is taking such a big—It’s so big these days because mental health in the community is massive because there are so few hospital places you need. It’s all*

*down to the GP. They need to diagnose better, quicker and correct more of the time. If that software can help you and help the patients, it's got to be a good thing."*

PP#81 also identified the idea of the tool as being an aid to the healthcare worker, recognising that it provided "*structure to the approach*". When asked whether he thought the use of GMHAT/PC might have hindered the healthcare worker in any way, he responded:

*"I certainly think it didn't hinder him. In terms of helping, I could see it helping him as a way of giving structure to the approach. I can imagine it being a bit of a maze. Mental health questions and so forth of them. He had a bit of direction to go. Again, for him and me, some of it wouldn't have been relevant, perhaps there was parts of the interview which didn't need to be done. Obviously, we wouldn't know that until we done it."*

PP#2, a young woman in her 20's, compared the completeness of the GMHAT/PC with her previous assessments, and recognised the benefit of a semi-structured tool for the healthcare worker:

**Interviewer:** *Is there anything good that helps the doctor, do you feel?*

**Participant:** *Yes, because the questions they asked you in there, doctors don't usually ask them. They're more inclined to ask them obviously if they're going through the program. I've never been asked them type of questions before when I've been seeing a doctor for various things.*

PP#6 recognised the benefits of GMHAT/PC, saying "*It took me about six weeks to admit I was depressed. Having that [GMHAT/PC] at the beginning would have been a good tool for the doctor.*" At the start of her diagnostic journey this patient was conflicted about the idea of a mental health diagnosis – see page 194.

### 5.3.5.2 Positive views of benefit to patients

Twelve (12) patients had positive views of how the use of GMHAT/PC had benefitted them in some way. When asked whether the use of GMHAT/PC had been useful to him, PP#102 responded:

**Participant:** *I'd say yeah, yeah.*

**Interviewer:** *How...can you say how or...?*

**Participant:** *Well, I've...having only just done it, you know, it helps...not...not necessarily answer questions cause I've already had some questions answered but it helps reconfirm things that have been said.*

**Interviewer:** *Mm.*

**Participant:** *Obviously I'll probably find a bit more as time goes on how much helpful it was but...and having just finished initially...*

**Interviewer:** *Oh right.*

**Participant:** *...it seems useful but obviously I'll...over the next day or so I'll probably try and reflect on it a bit more.*

This participant also picked up on the benefits of a script for the healthcare worker. Additionally, he felt that the semi-structured nature of the GMHAT/PC tool had helped him focus on the questions:

**Interviewer:** *I'm interested in whether you feel it helped you or hindered your care, or helped or hindered me in looking after you.*

**Participant:** *I think it might have been more beneficial to me than you...*

**Interviewer:** *Because?*

**Participant:** *Because of the rigidity.*

**Interviewer:** *Right.*

**Participant:** *Cause you've got...you've got...a set of...you know, you've got a script to go through, haven't you? Which...I guess...you just, you know, becomes an automatic thing once you keep doing it, but for me it...the...the rigidity of it, the structure of it, actually helped me focus on the question at the time rather than (makes shooting noises) my brain firing all over the place, which you might not get in the freedom of an open conversation because it's open and...*

**Interviewer:** *Unstructured?*

**Participant:** *Yeah*

Similar themes were identified by PP#132:

**Participant:** *I think just say like what I've already said because there was specific questions that you asked here I had to give a yes or a no, and you were able to pull things out of...out of that, I just felt it was a lot easier for you but most definitely a lot easier for me to explain how I felt.*

The idea of the GMHAT/PC interview being therapeutic to patients was voiced by several interviewees. This perceived therapeutic benefit probably relates to the breadth and depth of the questioning and the related professional conversation. PP#108 found the interview relieved her stress:

**Interviewer:** *Was there anything else helpful about the process?*

**Participant:** *It did relieve quite a bit of stress cause as I said, you know, I let things build up.*

**Interviewer:** *Right.*

**Participant:** *And it is pretty stressful. So, you know, being able to talk about them, it did relieve quite a bit of stress.*

PP#137 also reported feeling better after the GMHAT/PC interview, attributing this possibly related to “*the talking*”. She also felt that the healthcare worker was getting a better insight into her condition, a theme already reported by others.

**Participant:** *Erm...I felt better when I came out. I did feel a bit better when I came out. I don't know if it was because of the talking which it brought about but I did feel better when I come out. I think it's...erm...helps to pinpoint a bit more the way you're feeling at the time and how you can...like you can say to the doctor, oh I felt like that then, yes I have felt like that but not now, and you can explain better.*

**Interviewer:** *Yeah. A number of people have said that sort of thing. So, is there anything...anything that you're able to pinpoint in the way it made you feel better?*

**Participant:** *Yeah, I felt as though the doctor was getting a better understanding of the way I was feeling.*

**Interviewer:** *Mm.*

**Participant:** *And more able...he was listening, he was not just like one generic question about what you...what's your problem? Oh, I feel depressed, alright I'll give you these tablets. It was a number of questions to find out what...what state my*

*mental health was in, how it's been in the past and helped to monitor it over the time that it's going and that feels like you're not being ignored and there is a light at the end of the tunnel and I feel...yeah, I do, I think it's very good.*

Asked whether she had found any benefit from the GMHAT/PC assessment, PP#46 reported improvement in how she felt, and described how she had faced her social phobia by attending a mother's group meeting at her children's school – a positive step in her journey:

**PP#46:** *"I thought it was really good. I felt a lot better when I left here after breaking down part of how I was feeling.*

*It gives you an understanding of, obviously, certain levels of mental health. Lucky enough, I was really low. You can see that it is different positions of it. Questions like, "Would you harm yourself?" and I obviously wouldn't, but some people really would, and you're like, well, you did see all the sides of it.*

*Well, it did [help]. I just felt a little bit lighter really because I was coming in here expecting to be sent to the white coats, but it wasn't that situation, I was just an anxious person. Then it made me think, "You may need to start pushing yourself and doing things that you used to do and getting yourself out there." That sort of thing. It did make me flick a switch on in my head really, like this morning, there was a mum's group on at the school, I thought, "I'm going." So I did go, but I was quick to home, back into my pyjamas. I did go and made the effort to go instead of sitting in the house."*

Further in his interview, PP#68 returned to his comparison of the GMHAT/PC-based assessment and "*bland questionnaires*" (referring to tools more commonly used in primary care such as the PHQ-9, the HAD or the GAD-7):

**Interviewer:** *Thinking about you in particular, did the use of the program help you at all.*

**Participant:** *Yes because in the past, I've filled in very sterile anonymous bland mental health questionnaires. Whereas, what I was doing instead of filling it in, I was talking to you as you read off the screen. Some of the questions that you asked me, made me think in a little bit more depth about my response on about how I felt. The*

*use of that program, I felt I had a better quality of consultation than, say for argument's sake, if you remember, [Healthcare Worker], I came to you with a referral to the [redacted] convalescence home when on the back of those forms, there was some screening forms and you passed comments and there were two forms to mental health questionnaires that I had to fill in. I forget the numbers of those forms, but I felt the use of the computer program was much better than filling in very broad and useless forms. The interactiveness of the computer program, it flowed better. It's better than filling forms in, definitely.*

**PP#87** was another patient who recognised that the use of GMHAT/PC in her consultation had provided a mechanism for her to identify her symptoms. Her comments illustrate the advantages of a semi-structured interview over a simple “*How are you feeling?*” question.

*“You can get a bit confused when somebody asks you how you're feeling it, it is quite hard to explain to someone. You can't really explain it, but when the question is broken down, you can go into more depth with each individual question, it is a lot more helpful.”*

Others were more succinct about their perceived derived benefits:

**PP#3:** *“I think it's good because I feel it's going to be a help to me and maybe to other people and I think that's good, that's what I want.*

*If I take tablets and they have – it makes me feel ill. I just seem lack and going nowhere but if someone's asking me questions about how I'm feeling and I'm given answers, I feel like I might get to the root of it.”*

**PP#84:** *“The tool was very useful. It helped. It helps you to find what is wrong with the patient which is helpful for me and you.”*

### 5.3.5.3 Positive comments about completeness of assessment

Eleven (11) patients made positive comments about the completeness of the assessment. Some of this “completeness” related to the exposure of a single symptom as in PP#132 who had not realised she had anxiety and social phobia:

**Interviewer:** *Were they actually the right questions?*

**Participant:** *Yes. Yes, they were. There was one question erm...I think...er...which I didn't really know I felt like that and it was when you were asking about how I would feel getting on a bus.*

**Interviewer:** *Yeah.*

**Participant:** *And I realised I'd be really afraid to get on a bus.*

**Interviewer:** *Oh right.*

**Participant:** *So...so definitely yeah.*

**Interviewer:** *So, it brought out that particular symptom in you?*

**Participant:** *Yeah.*

**Interviewer:** *So...and if I hadn't asked you that question, I wouldn't have got the answer and I wouldn't have that little bit of helpful information about you?*

**Participant:** *Not at all. It's something I wouldn't have realised.*

**Interviewer:** *Did you know you had that symptom of being nervous of crowded places?*

**Participant:** *Not really. I know I didn't like the idea of going out of the house.*

**Interviewer:** *Mm.*

**Participant:** *I didn't know whether it was called nervousness, I just know how I felt but that question alone, I think it showed, you know, there was something else there too.*

PP#132 then went on to reflect on a previous time she had mental health symptoms and reflects on the assessment and management strategies she encountered then:

**PP#132:** *I just thought it was really, really good. Really good because I don't think I would have come, and have told you everything how I felt a) because I wouldn't remember because that's one of the problems at the moment and it was just the*

questions. You were able to, once I gave an answer, you were able to ad lib on that and pull other things out from it.

**Interviewer:** Have you ever gone to a doctor, even me even, when you've had mental health symptoms and had different assessments not using that tool?

**Participant:** Yes. Many years ago, I remember when something like this happened, I was just really nervous cause I hadn't...I didn't have a clue what was wrong with me.

**Interviewer:** Yeah, yeah.

**Participant:** And I just don't think at that time that the doctor really understood or whether the doctor was just used to hearing it, you know, and just thought yeah, take these tablets and that's fine.

**Interviewer:** Yeah.

**Participant:** Lucky enough the tablets did work for me but if it was somebody else, you know?

**Interviewer:** Yeah.

**Participant:** I think they should have used that tool then.

**Interviewer:** And so, looking back on those consultations and the consultation you had this week, was there any difference on the thoroughness...

**Participant:** Yeah.

**Interviewer:** ...of whichever way?

**Participant:** Yeah, the tool that we used this week I think got everything out.

PP#137 also considered the use of GMHAT/PC had facilitated a more comprehensive assessment:

**PP#137:** I thought it was very good because it felt like somebody was digging deeper in to...the reason I'd come for a consultation and it wasn't just a quick oh yeah, alright, take them [tablets] and pop off.

**Interviewer:** So, it went into your health issues in more depth you found?

**Participant:** Yes, I think so. I think it helped a lot more.

**Interviewer:** Right.

**Participant:** It helped me as well bring a couple of things to the top that had floated away over the years.

**Interviewer:** Have you seen other doctors or other healthcare workers about mental health symptoms in the past?

**Participant:** Yes, I have.

**Interviewer:** Right. So how did that interview compare with...with those previous assessments or consultations?

**Participant:** They were very good, the doctors were very good, but I didn't feel that it was as in depth and help...it didn't help me to get to the...by questioning me it helped me to get more to the bottom of the way I was feeling on the day.

**Interviewer:** Yeah.

**Participant:** So yeah, that...the other consultations didn't, if you know what I mean? They didn't make me feel better on the day because it was like...oh I don't know how to put it in to words. It's like they care and they're good at their job but they're not going quite far enough in to...they're not asking you enough questions.

**Interviewer:** And not...and not as much as in depth as the interview you had using the tool?

**Participant:** Definitely not as in depth, no.

**(Later)**

**Participant:** Well I know from these days that we haven't got long for consultations. So maybe that didn't help but I think er...doctors should be allowed to book the time in and make the time because I think it...it just needs to be. I think it's...it's just great. I've never seen anything like it.

Sometimes in their distress, people believe that they have some more severe or more significant mental health disease and can express relief when they are told or come to realise that they do not:

**PP#132:** "I think probably one section that didn't apply to me but that's good 'cos we now know it doesn't apply to me".

PP#81, a young mother with anxiety, depression, and social phobia, said of GMHAT/PC:

"It was more thorough. It produced more potential relevant information. It was more about, I would say, periodical evidence rather than just interpretation because I can understand how difficult it is. You come into a doctor and you say you're not feeling

*well. How are you not feeling well? Well, I'm just not feeling well, and this was at least much more structured than any previous one."*

And when asked what she would say if she had to tell others about GMHAT/PC, PP#71 responded, *"That is a fair, thorough, and helpful way to go"*.

#### 5.3.5.4 Positive comment about facilitating discussion or disclosure

Five (5) patients felt that the use of GMHAT/PC had helped them discuss or disclose symptoms. PP#108, a young man, said:

**Participant:** *Well, it was...different in a way because I'm not used to opening up about what I feel and, you know, I'm the type of person who will let it build up and, you know, eventually it just explodes. So, coming in and, you know, having the opportunity to be, you know, asked questions that were part of the research, you know, having to be able to talk about them, it did help. I didn't feel like they were, you know, too overbearing, you know, they were the...right sort of question for me to be able to answer comfortably.*

**Interviewer:** *Right.*

**Participant:** *...without feeling like I'd, you know, been invaded by my privacy or anything like that. So, I'd say it was...it was pretty good.*

**Interviewer:** *Right, oh good, and...and did you feel the questions helped you to talk, helped you to explain your difficulties?*

**Participant:** *They did help quite a bit. I wouldn't say, you know, I could just blurt out whatever was, you know, wrong with me. If...I could just, you know, go up to anyone I'm close to and just say yeah, this is what's wrong with me, but it did help...it did help me bring, you know, quite a lot of problems to the surface.*

Speaking about the same topic, PP#2 said, *"If you're going for a consultation and they're not asking certain questions, then you're more inclined to just keep quiet about things"*.

And PP#30 would also have not fully disclosed her symptoms in other circumstances:

**Interviewer:** *I'm particularly interested in what you thought was helpful or good about the software.*

**Participant:** *It made me think about things I hadn't really thought about. About how I was feeling about certain things and I probably might not have told the doctor, had she not asked me.*

**Interviewer:** *Did the software help you to talk to her, or was she just an easy-going person and was easy to talk to anyway, or –*

**Participant:** *No, she asked the questions, and then she dug a bit deeper. It helped me to get everything that I wanted to say.*

PP#87 also found value in the semi-structured nature of GMHAT/PC, reporting:

**Participant:** *It was nice to be able to talk about something and not be worried about talking about it, if that makes sense.*

**Interviewer:** *Yes. Did the program help that to happen, or do you think that would have happened anyway?*

**Participant:** *No. I think, obviously, the questions are there instead of beating around the bush, which is helpful, to me, because I like it when somebody can be completely direct with me, so I can be direct with them, so I know where I stand.*

These responses illustrate the importance of having some structure to clinical assessments and the importance of that structure as a tool to ask about specific symptoms rather than expecting the patient to volunteer everything.

### 5.3.5.5 Easy to understand

Five (5) patients commented that the questions arising from the use of GMHAT/PC were easy to understand. There is some overlap with the theme of the tool facilitating discussion or disclosure as in PP#132 who said:

*"I wasn't too sure at first but once you started answering the questions, and I got used to giving the answers, I realised it was a lot easier to talk through the...through the questions that you were asking. I think because they were specific questions*

*with kind of like a yes or no answer where...it's a lot easier that way than for me to come here and try to explain how I feel because a) it's embarrassing and b) I'm not always too sure how I feel. So just answering them questions was a lot easier.*

#### 5.3.5.6 Positive opinion of diagnostic accuracy

Three (3) patients expressed views reflecting a positive opinion of diagnostic accuracy. PP#2, a young woman with anxiety, depression, and personality issues, has been interviewed several times using GMHAT/PC and she opines:

*"I've done it quite a few times like I said with different doctors in here. When they put in what their opinion is on diagnosis and things, it always come back with what I've actually been diagnosed, so it's kind of correct and seems to work".*

PP#46 was able to recognise some symptoms in herself and reported *"I just felt better that it spoke about certain issues, that I was like, 'Oh yes, that's me"*.

#### 5.3.5.7 Negative comments about the use of GMHAT/PC

Three (3) patients had concerns about the use of GMHAT/PC. PP#102, a middle-aged man working in third-level education, had some disquiet about what he perceived as the impersonal use of the semi-structured tool in his consultation, opining that non-structured consultations can be *"a little bit more personal"*.

**Participant:** *Not using the tool I think can be...felt like it's a little bit more personal.*

**Interviewer:** *So, it's impersonal using the tool?*

**Participant:** *Well I didn't necessary feel that but I've done this type of work so I understand the process. Whereas I guess somebody who's...who does understand say research might find it a bit more impersonal.*

PP#2, had concerns about the doctor not involving her in rating the severity of her symptoms:

*“When I was there, when it was [Healthcare Worker], it was okay, but she never asked me because it was like a severity of when you’re clicking on it and it says that it severely impacts you. She never asked that, she just ticked one”.*

GMHAT/PC is a healthcare worker’s tool and the HCW is expected to rate symptom severity. Shared decision making between the HCW and patient is good practice and clearly PP#2 was discontent with the level of engagement and decision-sharing.

PP#6 initially viewed her symptoms as more likely somatic in aetiology and would have been distressed if GMHAT/PC had been used earlier in her presentation:

**Participant:** *If that [GMHAT/PC] had been used at the very beginning when I first came to see [Healthcare Worker] and the doctor sat behind the screen and got me to do that, I would have felt “They’re writing me off as depressed”. I came thinking that I had ME because I couldn’t even walk up the stairs anymore without stopping.*

**Interviewer:** *You’re under a lot of pressure, do you know that?*

**Participant:** *Yes. If that tool had been used right at the get go, I’d have not coped.*

**Interviewer:** *Why? Because?*

**Participant:** *I would have felt, I’m being pushed down, down the depressed line. Whilst I knew that I was very low, I thought it because I had ME, because one of my daughters had it, and I’d seen how she was. [Healthcare Worker], bless him, who respected what I was saying, and part of ME is depression, said “Let’s deal with that side at first and we’ll see how we go”.*

*It took me about six weeks to admit I was depressed. Having that [GMHAT/PC] at the beginning would have been a good tool for the doctor but not necessarily for me at the beginning.*

PP#35, while seemingly otherwise content with the tool, suggests that GMHAT/PC was too structured and felt that there should be a more flexible or less structured approach:

**Interviewer:** *Was there anything you didn't like?*

**Participant:** *With regards towards taking a typical diagnosis of a conversation. It feels like some aspects are too specific to have fitted into the question, but that's because, I imagined the nature of mental health means that, you overthink things and some things just don't fit into any easy category.*

**Interviewer:** *Really it's hard to get a tool for everybody but.*

**Participant:** *Perhaps allowing someone to have, as well having structured questions, allow them a bit of, what's the word?*

**Interviewer:** *Flexibility?*

**Participant:** *Yes. A bit of leeway to come up with things that only they can express in their head that aren't on paper.*

**Interviewer:** *Yes.*

**Participant:** *Does that make sense?*

**Interviewer:** *Yes, it does. It makes perfect sense. Good. Was there anything else you didn't like? Was there anything else you thought could've been better?*

**Participant:** *No, nothing comes to mind.*

**Interviewer:** *All right. Anything you think should be done differently with the use of the program or about the use of the program?*

**Participant:** *No, I thought the use of the program was fine.*

PP#71 elected to be accompanied by her husband to both the mental health assessment and the post-assessment research interview. In consequence, he may have discovered things about his wife's medical history that he did not already know. While this could happen in any consultation where the patient chooses to be accompanied, it is possibly related to the breadth and depth of the GMHAT/PC assessment.

**Interviewer:** *Was there anything bad at all?*

**Participant:** *Well, only that things came out my husband hadn't known about. I'm worried about them coming out to him because he wouldn't have known about them. I had to mention them because it went so far back.*

**Participant's husband:** *It was your decision about me coming with you.*

**Participant:** *But it did not upset you too much, did it?*

**Participant's husband:** *No.*

#### 5.3.5.8 View of harm to patient

PP#108 reflects that thinking about his recent history may have been traumatic for him:

**Interviewer:** *Anything bad about the questions? Were they intrusive? Did they take too long?*

**Participant:** *It was a lengthy...it was a lengthy process. I'm not...I wouldn't say it was, you know, ridiculously long but it did take quite a while.*

**Interviewer:** *Yeah.*

**Participant:** *Other than that...just reflecting on, you know, what's happened in the last few years or so was the only downfall to it. That's all I can think of.*

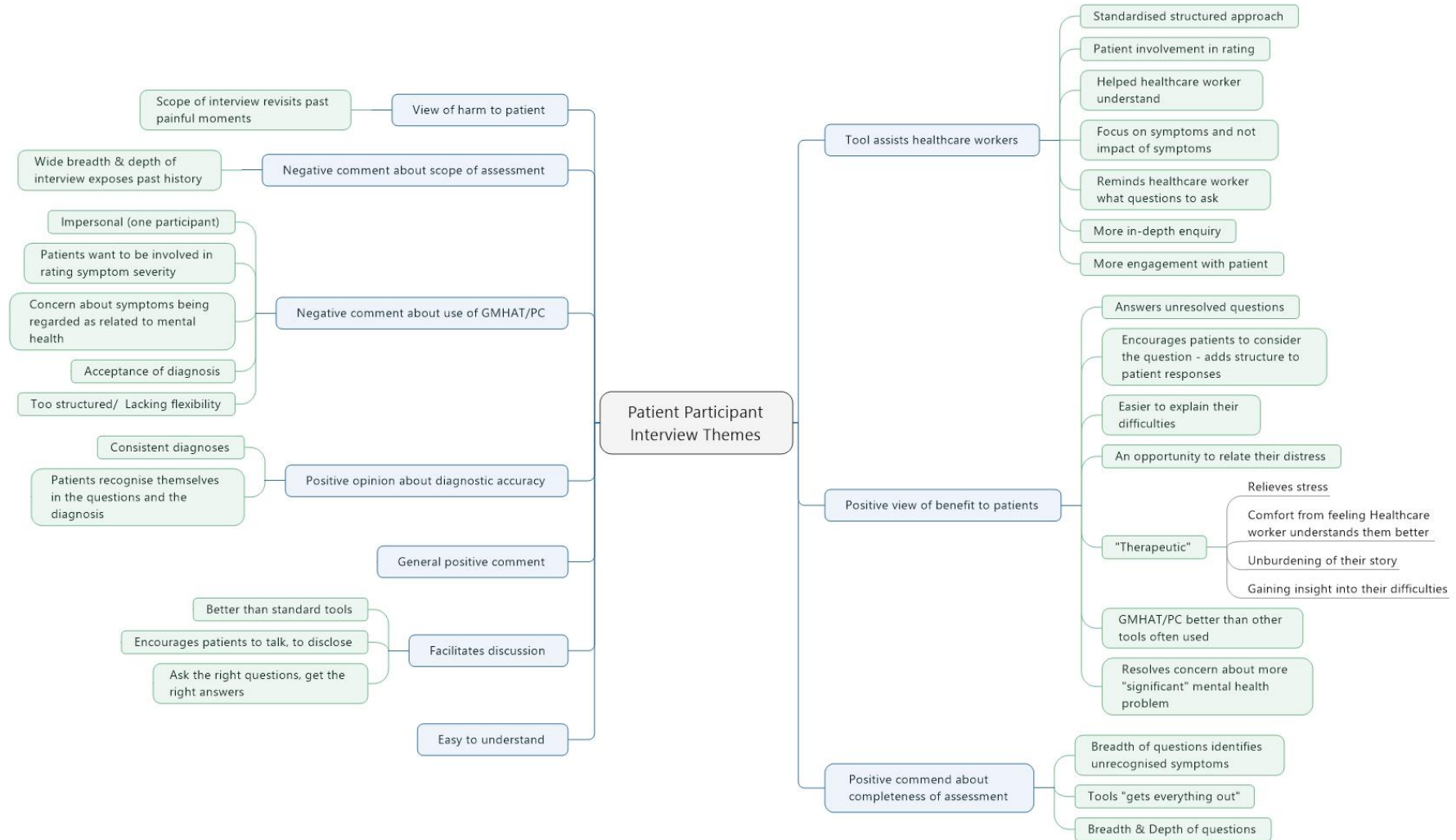
**Interviewer:** *It brought up some bad memories for you, is that what happened?*

**Participant:** *Yeah, yeah.*

#### 5.3.5.9 Tool hinders healthcare workers

I particularly looked for any suggestion that any patient participant might have believed that the use of GMHAT/PC might have hindered the healthcare worker in any way. The semi-structured interview schedule included a question, directly asking whether this might be so. No patient participant opined that using GAT/PC had hindered their healthcare worker.

Figure 15: Mind map of Participant Interview Themes



## 5.4 Feasibility

### 5.4.1 Introduction

This section examines the data collected to answer the second question, “*Is the use of GMHAT/PC feasible in primary care?*”. Of the fifty-five (55) healthcare worker participants, forty-seven (47) healthcare worker participants were interviewed. Eight (8) were not interviewed, some declining consent and others being lost to follow-up, e.g., moving to another post and not responding to contact efforts.

The interviews followed a semi-structured schedule. Each was recorded and subsequently transcribed. The schedule for the semi-structured interview is shown in Appendix K on page 316. In the preamble, the healthcare workers were advised that they would not be identified in the research but that if they said or revealed any information that might suggest a risk to themselves or someone else I would have to respond appropriately, disclosing that information so as to eliminate or at least reduce that risk. All participants indicated that they understood this. In the event, no such risk was identified from any participant.

The main themes of the questions posed to the participants were to:

- Identify their views on the general medical templates used in their clinical system.
- Identify their views of the GMHAT/PC tool.
- Determine their views on the feasibility of using the tool in primary care.

In the light of learning from initial interviews, three questions were added to the schedule. First, it became apparent that some healthcare workers had encountered diagnoses they had not been expecting. Subsequent interviewees were asked if they had experienced any such “*surprise*” diagnoses. Second, some early interviewees expressed sensitivity about asking patients if they had any history of sexual abuse. A question was added to explore this and to determine if the use of the tool helped healthcare workers pose embarrassing or sensitive questions. Third, there was a line of thought from some interviewees that patients interviewed using the tool received a more comprehensive assessment than those assessed without the tool. A question was added to explore this issue too.

Some interviewers reported that the additional research step of enrolling the patient into the research had affected how often they had used GMHAT/PC in the research setting, either because it had seemed inappropriate to ask an upset or distressed patient to pause while they were enrolled, or because the healthcare worker had felt they could not allocate the time required, due to their other time pressures.

#### 5.4.2 Analysis of themes identified

The forty-seven (47) healthcare worker participant interviews were transcribed and thematically coded in NVivo 11 ©. The analysis included:

- Detailing the themes identified. See Table 26 on page 200 which also lists how many participants identified each theme.
- Describing the general templates used in UK primary care electronic patient records.
- Exploring the views of the healthcare worker towards these templates.
- Delving into their opinions of the GMHAT/PC tool.
- Looking at their view of the feasibility of using GMHAT/PC in primary care.
- Identifying their view of barriers to the tool's feasibility.
- Exploring how they think those barriers might be managed.

**Table 26: Themes in healthcare worker interviews relating to feasibility**

**Themes identified in healthcare worker  
participant interviews relating to feasibility**

<b>Name</b>	<b>Description</b>	<b>Number of Sources Coded</b>	<b>Number of Coding References</b>
General templates useful	The healthcare worker expresses a view that the general clinical templates are useful in some way.	35	46
Completeness of GMHAT-PC assessment	The healthcare worker expresses a view suggesting that GMHAT/PC provides or facilitates a complete or comprehensive assessment of the patient's mental health symptoms.	34	60
Managing barriers to feasibility	The healthcare worker identifies barriers to feasibility and considers or proposes ways to manage them.	24	32
Support for healthcare worker	The healthcare worker expresses a view that using GMHAT/PC supports them in some way, e.g., by reminding them what symptoms they need to explore.	24	41
General templates – concerns or other negative views	The healthcare worker has a concern about the general physical health templates used in the EMIS software.	20	26
Logical, structured, or standardised approach	The healthcare worker makes a positive statement about the logical, structured approach to mental health assessments facilitated by GMHAT/PC. Making sure that everyone gets the same (comprehensive) assessment.	18	22
Vehicle to ask sensitive questions	The healthcare worker suggests that the use of GMHAT/PC provided them with a vehicle to ask sensitive questions.	14	16

Surprise diagnoses	The healthcare worker suggests that using the tool revealed a “surprise diagnosis” – some aspect of the patient’s mental health that had not previously been considered.	12	13
Barrier to feasibility – TIME	The healthcare worker identifies time as a barrier to feasibility and does not make any suggestion as to how that barrier could be managed in practice.	11	13
Positive view of GMHAT-PC’s feasibility in primary care	The participant expresses a positive view of the feasibility of using GMHAT/PC in primary care.	10	13
Barrier to feasibility – other than time	The interviewee identifies a barrier to feasibility other than time.	7	8
NO concern about straitjacketing	The respondent has no concerns about “straitjacketing” – a view that using any template or tool restricts their clinical initiative or their clinical freedom.	6	7
Other positive view of GMHAT-PC	The interviewee expresses a positive view of GMHAT/PC that is not elsewhere coded.	5	5
Concern about straitjacketing or tramlining	The healthcare worker expresses concern that templates and/ or structured tools straitjacket clinicians, restricting their clinical freedom, forcing them down tramlines.	4	5
Positive comment about utility of longitudinal assessment with GMHAT-PC	The participant expresses a positive view about repeated use of GMHAT/PC in providing longitudinal assessment of patient’s mental health symptoms.	3	3
Concern about wording of questions	The participant expresses disquiet or concern about the wording of the questions. This would be a negative comment. Positive comments should be coded elsewhere.	2	2

Concern about IT in medicine	The interviewee expresses a concern about the use of information technology in medicine.	2	2
GMHAT-PC easy to use	The interviewee expresses the view that GMHAT/PC is easy to use.	1	2
Concerns about GMHAT being used instead of clinical practice	The interviewee expresses concern about GMHAT/PC being used instead of, or as a substitute for, normal clinical practice.	1	1
Concern about acceptability to patients	The interviewee expressed their concern that GMHAT/PC might not be acceptable to patients.	1	1
Initial competence and-or confidence	The participant talks about their initial (pre involvement in this research project) competence and/or confidence.	1	1
GMHAT helps foster relationship with patient	The interviewee expresses the view that GMHAT/PC helps foster the relationship with the patient.	1	1
Negative view of GMHAT-PC's feasibility in primary care	The participant expresses a negative view of the feasibility of using GMHAT/PC in primary care.	0	0

### 5.4.2.1 Templates used in UK electronic patient record systems

Before exploring healthcare workers' attitudes to structured care tools, a brief description will help those unfamiliar with the computer programs used in UK general practice. Electronic patient record systems used in the UK allow for "templates", screens that present a set of questions relating to specific clinical situations, such as a screen relating to diabetes care, or to the secondary prevention of coronary heart disease. These templates allow for a more organised or structured care, prompting the healthcare worker on relevant items of history and examination, bringing in pertinent laboratory results and in some cases even offering management advice driven by a rules-based logic.

Templates will often be influenced by the NHS's Quality and Outcome Framework for primary care which defines a set of indicators for the care of patients with specific clinical issues. Indicators are based either on published evidence or consensus expert opinion. When a patient's care is deficient in some way, or they are not meeting a particular QOF indicator, an alert will be displayed in the clinical system when the patient's record is accessed. Examples of such alerts are shown in Figure 16 below. In the example shown, the clinical system is advising several things – a blood test is needed to monitor the safety of a prescribed drug, the last recorded blood pressure of 142/71 is not meeting the indicator standard and two vaccinations are recommended.

**Figure 16: Example of clinical system alerts for patient care**

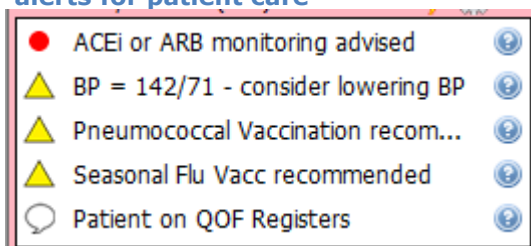


Figure 17 below shows a brief template that appears automatically in the author's practice when a clinician accesses the records of a patient with poor glycaemic control. The clinician is prompted to respond and reminded that the patient may have problems being accepted for elective surgery because of their poor glycaemic control.

**Figure 17: Example of diabetes template**

**Diabetic Control : Hba1c >59 mmol/mol**

**This patient is diabetic and their latest HbA1c is more than 59 mmol/mol. Please review their glycaemic control :**

Please say what you've done about their glycaemic control *Text*

Latest HbA1c

---

**HbA1c >=65**

**This patient's latest HbA1c is >=65 mmol/mol. They could have problems being accepted for elective surgery.**

Figure 18 below shows a second template example. This template is collecting data for the secondary prevention of occlusive arterial disease (coronary heart disease, stroke or transient ischaemic attack, or peripheral vascular disease). It is based on strategies first published in the National Service Framework for Coronary Heart Disease (Department of Health, 2000), addressing thromboprophylaxis, smoking cessation, blood pressure control and cholesterol management.

**Figure 18: Example of cardiovascular secondary prevention template**

**CHD/ CVA 2nd'ry Prevention**

**Height And Weight**

**Blackheath 2nd'ry Prevention Template**  
**Use in persons with h/o CHD, CVA or peripheral arterial disease**

O/E - Height  cm

O/E - Weight  kg

Body Mass Index

Tobacco Consumption

Smoking Cessation Advice

*Text*

Blood pressure  /  mmHg

Please remind the patient that they should have an annual influenza vaccination and that they should contact the practice in early October.

Influenza vaccination verbal invitation *Text*

Serum Creatinine

eGFR

Serum Cholesterol

Serum Triglycerides

Advice About Taking Aspirin

*Text*

Low Cholesterol Diet

#### 5.4.2.2 Healthcare workers' views of general templates

Healthcare workers' views of general templates will provide some insight into their opinions about the use of information technology in general practice and the idea of semi-structured tools to support patient care. Understanding these perspectives provides a valuable contextual background to their views of the feasibility of the GMHAT/PC tool in primary care.

The theme expressed most commonly by participants was that templates are useful, helping clinicians remember what they should include in their conversation, whether it might be an item of history-taking, examination, or management. HCW #38, a healthcare assistant, picked up on the value of templates in providing logical structured flow and in reminding the healthcare worker what they need to cover:

*Interviewer: Yeah and you were talking too about logical flow? So, you...and do you like that in a template?*

*Participant: I think if it's a logical flow it comes through to the patient more naturally and you're less likely to miss something out because it is a natural progression and flow.*

*Interviewer: Right and you mentioned something else, another theme about leaving things out. So...is...is that one of the perks of templates that they help you to remind...help you to remember things?*

*Participant: Definitely. It's a little reminder as to what comes next and as long as it flows logically it's just a little added reminder for you.*

*Interviewer: Is there anything else you like about the templates you use?*

*Participant: It just...like I've already said, you know, it is a reminder so nothing gets missed.*

HCW #16, a junior doctor, said, *"They're very useful. Basically, because they...they lay out what is important for me to find out in the patient rather than me trying to depend on my own memory, which can be subject to error in data gathering. So, I found them very useful, very comfortable to use, and not excessively long, just the right size"*.

HCW #26, an established general practitioner had similar views and also picked up on the point of quality of care:

**Interviewer:** *I just wondered what views do you have about the [clinical system] templates on your computer system?*

**Participant:** *Yeah, I actually find them quite a good aide memoire to be honest.*

**Interviewer:** *Yeah.*

**Participant:** *I don't...you know, some people find them a bit onerous but I don't at all and I actually...they're easy to access as well. It's just the click of a button, you're loading all the information that you need very quickly, it's on the system and you know you're capturing the data that you need for things like QOF [Quality and Outcome Framework] but it also...the whole point of it is about quality of care. So, anything that can help with quality of care is fine, that's good, yeah.*

HCW #36, an established general practitioner, also saw the value of templates for those in training:

**Interviewer:** *What do you think of the EMIS templates, the sort of the ordinary, general, medical templates you see for diabetes, heart disease, COPD<sup>4</sup>, what do you think of those?*

**Participant:** *I think they're really good, to be fair. I think if you...if you see a patient as the sort of practice partner you're more likely to go looking for these things but I think if you're here as an F2 [junior doctor] and you've not really got much experience in general practice it's a really useful tool to sort of prompt you and...and it gives you an easy way of sort of seeing if you've...if you've sort of ticked all the boxes and made a difference to that patient's care say. I think especially for the trainees it's particularly useful.*

HCW #8, an established general practitioner, a partner in a Wirral practice, when asked the same question, said:

**HCW #8:** *Personally, I like them. I think...some of what's important about everything that we do is we do things holistically and we cover all the important things but we take...we have a full assessment of the patient's need and even the best doctor may forget things and I think the templates, whatever template it is, allow us to make that*

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<sup>4</sup> COPD Chronic Obstructive Pulmonary Disease

*holistic assessment and cover everything that we need to cover. So, generally it's a big yes from me for templates.*

**Interviewer:** *OK and so do you think the templates help your daily practice?*

**HCW #8:** *Absolutely.*

**Interviewer:** *Yeah?*

**HCW #8:** *I think templates speed me up. They serve as a prompt, a reminder, that I'm covering the right things.*

HCW #67, a GP trainee with several year's prior experience in geriatric medicine, saw value in the use of general medical templates to present information in a logical way, help quantify the severity of symptoms and do a quick but thorough assessment of their patient's current status:

**Interviewer:** *How do you feel using them then?*

**HCW #67:** *Oh, it's fine. I think they're really user-friendly. I think it prompts you in a fairly logical manner and the fact that you know, you've got those sort of autofill fields often particularly with erm...asthma and COPD about their symptoms and things makes that quite easy. You're not having to, you know, quantify it yourself.*

**Interviewer:** *Right and do they help you in any way?*

**HCW #67:** *Erm...I think they...you get an overall impression based on that and quite a thorough sort of review of someone quite quickly and that prompts me to say, you know, that really their current medication is fine and then perhaps you can complete a medication review at the same time, or that it flags up that actually it sounds as if their symptoms aren't particularly well-controlled and you might wanna do something about that at that time and then save them, you know, coming in for another appointment.*

Twenty (20) (45%) expressed some concern about templates. Most of these felt that sometimes completing a template was inappropriate in some consultations. Some were concerned about straitjacketing, being forced down a tramlined structured care pathway, losing their "clinical freedom" (Geddes, 1996) (Cabitza, Sarini et al., 2007). HCW #23, a medical student, witnessed me cancelling out of a template in a consultation; "*There might be some situations where it might not be appropriate. Say if they come in with kind of*

*another sensitive matter that they want to sort quickly. I'm not sure how easy it is to jump out of the tools, but I've seen you jump out of it'.*

HCW #3, a Foundation Year 2 junior doctor, laments the loss of the “*art of medicine*” and then accepts the value of templates in reminding him what he needs to do:

**Interviewer:** *How do you feel about those templates?*

**HCW #3:** *That's a wide question. I think in some cases they take away the art of medicine in a way, they made it almost like a tick-box exercise for all the doctors and take away the magic, which we've brought up to believe, the art of human body, the science of Medicine and all this. At the end, I completely understand why they exist because in today's culture of medicine, medically you cannot miss things and you have to make sure that you are giving each patient the correct investigations and treatments. Quite often I do a case quite well in many departments and I just check on guidelines and there's two or three things – that I would have forgotten like, “Right, thank God that was there.” I can definitely see why they exist and I think they are helpful, but I think they're so many now. It's almost hard to avoid them, I think.*

HCW #35 seemed to accept the role of templates in prompting the doctor but seemed to regard management of the deficient care of the patient's chronic disease as intruding inappropriately into the management of their presenting symptom. The doctor was content to access templates on their own agenda but not when they displayed automatically in the patient management software, going so far as to decry the time dealing with the template as “wasted”, even though it was presumably triggered by some deficiency in the patient's care:

**Interviewer:** *So, can I just ask your views about those tools, about the...about the EMIS templates in general?*

**HCW #35:** *I think they have their place and I think they can be useful for prompting you to respond to different cues that you perhaps wouldn't have thought of. They can be very unhelpful when they pop up in consultation for a consultation that's completely unrelated and you can't get rid of the template until you've completed. So, you feel like you're wasting time ticking the boxes on a template which isn't really the [patient's] primary concern.*

**Interviewer:** *So, again, prompts you and helps you to remember certain things and they're kind of a nuisance in so far as you feel they're a task that you have to do that's not related to the...*

**HCW #35:** *Yeah. So, if you activate the template yourself then that's a different story because you're wanting to initiate sort of completion of that information gathering anyway.*

HCW #66, a junior doctor, saw a different value in the templates, taking the view that they prompt her and sometimes make her think about her patient's care. She recognised the value of a rules-based clinical decision support system prompting her about patient care, in this case the care of a patient with asthma, and not just managing the patient's presenting complaint.

**HCW #66:** *They make you remember everything (laughs).*

**Interviewer:** *Yeah.*

**HCW #66:** *I wouldn't remember most of the asthma questions and then they make you like, even if the patient's just in with an exacerbation, you wouldn't necessarily ask them about that, you know, how their control is and I found a few patients who aren't actually, when you look back, and sometimes you don't...they've had a few exacerbations but nobody's increased their like baseline treatment, you know, it makes you think about that rather than just what's in front of you.*

HCW #70, an established general practitioner, seemed somewhat frustrated by templates and concerned about professional autonomy:

**Interviewer:** *Anything you don't like about templates?*

**Participant:** *There's quite a lot of superfluous bits to them that...asks sometimes you need to fill in, to save it, and add that. That does get...get on your wick a bit.*

[And later:]

**Interviewer:** *And people sometimes talk about being straitjacketed and a kind of loss of clinical freedom. Do you feel that when you have to use a template?*

**Participant:** *Yeah, probably one of the reasons I don't look at'em so much. I mean yeah, I do like to try and exercise my own judgement sometimes and that's part of...that's one of the...one of the things about the job isn't it?*

**Interviewer:** *Yeah.*

**Participant:** *It is and you know, you're...do everything, you know, according to the patient...I suppose you're a bit more patient-centred if you do it that way, you know, I don't like to lose my autonomy much.*

HCW #62, a medical student, clearly felt overwhelmed by the number of alerts appearing when she accessed patient records:

**Interviewer:** *Is there anything bad about them?*

**Participant:** *Sometimes like quite a lot of things might pop up. So, then you might get like oh, I'll just exit, just, you know, cause you get...cause you're used to them popping up all the time?*

**Interviewer:** *Yeah.*

**Participant:** *So, you might not take it as seriously.*

**Interviewer:** *Yeah.*

**Participant:** *Cause there's so many.*

**Interviewer:** *That's a problem. That's actually called "alert fatigue" <sup>5</sup>*

**Participant:** *Yeah.*

**Interviewer:** *...and it's a major problem but the trouble is the alerts are there for a reason.*

**Participant:** *Yeah.*

**Interviewer:** *And if a lot...if lots are coming up, what does that tell you about the care the patient's getting?*

**Participant:** *Yeah, you need to do it.*

HCW #67, a GP Trainee, saw that using the general medical templates could help her in future placements where the templates she used in her training practice were not available to her:

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<sup>5</sup> For further information on alert fatigue see (Ash, Sittig et al., 2007; Baysari, Tariq et al., 2017).

**HCW #67:** *I think that where you do a more comprehensive review and if you're going on, you know, to do that elsewhere, you know, on another placement or whatever, without the use of that template, I would probably still work through that, that I've seen.*

**Interviewer:** *Yeah.*

**HCW #67:** *You know, that would be the thing I carried with me.*

#### 5.4.2.3 Healthcare workers' views of the GMHAT/PC tool

Thirty-four (34) (77%) expressed the view that the GMHAT/PC tool facilitated a complete assessment of the patient's mental health symptoms. During the initial interviews, some healthcare participants reported that using the tool was leading to what became known during the research as "surprise diagnoses" – the more complete assessment was unmasking previously undisclosed or missed diagnoses. When asked to compare assessment using the tool against an assessment not using any tool, HCW #18, a medical student, responded:

**HCW #18:** *I think the GMHAT's a lot more thorough.*

**Interviewer:** *Why? What makes you think that?*

**HCW #18:** *I think it explores areas that may be a patient wouldn't be forthcoming in telling me about. I think sometimes when I used to ask patients questions on GMHAT, initially, they would say, "No." Then, they'd think about it, and they would say, "Actually, yes. I do feel like that." That may be in a consultation without a template like that, it wouldn't be an area that you would cover. I found out quite a lot with GMHAT. It's very thorough. Even though sometimes some of the questions may not seem applicable, initially when people start-up.*

*When they then think about it, and when you explore those questions, I found that in a couple of times, and even once we saw a patient after he had had an initial consultation, and we found out lots more information from the GMHAT, than had been initially found from the consultation, which was really beneficial.*

**Interviewer:** *Did that information influence the patient's management?*

**HCW #18:** *Yes. I think it was just the severity—How severe it was, was realized from the GMHAT and –*

**Interviewer:** *Had that been underestimated in the initial consultation.*

**HCW #18:** *I think so. Not in a bad way. Also, a broader spectrum of problems. It wasn't just depression.*

HCW #19, an FY2 doctor on his four-month attachment in primary care, when asked if the tool had helped him in his assessment of patients with mental health symptoms, also seemed to appreciate how the use of GMHAT/PC helped to reveal diagnoses and facilitated management. He also recognised the scope of the GMHAT/PC assessment.

**HCW #19:** *I think it has helped in the sense that it can uncover the problem, such as alcohol dependence or sort of, you know, traumas from childhood, and I think it can make patients more open to talking therapies to discuss those sorts of things. 'Cos I think a lot of patients are reluctant if you don't use a tool like that to sort of go to talking therapies. Whereas I found that if I use a...ask them about previous problems in childhood, there's something else, they might be more sort of amenable to entertaining the option of talking therapies.*

**Interviewer:** *Right, OK. So...so it helps the patient to open up you feel?*

**HCW #19:** *I think so, yeah.*

**Interviewer:** *And why is that? What about it especially? You know, what is it about the tool that helps the patient to open up?*

**HCW #19:** *Probably the fact that there's quite open...open questions. Obviously depending on the style of the person asking them but I tend to ask them quite openly and then sort of use it to focus in on, you know, more specific questions. But I think it's the open questions and the fact that...I'm not sure really. Maybe the fact that it's a standardised tool and they don't feel like you're asking them sort of because you suspect there's a problem. I think that might be helpful as well. It's more of a sort of...a routine thing that you ask everybody.*

[and later:]

**Interviewer:** *How do you feel about mental health assessments that have been done without the tool in comparison to mental health assessments done with the tool? Is there a difference?*

**HCW #19:** *I think with the tool it's more comprehensive.*

**Interviewer:** *Yeah?*

**HCW #19:** *I think without the tool it's tempting to just go down one...one sort of route that you've already decided. Whereas I think with the tool it forces you to think about other things, which is a good thing.*

When asked what she thought was good about GMHAT/PC, HCW #57, a mental health counsellor working in a community setting, opined that it helped her ask the right questions and made her feel confident:

**HCW #57:** *Yeah. I think that it covered a lot of issues, pretty much everything. It was quite helpful in terms of asking the right questions at the right time. Knowing how to ask them as well, you know, tentatively. I think the main thing with it that I found was useful was sort of...the way...I think...well what most useful, sorry, the most challenging part of it was trying to gauge ... 'cos it was sort of your own interpretation... of their...of their sort of experiences really and what they're saying, that was probably the most challenging part of it but with the assessment tool I found it helpful and quite easy to use in a way. It made me feel confident asking the question that I needed to ask really.*

HCW #35 also had views about the comprehensive scope of GMHAT/PC's assessment and how it increased her confidence:

**HCW #35:** *It's very thorough. It explores all areas of mental health and often mental health problems co-exist. So, whilst you may be pretty certain somebody has anxiety and depression and you'd ask all the appropriate questions and that, in your routine clinical history you might not go down exploring the OCD tendencies that they may also have. So, it can bring out more than one issue.*

GP Trainee, HCW #60, also recognised the comprehensive scope of the GMAHT/PC interview, its role in guiding the healthcare worker through the interview, including prompting about sensitive questions. She did not seem to feel embarrassed or awkward about asking those questions – she just valued the role of the tool in prompting her to ask them.

**HCW #60:** *Yeah, I think it...I think you talked about compre...it being comprehensive. That might be a later question but it's definitely comprehensive and it definitely covers areas that you would not naturally cover in general practice. So, more the psychosis elements definitely, eating disorders I don't think you would always ask about that as routine unless you had a...you know, a typical patient in*

*front of you, you know? So your sixteen-year-old girl or something but I don't think it's something you would think about. More of the obsessive symptoms as well, expanding on that was quite good. I think they're the ones that are calling straight away to my mind. So, it was very comprehensive.*

*[... and later:]*

**Interviewer:** *So, was there anything else you liked?*

**HCW #60:** *It was good to feedback to the patient as well.*

**Interviewer:** *Oh right.*

**HCW #60:** *So, the patient came in. We had some suspicions that this might be the case, but it was nice to go through it together. It opened up a lot of things that I hadn't realised about the patient, that he had not disclosed. So, we found out about some unusual behaviours and things that...there's no way would have come out without doing that interview.*

*[... and later:]*

**Interviewer:** *How do you feel about the comprehensiveness of the examination the patient gets with the tool as compared to the examination assessment the patient gets without the tool?*

**HCW #60:** *Definitely more comprehensive, definitely. One probably because of the time aspect.*

**Interviewer:** *Yeah.*

**HCW #60:** *Two because it's there as a prompt, as all good templates are, it's a prompt at all the things that you might not remember automatically to do in a full mental health examination erm...and especially from general practice where you are used to seeing anxiety and depression and...you know, perhaps some drug and alcohol issues but your full spectrum of mental health disorders you don't see day in day out in general practice.*

**Interviewer:** *Mm.*

**HCW #60:** *So, as with anything, you become deskilled in that area and you forget about those parts of the assessment. Or you might ask a cursory question that doesn't really get everything out of the patient. Whereas with the GMHAT programme you are tunnelled into those questions so that you have those prompts and you ask them.*

*[... and later:]*

**Interviewer:** *So, did any of the questions cause you problems. Some people have felt uneasy about questions of sexual abuse, the eating disorder questions, those sort of questions...suicidal ideation, these are examples of questions that have bothered some people.*

**HCW #60:** *Suicidal ideation absolutely not because I think that is a core part of your responsibility in general practice. So, I think that might have been the response from perhaps an F2 or someone who's less experienced, but I think everybody who's seeing people with depression should be really comfortable at asking about...about suicidal tendencies. So no, that one was not a problem for me because I'm used to asking about that with everyone with depression. But yeah, I think the ones about sexual abuse you're definitely not gonna ask routinely. I didn't feel uncomfortable asking it but I think it's one of those examples I wouldn't always think to ask about.*

And HCW #8, an established GP, reported:

**Interviewer:** *Have you thought something or had something been revealed in the GMHAT interview that hadn't been previously considered?*

**HCW #8:** *Erm...I'm going back now but there were a few...I'm convinced there were a few, you know, I thought the individuals' behaviour was a little bit odd erm...and...I mean GMHAT revealed that they may have...have at some stage a psychotic episode. So...so yeah, there were a few surprises.*

**Interviewer:** *Mm.*

**HCW #8:** *Things that I didn't expect.*

**Interviewer:** *And did that influence your patient care?*

**HCW #8:** *Absolutely. I think it really influenced your patient care because there are times when you're reluctant to make a referral through to secondary care because again, you're not sure, you've got that diagnostic uncertainty and having the information from the GMHAT makes you a bit more comfortable about referring through to secondary care about your differential diagnoses.*

Some other healthcare workers had found that symptoms were more severe than they had previously believed. HCW #63, a trainee physician associate, provides an example of that:

**Interviewer:** *In the course of your observations had you had any surprise diagnoses, things that came up that you weren't expecting in clinical contact?*

**HCW #63:** *No, I think most of them I had a general idea. Maybe a surprise diagnosis wouldn't have been the condition. I think it would have been the severity of the condition that was more surprising but that's also a good thing about it is...it gives you a scale of severity instead of just OK, it's anxiety, but how anxious.*

#### 5.4.2.4 Views of the feasibility of using GMHAT/PC in primary care

Many interviewees identified time as a barrier to feasibility – the time it took them to go through the GMHAT semi-structured interview with the patient. HCW #16, a GP Trainee with several years prior experience in emergency medicine, had views about how the time issue could be managed:

**Interviewer:** *How do you feel about the feasibility, the actual practicality of using GMHAT in primary care?*

**HCW #16:** *I think it's...I think it is a practical tool to use. It's completely feasible. I believe that a ten-minute consultation would be too short. I think the ideal setting for G...I think the ideal setting for GMHAT is booking a patient in to have the GMHAT done as he would have any other diagnostic procedure with varying times between fifteen and twenty minutes, or more inclusive depending on the patient. Other than that, yes, it's very feasible. It's very practical.*

**Interviewer:** *So, it's a time issue?*

**HCW #16:** *It's a time issue basically. I mean you can just pull it out and start doing it on...doing your consultation but if you're not sacrificing...as with any diagnostics tool, you're not gonna sacrifice quality er...and that means that...the consultation and the rest of the time takes up loads that it's, you know, easily twenty or thirty minutes.*

When the same question was put to HCW #36, an FY2 doctor, he responded:

**HCW #36:** *I think it's entirely practical. I mean...I think once you've got the hang of the system, that didn't take too long to pick up to be honest.*

**Interviewer:** *Right.*

**HCW #36:** *And like you said before it's your interpretation. So, I think if you soon realise that it's not the patients' inter...it's what you're interpreting, and you can*

*obviously discount some questions as they...as they don't apply to the patient. So, I found I was getting through it quite nicely and it was flowing well, yeah.*

The question of time does not seem simply related to the use of the GMHAT/PC tool. HCW #50, an established general practitioner, did not interview any patients using GMHAT/PC during the research and seemed unwilling to use any “*more in-depth tool*” because of the time it would take:

**Interviewer:** *So, what sort of views do you have about these sorts of... more in depth tools?*

**HCW #50:** *Yeah, I think it would be...sometimes be quite useful in certain patients who, you know, there could be an element of something going on or something else that you wouldn't necessarily sort of pick up.*

**Interviewer:** *Yeah.*

**HCW #50:** *If they've got a bit of an unclear history it gives a good direction to explore the issues, yeah.*

**Interviewer:** *OK. But the thing stopping you using...is the time?*

**HCW #50:** *Yeah.*

GMHAT/PC is a separate standalone program and the fact that healthcare workers had to spend time opening it as a separate process from their electronic patient record software seemed to be a barrier to some, even though switching to different programs occurs frequently during consultations, e.g., healthcare workers have to switch to different programs or web apps to order investigations such as blood tests or x-rays, or to view incoming clinical correspondence. HCW #60, a GP Trainee, said:

**HCW #60:** *I think the additional system, you know, having to come out of the EMIS and go into a different system, that makes things a bit...take a bit longer. So, I think the way it worked well was a GP screening for the use of it and then a separate appointment with (Name) or whoever to take longer and do the full interview.*

**Interviewer:** *Mm.*

**HCW #60:** *Because...and also the fact that you're going out of EMIS and into a separate system. Unless you've got two screens. That then becomes tricky because*

*then you...you know it's taking a bit longer. You're going back and going...getting the other stuff out of EMIS and things.*

**Interviewer:** *So that's a kind of time issue?*

**HCW #60:** *Yeah.*

**Interviewer:** *And was the time it took a problem for you?*

**HCW #60:** *No because I had a longer appointment for it but that was...that was why I think I've only done it the one time because I booked the guy in and brought him back to do it and I think if it was wanting to be done opportunistically in an appointment, unless you're super familiar with, you know, like yourself or whoever's using it regularly, I don't think you would use it opportunistically in a ten minute appointment because you'd be aware that you've got the whole waiting room full of people and it's gonna extend your appointment to at least fifteen-twenty minutes.*

HCW #26, an established GP, worried about the fact that patients have multiple morbidities and will often bring up symptoms from different morbidities during a single consultation:

**HCW #26:** *I think there's a bigger umbrella thing going on here and things like, you know, this questionnaire, there are times where I think it's appropriate to stop and address those issues. Sometimes that's difficult though when there's a lot of other comorbidity or perceived comorbidity that you can't leave, you know, because someone's said well actually, you know what, I'm getting chest pain now. You know, so...you know, there's again, that whole thing of, sometimes the patient, you know, kind of derails that, even though you think no, actually, it would be sensible now to look at your mental health issues 'cos I think there's something else big going on here.*

HCW #37, an FY2 doctor, identified the same issue: "*But when you also deal with something else in the same consultation it's a bit difficult*". Patient factors also affect feasibility as noted by HCW #59, a medical student:

**Interviewer:** *And we had that chap in your second week who'd we asked to come back on the Friday two days later and he didn't turn up, did he? That's another part of the problem?*

**HCW #59:** *Yeah, possibly. Like patient concordance would be an issue...*

**Interviewer:** *Yeah.*

**HCW #59:** *...if they're aware that it is going to be a little bit of a longer interview, I think that that might put people off.*

While most interviewees identified the issue of time as a barrier to feasibility, many had suggestions for managing it:

**Interviewer:** *How do you feel about the time it takes?*

**HCW #36:** *I think the time it takes is fine. I think what I've noticed is if you ask every question as it's coming up then you'll end up repeating yourself and things but I think if you use it more conversationally, if you...if they tell you something that comes up later on, I think instead of asking them again you can...you can apply what they've already told you to that.*

**Interviewer:** *And that helps keep things flowing?*

**HCW #36:** *Yeah, I think so, yeah and it seems less of a sort of stilted questionnaire as well. It's more of a conversation.*

HCW #8, an established GP, identified the time issue and thought adjustments to his consulting schedule could be considered to allow for the GMHAT/PC assessments:

**Interviewer:** *Do you think the tool could have hindered your practice in any way?*

**HCW #8:** *I think the only way it would hinder my practice is from a time perspective. The patient who's having the assessment done is...is in my opinion benefitting from the assessment but the patient that waits fifteen or twenty minutes late are coming in slightly annoyed behind them. So, it's...it only hinders it from a time perspective.*

**Interviewer:** *Time?*

**HCW #8:** *I think if it's possibly used as part of your day to day practice an allowance for the time would have to be factored into your working day.*

**Interviewer:** *OK. So, it's a time issue but it can be managed if there was some allowance made, yeah?*

**HCW #8:** *Yeah.*

HCW #17, a medical student, agreed that more time was needed but felt that the extra time was justified:

**Interviewer:** *Anything that kind of undermines feasibility?*

**HCW #17:** *The only thing would be timing. You'd have to put maybe a slightly longer appointment. It's dependent on each patient but maybe a slightly longer slot rather than your 10 or 15- minute to be able to really get to the bottom of it.*

[... and later...]

**Interviewer:** *Do you think it's worth that time?*

**HCW #17:** *Worth adding extra time?*

**Interviewer:** *Yes.*

**HCW #17:** *I think definitely. I think it's a very useful tool.*

HCW #19, an FY2 doctor, also noted that time was an issue and had identified how he could manage that:

**HCW #19:** *I think it's important when you're doing a GMHAT to get enough time with the patient basically. So, I tend to ask for...if I'm bringing somebody back for a GMHAT I'll ask for a double appointment.*

[... and later...]

**Interviewer:** *So, the actual feasibility of the tool in primary care, how feasible do you think it is to use it?*

**HCW #19:** *I suppose it depends where you work doesn't it really? If you're pushed for the ten minutes appointment, I think it would be difficult to be honest.*

**Interviewer:** *Yeah.*

**HCW #19:** *And I think that, you know, it is a useful tool, but I think you do need about twenty minutes.*

**Interviewer:** *OK. So...so...it needs extra time?*

**HCW #19:** *Yeah.*

**Interviewer:** *So, if you have...if you have the time or some way of making the time, as in bringing the patient back at the end of the session or having double appointments, is it feasible then do you think?*

**HCW #19:** *Yeah. I think it is. I don't see why not. Yeah. I think that the main thing is time.*

HCW #26, an established general practitioner, clearly felt overwhelmed by other time pressures in her working day but considered the idea of allocating the GMHAT/PC interviews to another clinician in training, with longer appointment times:

**Interviewer:** *How did you find the training session?*

**HCW #26:** *Great. That was fine, that was clear. You know, you actually took us through step by step every part of the process. So, the training itself was fine.*

**Interviewer:** *Yeah and so...and leaving that meeting, how did you feel leaving that meeting?*

**HCW #26:** *A little bit apprehensive if I'm being honest. That whole feeling of oh my gosh it's something else to try and factor in.*

**Interviewer:** *Yeah.*

**HCW #26:** *So, for my input if you...perhaps there was, you know, admittedly some resistance there.*

**Interviewer:** *Why? What...?*

**HCW #26:** *I think it's the time pressure.*

**Interviewer:** *Yeah, yeah.*

**HCW #26:** *I think it's the time pressure but in itself I think we tried to find solutions at the time because we talked about delegating that to another team member. So, I think there was a...was it an SHO<sup>6</sup> at the time that we could book patients in with that we felt that was appropriate for?*

HCW #34, a fifth-year medical student, recognised the time issues and the possible management strategy of allowing more time for a more complete assessment with its benefits for patients:

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<sup>6</sup> SHO : Senior House Officer; a junior doctor grade, more commonly referred to now as a Foundation Year 2 (FY2) doctor.

**Interviewer** *How do you feel about the feasibility, the actual practicality of using this sort of tool in primary care?*

**HCW #34:** *I think it is completely feasible erm...should there be enough time put aside for it because obviously that's not gonna fit in your standard ten or fifteen-minute appointment. So as long as both the patient and doctor, and staff, are aware of that I think it's completely feasible.*

**Interviewer:** *Yes. How would you handle the time issue because it is obviously is an issue, isn't it?*

**HCW #34:** *Yeah, so I think erm...what you know, really... if it comes up in just a normal appointment ask them to come back and then sort of spend a bit more time on it and obviously if you know that it's something that you want to do just take out two appointments.*

**Interviewer:** *Fair enough erm...and...do you think doctors ought to use this sort of tool or not?*

**HCW #34:** *I think so, yeah.*

**Interviewer:** *Why?*

**HCW #34:** *I think, like you said, any hypertension and anything else you run a template. So why should mental health be any different?*

**Interviewer:** *Right, OK. Any other reasons?*

**HCW #34:** *I think it just means that you get a general view of the patient and I think one thing that a patient said that I thought was quite nice and quite surprising was that she was saying actually, it's given me a lot to think about for myself, because a lot of the way it norm...erm...questions are worded it can kind of highlight ways that perhaps they deal with issues or triggers for their erm...sort of mental health. So, I think that in itself is actually quite good.*

Similar views about allowing additional time came too from HCW #37, an FY2 doctor, who said: *".....I mean I suppose if people came back just for this...twenty minutes, even fifteen would be absolutely fine"*. HCW #38, a healthcare assistant, found that appropriate time could be allocated on her consulting schedule for GMHAT/PC assessments:

**Interviewer:** *So it is a feasible thing to do, you think, but there's a time thing involved?*

**HCW #38:** Yes.

**Interviewer:** *And certainly, speaking to the doctors, they seem to find it a big time issue?*

**HCW #38:** Yeah.

**Interviewer:** *But erm...so you think it is feasible, but you'll perhaps get more time with patients because of the things you do with them?*

**HCW #38:** *Well doctors tend to be single appointments unless it's something out of the ordinary and it's a double. Whereas because of the range of things I'm doing they can allocate me the time, it's just...basically how much clinic time we've got.*

HCW #47, an FY2 doctor, felt that using GMHAT/PC in clinical practice was feasible provided that extra time was provided:

**Interviewer:** *Do you think it's a feasible thing to have this as part of doctors' standard practice?*

**HCW #47:** *I think...if you...if you could have...maybe ten...two times ten minute...like twenty...*

**Interviewer:** *For extra time? Yeah.*

**HCW #47:** *Extra time consultations to...yeah, I think so.*

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## 5.5 Impact on Healthcare Workers' Confidence and competence

### 5.5.1 Introduction

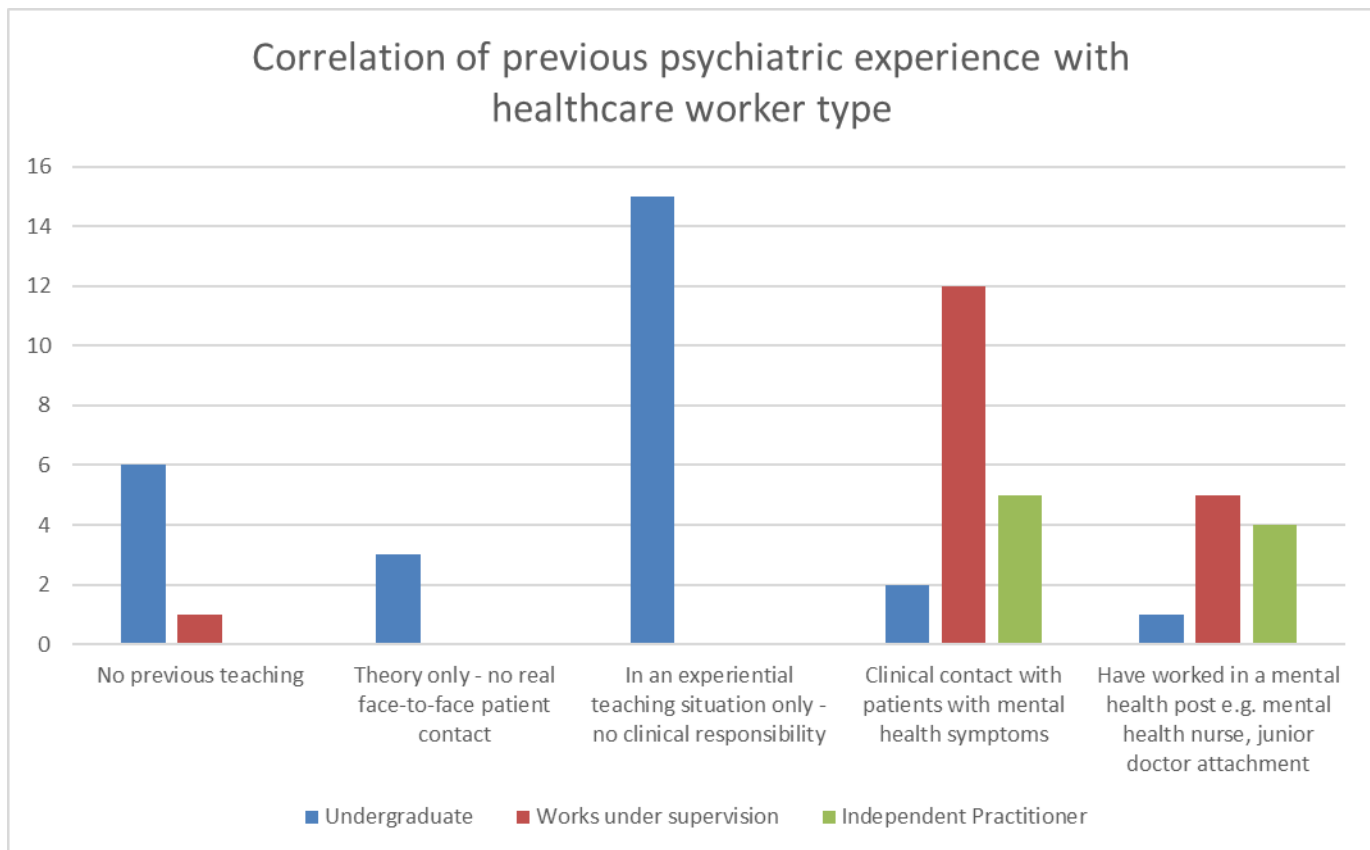
Evidence discussed in earlier chapters identified the concerns from several researchers that primary care healthcare workers are poorly trained to provide adequate mental health care to their patients. Looking for a possible solution to this, the study looks now at the third question, “*What is the impact of using GMHAT/PC on the healthcare worker’s ability to conduct mental health assessments?*”. Could the use of this tool, leading healthcare workers through a comprehensive mental health assessment with a validated diagnostic algorithm, have any effect on primary care’s capacity to care for its patients?

To provide answers, there are two sets of quantitative data from the questionnaires completed by the healthcare worker participants – the first completed when they were enrolled to the study, and the second when their participation in the research finished. In these questionnaires, the healthcare workers indicated their confidence and self-rated competence in mental health assessments. There is also qualitative data from the healthcare workers’ interviews, completed at the end of their participation in the research.

### 5.5.2 Prior mental health experience

During enrolment, the healthcare workers were asked to indicate their prior mental health training or experience – see page 146. The following graphic shows the correlation between the types of healthcare workers and their mental health training. As might be expected, undergraduates mostly had no previous teaching in mental health or had experience only in a teaching setting with no clinical responsibility and independent practitioners had experience of clinical contact with patients with mental health symptoms or had worked in a mental health post at some stage in their career.

**Figure 19: Correlation of training with previous mental health experience**



In the study, healthcare workers rated their competency on a scale ranging from “*Unable to perform a mental health interview*” to “*I can perform a mental health interview without assistance or supervision*” (see page 146). They also rated their confidence in doing mental health assessments on a Likert-like scale ranging from “0” to “10”.

There are three groups of healthcare workers. Undergraduates will be discussed on page 227. Those “working under supervision” will be discussed on page 234, while independent practitioners will be discussed on page 242. For each grade of healthcare worker, there is first a statistical analysis of any change in self-rated competence and then the statistical analysis of any change in confidence.

For the statistical analyses, the competency rubrics were assigned numeric ordinal values. Abbreviated competency rubrics were defined for use in tables and graphs for presentation purposes. See Table 27 below for these ordinal values and abbreviations.

**Table 27: Abbreviated competency rubrics and ordinal values**

<b>Competency Rubric</b>	<b>Ordinal Value for Statistical Analysis</b>	<b>Abbreviated Competency Rubric for Graphs</b>
I cannot perform a mental health interview.	1	Cannot perform MH interview
I can perform a mental health interview but require direct supervision and assistance.	2	Can perform MH interview but requires direct supervision
I can perform a mental health interview with some supervision and assistance such as “senior” support available on site or readily available by telephone; being able to access a protocol or prompt sheet or some other support tool.	3	Can perform MH interview with indirect supervision
I can perform a mental health interview without assistance or supervision.	4	Can perform MH interview without assistance

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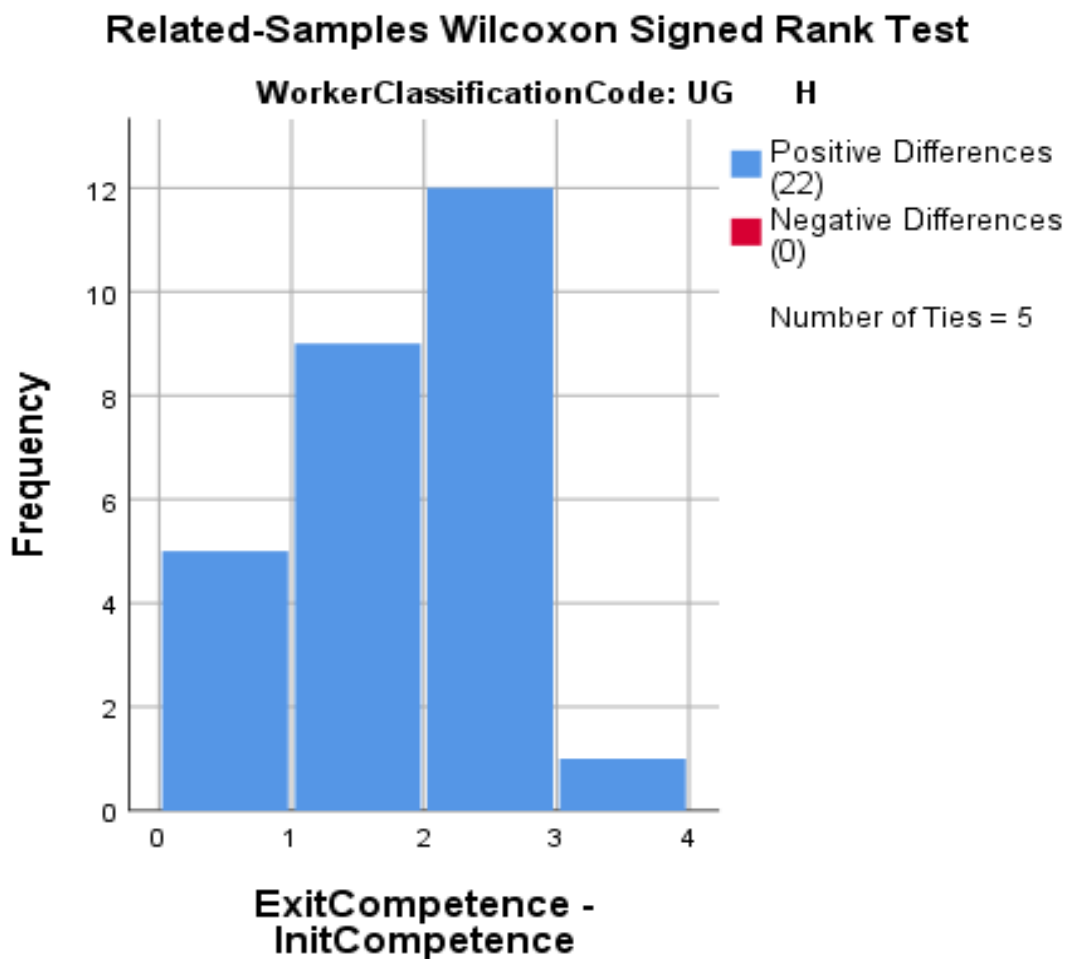
### 5.5.3 Impact on Undergraduates

There were twenty-seven (27) healthcare workers classed as “Undergraduate”. This term is applied to those in training for their first healthcare related qualification. Medical students and physician associate trainees are included in this group.

#### 5.5.3.1 Impact on Competency for the ‘Undergraduate’ group

Figure 20 below shows the differences in the undergraduate group’s rating of their competency in performing mental health assessments. Five (5) opined that their competency had not altered. Twenty-two (22) opined that their competency had increased, and none felt their competency had decreased.

Figure 20: Undergraduate differences in competency scores



See Table 28 and Figure 21 below.

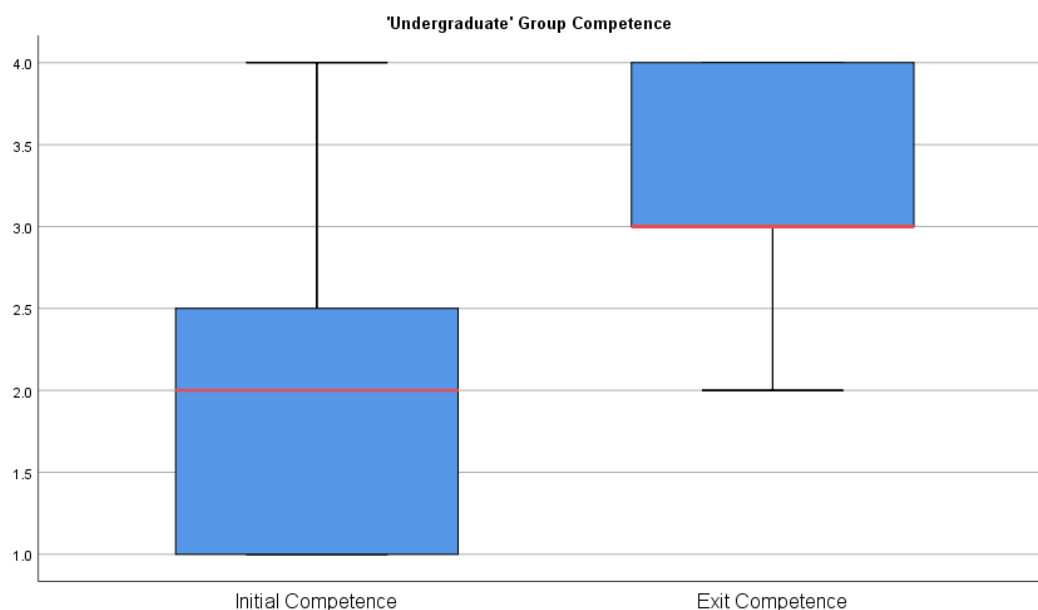
**Table 28: Descriptive statistics of undergraduate competence ratings**

		Statistics <sup>a</sup>	
		Initial Competence	Exit Competence
N	Valid	27	27
	Missing	0	0
Median		2.00	3.00
Mode		1 <sup>b</sup>	3

a. Worker Classification Code = UG

b. Multiple modes exist. The smallest value is shown

**Figure 21: 'Undergraduate' group competence boxplot**



An exact Wilcoxon signed ranks test was conducted to determine the effect of the intervention on the “undergraduate” group of healthcare worker participants.

The null hypothesis ( $H_0$ ) asserts that any difference in the self-rated competence for this group will have arisen by chance alone ( $p \geq .05$ ). The alternative hypothesis ( $H_a$ ) asserts that any difference occurred not by chance and that it is instead related to the intervention. The test showed that there was a statistically significant difference between the healthcare

workers' assessments of their competence after the intervention (*Mdn* = 3 [Can perform MH interview with indirect supervision]), compared to their initial pre-intervention competence (*Mdn* = 2 [Can perform MH interview but requires direct supervision]), ( $T = 253$ ,  $z = 4.221$ ,  $p < .001$ ), thus refuting the null hypothesis ( $H_0$ ) and instead confirming the alternative hypothesis ( $H_a$ ) – see Table 29.

**Table 29: Wilcoxon test summary for Competence in Undergraduate group**

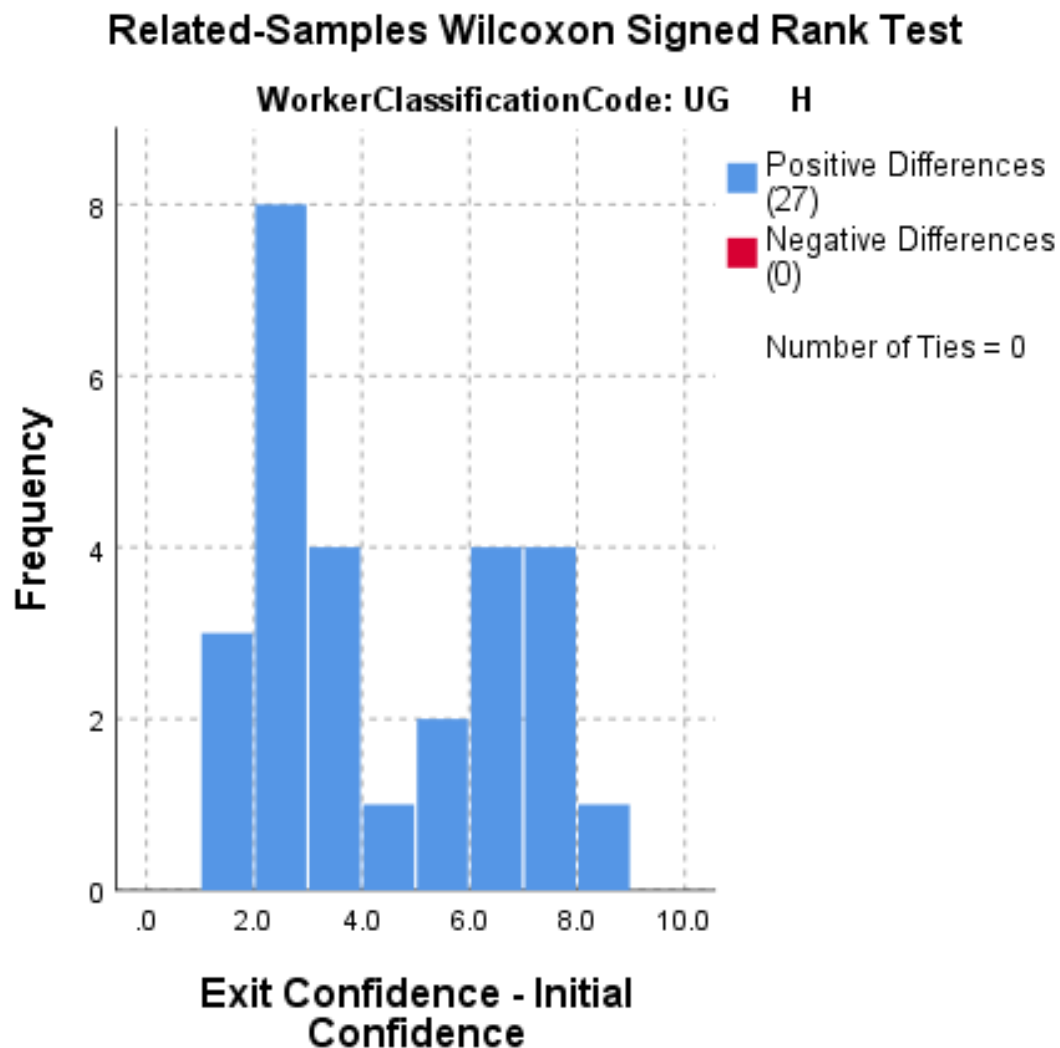
**Related-Samples Wilcoxon Signed Rank Test  
Summary**

Total N	27
Test Statistic	253.000
Standard Error	29.967
Standardized Test Statistic	4.221
Asymptotic Sig.(2-sided test)	.000

### 5.5.3.2 Impact on Confidence for the 'Undergraduate' group

Figure 22 below shows the differences in the undergraduate group's rating of their confidence in performing mental health assessments. All twenty-seven (27) opined that their confidence had increased.

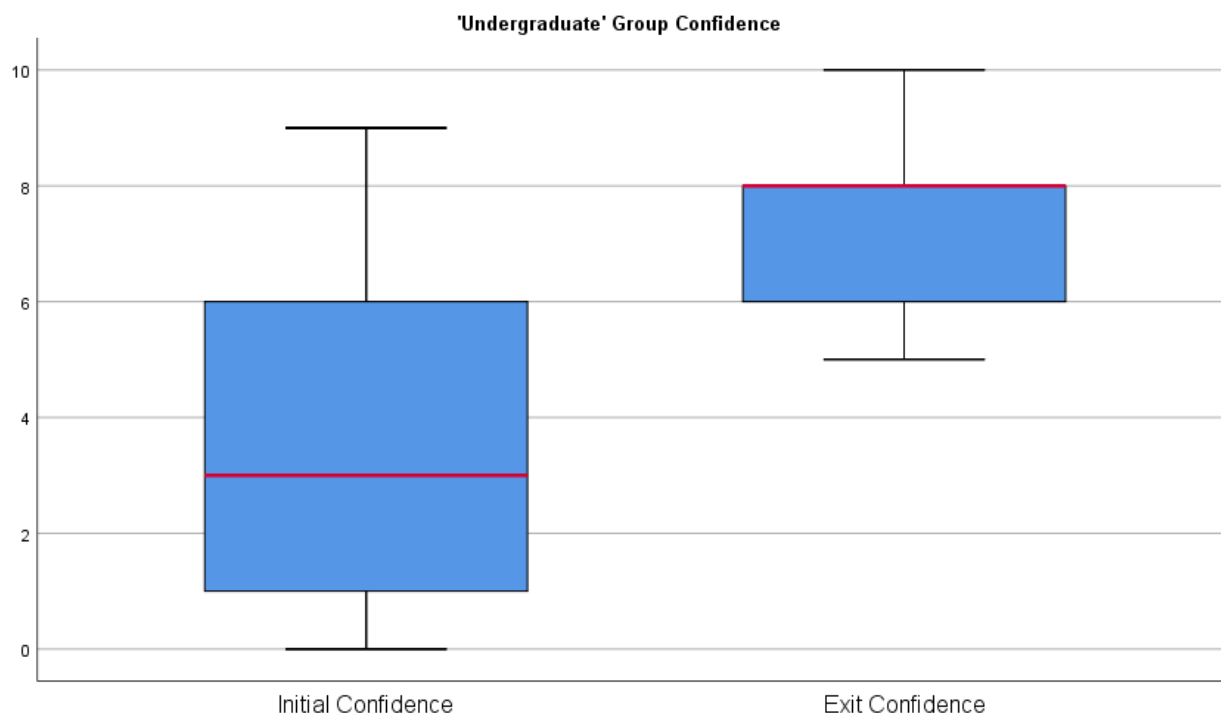
Figure 22: Wilcoxon signed ranks for Confidence in 'undergraduate' group



The median value for confidence in the 'undergraduate' group at entry to the research was "3" on the Likert-like scale ranging from "0" to "10". The modal value for confidence in this group at entry was "0".

Looking at the confidence ratings after the intervention, the median and modal values were identical at "8" (Figure 23 below).

**Figure 23: 'Undergraduate' group confidence boxplot**



An exact Wilcoxon signed ranks test was conducted to determine the effect of the intervention on the “undergraduate” group of healthcare worker participants. The null hypothesis ( $H_0$ ) contends that any difference in the healthcare workers’ confidence has arisen purely by chance ( $p \geq .05$ ), while the alternative hypothesis ( $H_a$ ) asserts that the difference has not occurred by chance and, instead, is related to the intervention. The test showed that there was a statistically significant difference ( $T = 378, z = 4.560, p < .001$ ) between the ‘undergraduate’ group’s assessments of their confidence after the intervention compared to their initial pre-intervention confidence (see Table 30 below). This allows us to reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_a$ ).

**Table 30: Wilcoxon test summary for Confidence in Undergraduate group**

Related-Samples Wilcoxon Signed Rank Test Summary	
Total N	27
Test Statistic	378.000
Standard Error	41.449
Standardized Test Statistic	4.560
Asymptotic Sig.(2-sided test)	.000

## Triangulation evidence from healthcare worker interviews

In interviews with participants from the 'undergraduate' group, some expressed the idea that the intervention had helped their confidence in carrying out mental health assessments.

Healthcare worker (HCW) #10, a medical student, when asked how he felt when he had to do a mental health assessment said:

**HCW #10:** *I feel a lot more confident now, I think, especially with the use of the GMHAT tool. I think that really helped me go through the interview in a logical order, and I think it's the way it goes through in a stepwise matter, and it breaks down the spectrum of mental health disorders into individual categories.*

[And later:]

**HCW #10:** *Yes. I think that now that I've practiced with the technology, and I've gone through a few interviews, I feel that my confidence is growing with each one that I do.*

The theme of increased confidence was exposed too in the interviews with other undergraduates, HCW #30 and HCW #6:

**Interviewer:** *I'm hearing that it did help you cope? [with doing mental health assessments].*

**HCW #30:** *Yes, it definitely has helped my confidence because I found it a bit difficult initially because I wasn't sure. It was the first time in using it and I wasn't sure in terms of new symptoms and old symptoms but once you've used it, once you realise then, "Right, I know what I'm doing now," and you're so much more confident doing it. Like today, I just went off and I started to do it. I didn't really have to think in my head what I need to talk about because it was all there ready for me. I found it much easier and it's given me much more confidence in terms of making sure you cover every point, and make sure you've got the overall view of the patient. I thought, "That's really improved my confidence." Going forward even without it, I can just think back to what was coming up and it gives me much more confidence going forward.*

(And HCW #6):

**Interviewer:** *You rated yourself very low in terms of confidence in mental health assessment at the initial self-rating. You have just done another self-rating which I haven't seen. Can I ask you just to talk about any effect this might have had on your confidence and competence?*

**HCW #6:** *I think it's increased my confidence definitely from just doing the interviews. I think knowing what areas are the main ones to cover. I think it's increased my knowledge of what to ask and what the important parts are definitely. It's been very helpful.*

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## 5.5.4 Impact on healthcare workers working under supervision

There were nineteen (19) healthcare classed as “Working under supervision”. This group comprised people who have achieved their first healthcare related qualification but are only allowed to work clinically under the supervision of a fully qualified clinical manager such as a general practitioner. They might be in a training post, such as FY2 and GPST doctors, and working towards independent practice. Healthcare workers in this category also include a practice nurse and a GP Assistant.

### 5.5.4.1 Impact on competency for the ‘working under supervision group’

Figure 24 below shows the differences in the ‘working under supervision’ group’s rating of their competency in performing mental health assessments. Seven (7) did not report any change in their self-rated competence. Eleven (11) reported an increase in their competence while one felt that their competence had deteriorated.

The median and modal values for competence at entry to the research were both “3” (*“I can perform a mental health interview with some supervision and assistance such as ‘senior’ support available on site or readily available by telephone; being able to access a protocol or prompt sheet or some other support tool”*).

Looking at the competency ratings for this “working under supervision” group after the intervention, the median and modal values were identical at “4” (*“I can perform a mental health interview without assistance or supervision”*). See Table 31 and Figure 25 below.

Figure 24: Differences in competency scores for those 'working under supervision'

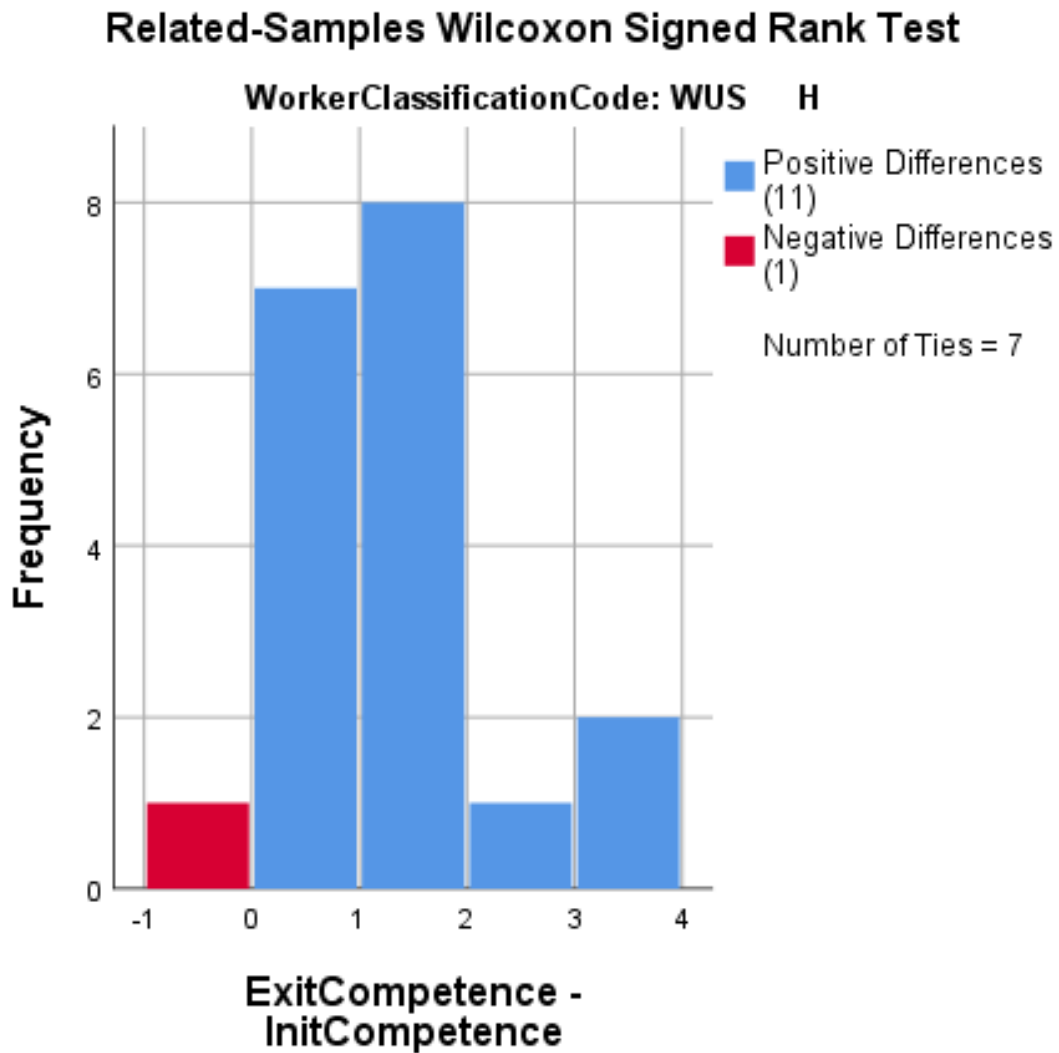


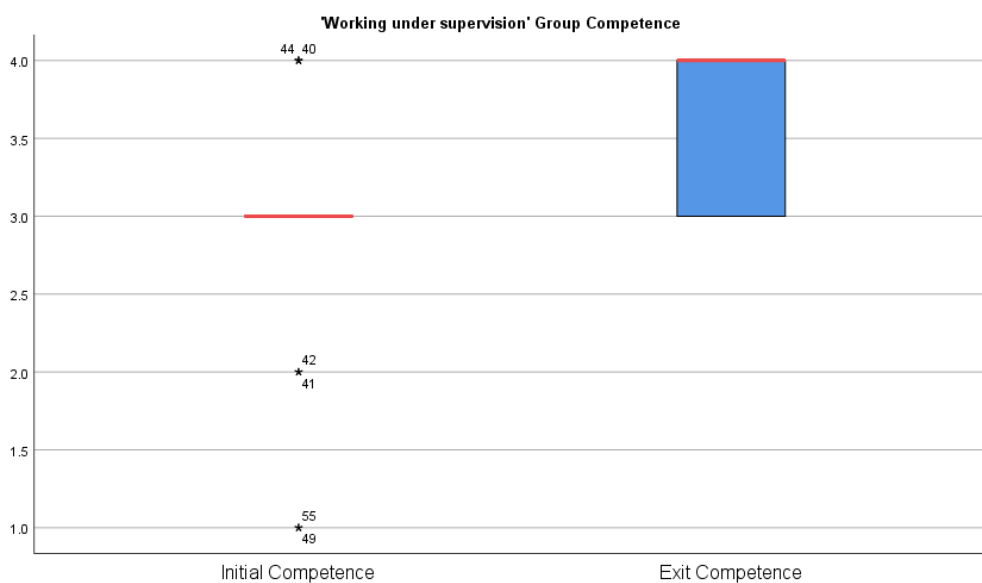
Figure 25 shows that there are some outliers in the self-rated competence ratings of participants in this group of healthcare workers. Although these participants had achieved their initial healthcare qualification, some had not received any training in the assessment of mental health symptoms. The outliers above the median were the opposite – they had typically worked in a mental health setting in some other part of their training.

**Table 31: Descriptive statistics for 'working under supervision' group competence**

		Statistics <sup>a</sup>	
		Initial Competence	Exit Competence
N	Valid	19	19
	Missing	0	0
Median		3.00	4.00
Mode		3	4

a. Worker Classification Code = WUS (Working under Supervision)

**Figure 25: 'Working under supervision' group competence boxplot**



An exact Wilcoxon signed ranks test was conducted to determine the effect of the intervention on the “working under supervision” group of healthcare worker participants. The null hypothesis ( $H_0$ ) states that any difference in the healthcare workers’ competence has arisen purely by chance ( $p \geq .05$ ), while the alternative hypothesis ( $H_a$ ) proposes instead that the difference has not occurred by chance and is a consequence of the intervention. The test showed that there was a statistically significant difference ( $T = 73$ ,  $z = 2.801$ ,  $p = .005$ ) between the ‘working under supervision’ group’s assessments of their competence after the intervention compared to their initial pre-intervention competence (see Table 32 below). This allows us to reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_a$ ).

**Table 32: Wilcoxon test summary for Competence in 'Working under Supervision' group**

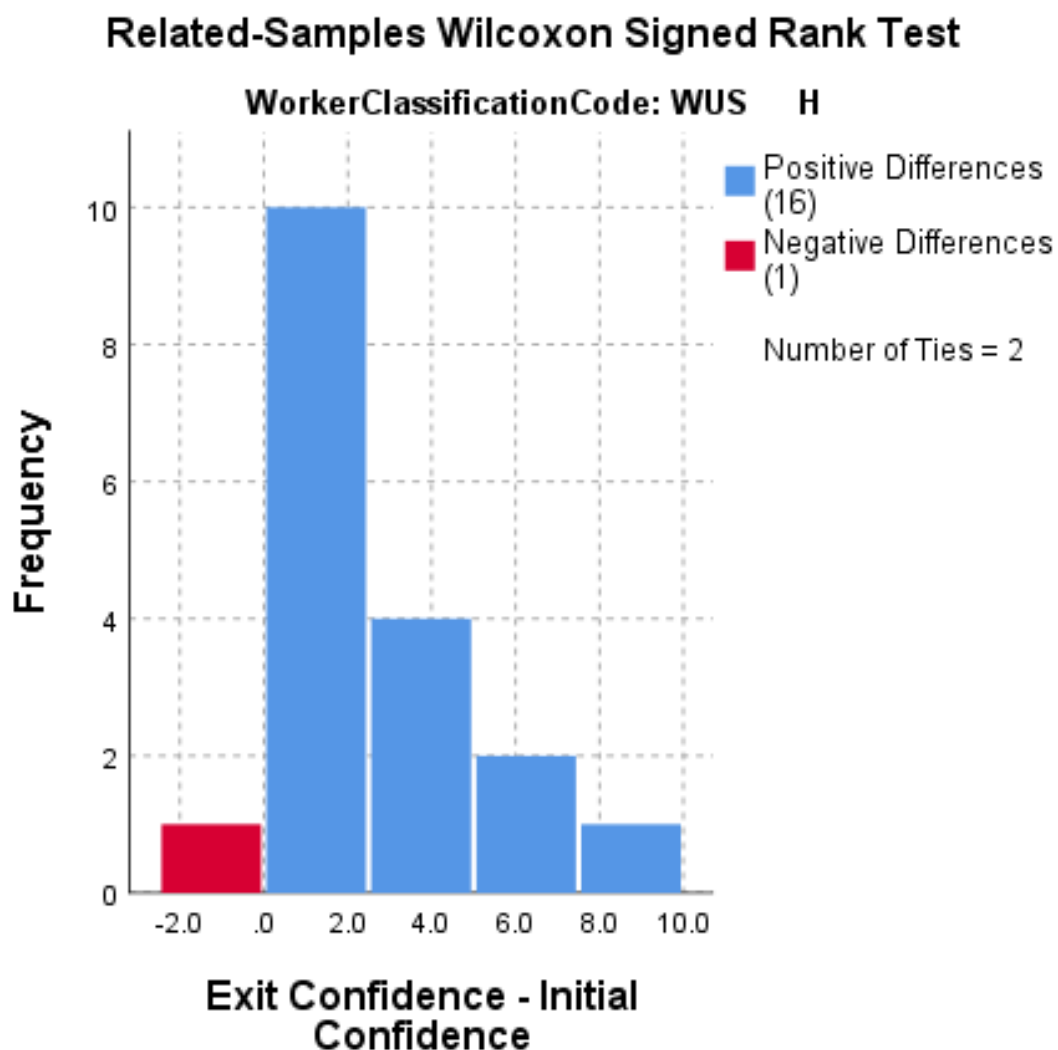
**Related-Samples Wilcoxon Signed Rank Test  
Summary**

Total N	19
Test Statistic	73.000
Standard Error	12.140
Standardized Test Statistic	2.801
Asymptotic Sig.(2-sided test)	.005

### 5.5.4.2 Impact on Confidence for the 'working under supervision' group

Figure 26 below shows the differences in the 'working under supervision' group's rating of their confidence in performing mental health assessments. Two (2) felt that their confidence had not changed. One (1) felt that their confidence had deteriorated, while sixteen (16) opined that it had increased.

**Figure 26: Wilcoxon signed rank test for Confidence in 'working under supervision' group**



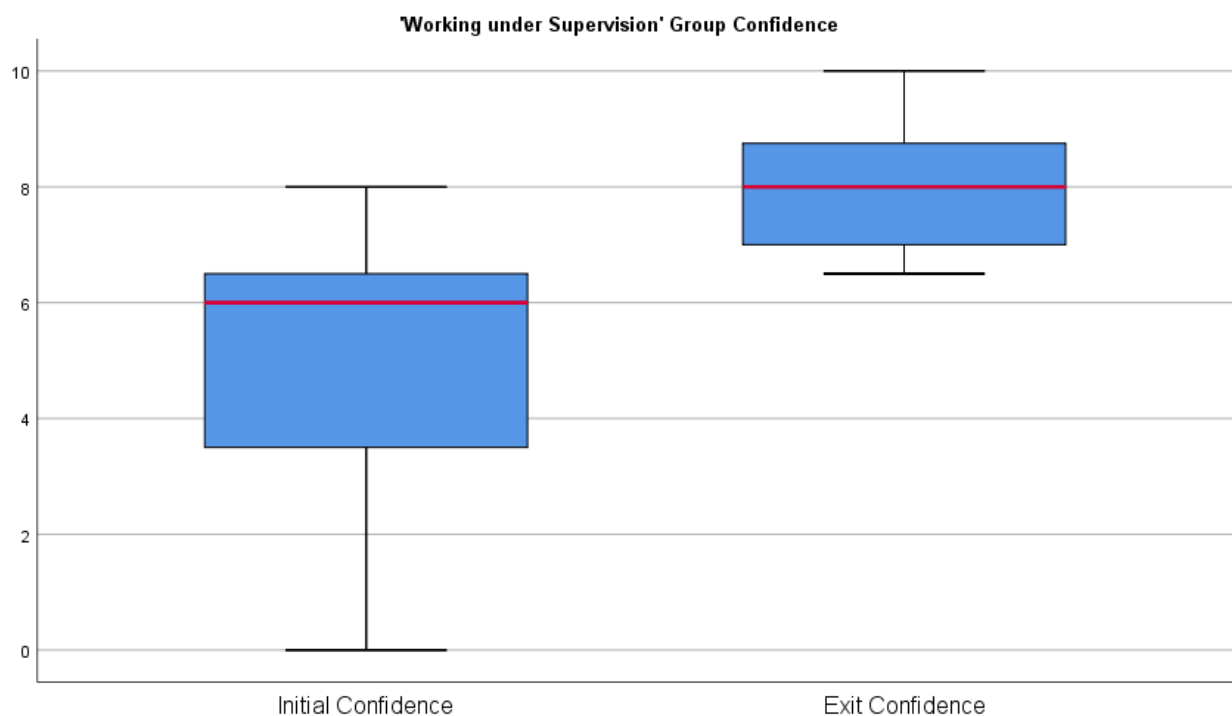
The median and modal values for confidence in this 'working under supervision' group at entry to the research were both "6". Post-intervention, the confidence ratings, the median and modal values were identical at "8". See Table 33 and Figure 27 below.

**Table 33: Descriptive statistics for confidence in 'working under supervision' group**

		<b>Statistics<sup>a</sup></b>	
		Initial confidence self-rating	Exit confidence self-rating
N	Valid	19	19
	Missing	0	0
Median		6.000	8.000
Mode		6.0	8.0

a. Worker Classification Code = WUS (Working under supervision)

**Figure 27: 'Working under supervision' confidence boxplot**



An exact Wilcoxon signed ranks test was conducted to determine the effect of the intervention on the “working under supervision” group of healthcare worker participants. The null hypothesis ( $H_0$ ) contends that any difference in the healthcare workers’ confidence has arisen purely by chance ( $p \geq .05$ ), while the alternative hypothesis ( $H_a$ ) asserts that the difference has not occurred by chance and, instead, is related to the intervention. The test showed that there was a statistically significant difference ( $T = 150, z = 3.491, p < .001$ ) between the ‘working under supervision’ group’s assessments of their confidence after the intervention compared to their initial pre-intervention confidence (see Table 34 below). This result allows us to reject the null hypothesis ( $H_0$ ), and instead accept the alternative hypothesis ( $H_a$ ).

**Table 34: Wilcoxon test summary for Confidence in Working under Supervision group**

**Related-Samples Wilcoxon Signed Rank Test  
Summary**

Total N	19
Test Statistic	150.000
Standard Error	21.056
Standardized Test Statistic	3.491
Asymptotic Sig.(2-sided test)	.000

**Triangulation evidence from healthcare worker interviews**

HCW #16, a first-year GP Trainee, opined that he “*found that GMHAT boosted my confidence in the assessment of patients with mental health*”. HCW #19, an FY2 doctor, was asked if he thought using the tool (GMHAT/PC) had helped him during his primary care attachment:

**HCW #19:** *Yeah but like where I said before, I think...I think it also helps, ....well personally, from my perspective, coming from Accident and Emergency and working in the hospital might feel a little bit, you know, rusty, around managing mental health in primary care. Whereas I think having a tool and a prompt gives you a bit more confidence and yeah, I think overall, it's helped me.*

HCW #38 is a GP Assistant. She scored her confidence as “0” in her pre-intervention rating.

**Interviewer:** *So, you seem to have come a long way, I see you've scored yourself quite highly now in the second rating. You seem to have come from zero to hero, right? And so how have you achieved that, do you think?*

**HCW #38:** *Well at first, I'd never done anything like this before. So, fear of the unknown but after doing a few of them I felt really confident doing them. Nothing...it didn't phase me and it felt...it felt quite comfortable with the patient, asking them questions.*

When asked if the use of GMHAT/PC had had any effect on her confidence and competence, HCW #67, a GP Trainee, responded:

**HCW #67:** *I think if you use the tool you can feel very confident that you've done a very thorough assessment. And I think that's the thing, it's...you're not left thinking did I ask about everything, have I missed anything out?*

**Interviewer:** *So, if you use the tool it will help you do a proper or complete mental health assessment?*

**HCW #67:** *Yeah, so you feel more confident in your own assessment, right.*

**Interviewer:** *And you as an individual, do you think it's helped you?*

**HCW #67:** *Yes, I think so.*

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### 5.5.5 Impact on Independent Practitioners

There were nine (9) healthcare workers classed as “Independent Practitioners”. These were healthcare workers who had achieved healthcare qualifications allowing them to practise independently, subject to their professional bodies’ licensing requirements.

#### 5.5.5.1 Impact on Competence for the ‘Independent Practitioner’ Group

Figure 28 below shows the differences in the ‘Independent Practitioners’ group’s rating of their competency in performing mental health assessments. Seven (7) did not report any change in their competence. One (1) reported an increase in their competence while one felt that their competence had deteriorated.

Reflecting the training and experience of the ‘Independent practitioner’ group, the median and modal values for competence at both entry and exit to the research were “4” *I can perform a mental health interview without assistance or supervision*”). See Table 35 below.

Figure 28: Wilcoxon signed rank test for Independent Practitioners

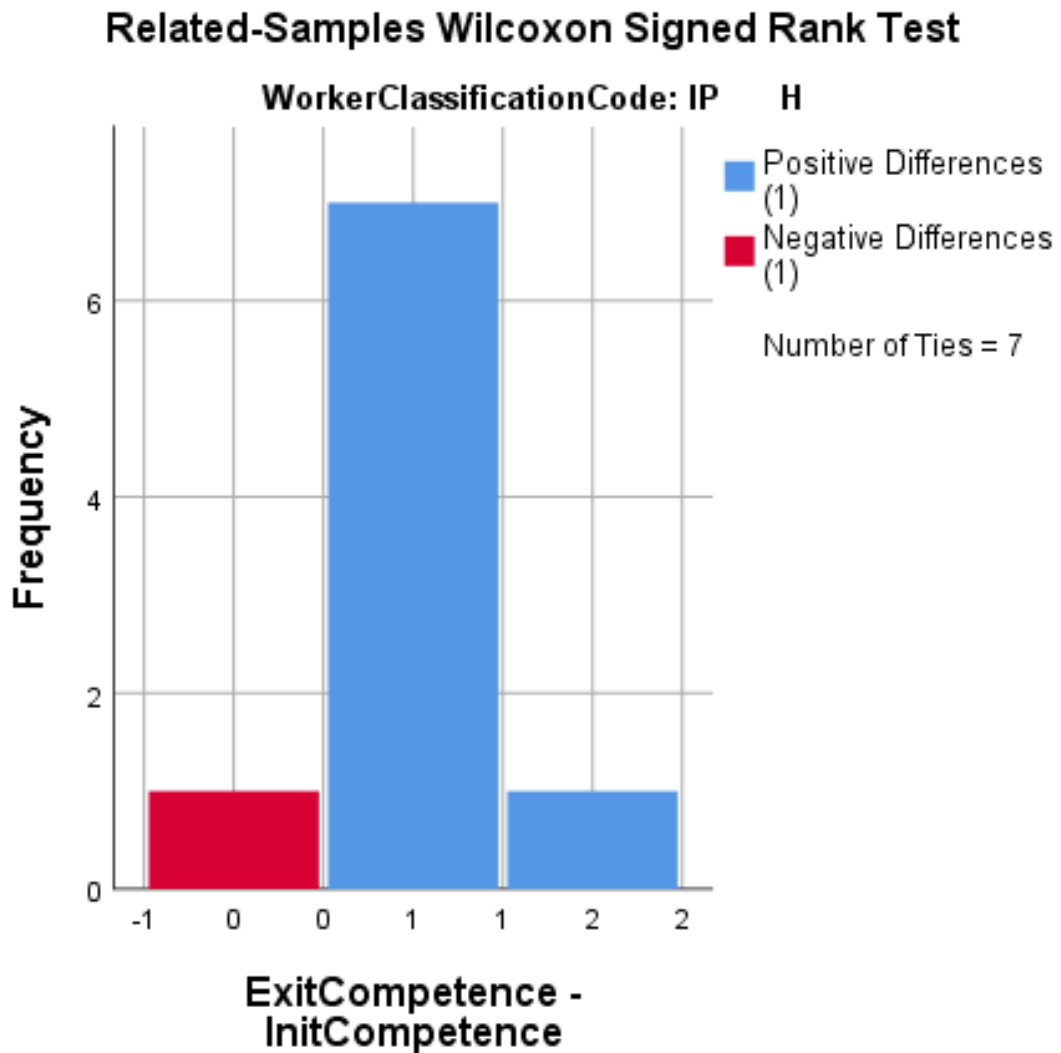
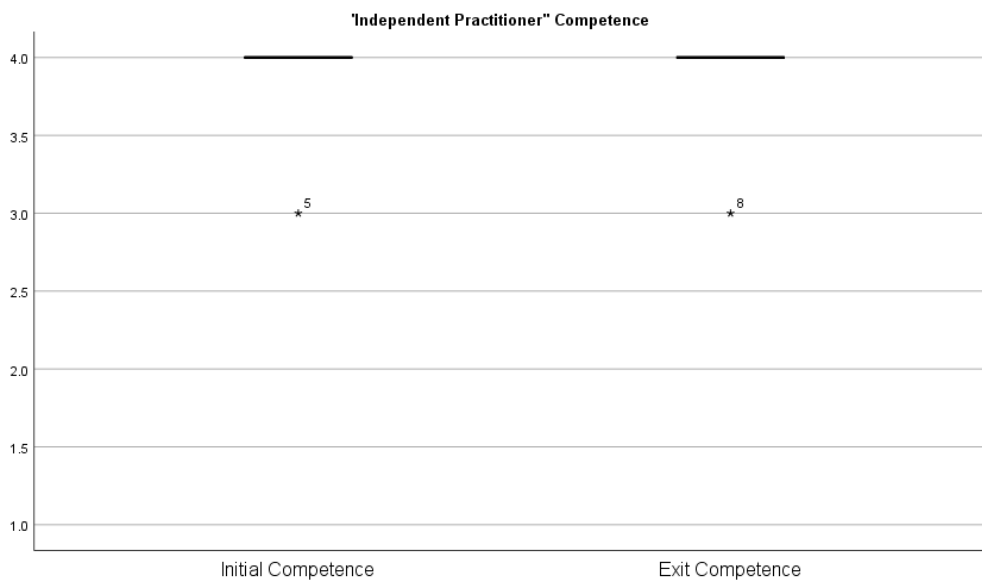


Table 35: Descriptive statistics for the 'Independent Practitioner' group's competence

		<b>Statistics<sup>a</sup></b>	
		Initial Competence	Exit Competence
N	Valid	9	9
	Missing	0	0
Median		4.00	4.00
Mode		4	4

a. Worker Classification Code = IP (Independent practitioner)

**Figure 29: 'Independent practitioner' group competence boxplot**



An exact Wilcoxon signed ranks test was conducted to determine the effect of the intervention on the “independent practitioner” group of healthcare worker participants. The null hypothesis ( $H_0$ ) contends that any difference in the independent practitioners’ self-rated competence has arisen by chance ( $p < .05$ ), while the alternative hypothesis ( $H_a$ ) asserts that the difference has arisen as a consequence of the intervention and not by chance. Figure 29 above gives an indication of the likely outcome of this analysis. The test showed that there was no statistically significant difference ( $T = 1.5$ ,  $z = 0.000$ ,  $p = 1.0$ ) between the ‘independent practitioners’ healthcare workers’ assessment of their competence after the intervention compared to their initial pre-intervention competence (see Table 36 below). In this case, we accept the null hypothesis ( $H_0$ ), and reject the alternative hypothesis ( $H_a$ ).

**Table 36: Wilcoxon test summary for Competence in 'Independent Practitioner' group**

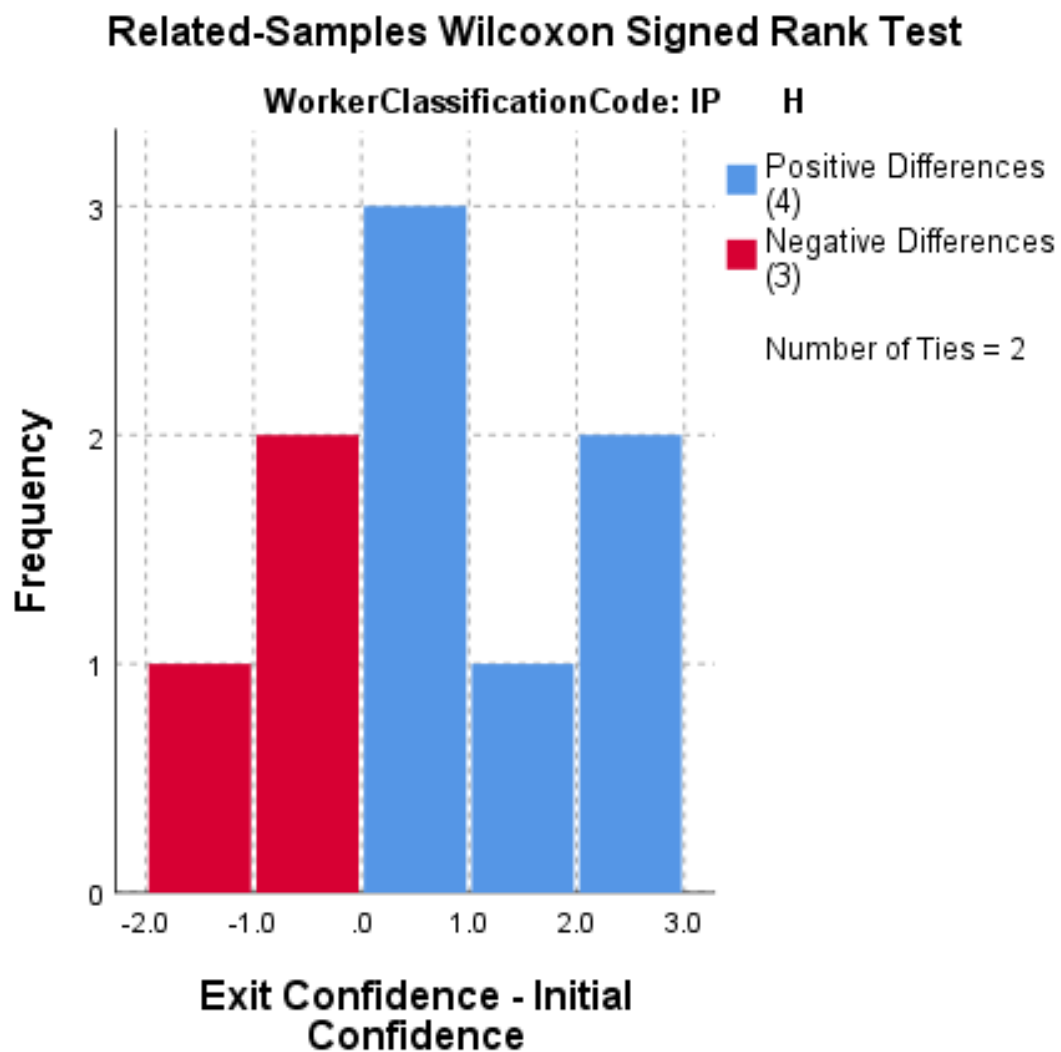
**Related-Samples Wilcoxon Signed Rank Test Summary**

Total N	9
Test Statistic	1.500
Standard Error	1.061
Standardized Test Statistic	.000
Asymptotic Sig.(2-sided test)	1.000

### 5.5.5.2 Impact on Confidence for the 'Independent Practitioner' Group

Figure 30 below shows the differences in the 'independent practitioner' group's rating of their confidence in performing mental health assessments. Two (2) opined that their confidence in mental health assessments had not changed. Three (3) felt that their confidence had deteriorated and four (4) felt more confident in these assessments.

**Figure 30: Differences in confidence ratings for 'independent practitioner' group**



At enrolment, the median value for confidence in this ‘independent practitioner’ group was “7”. There were two modal values, “6” and “9”. Post-intervention, the median confidence rating for this group was “8” and the single modal value was “7”. See Table 37 below.

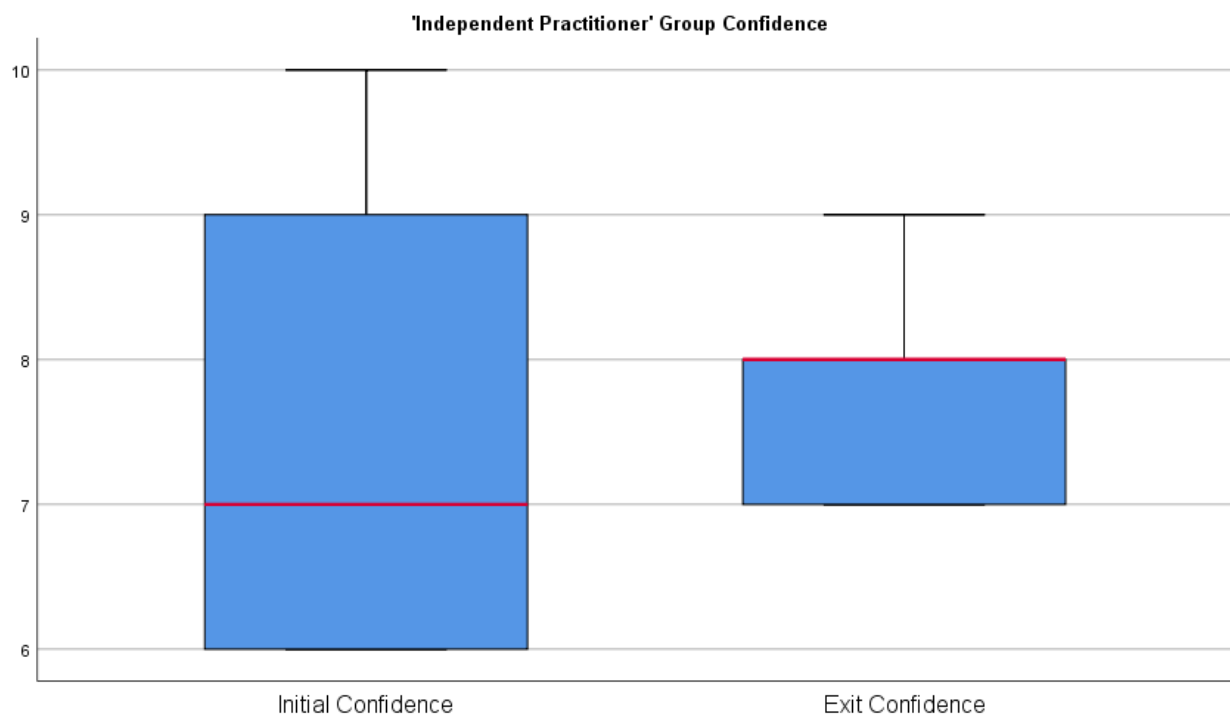
**Table 37: Descriptive statistics for Confidence in ‘independent practitioner’ group**

		Statistics <sup>a</sup>	
		Initial confidence self-rating	Exit confidence self-rating
N	Valid	9	9
	Missing	0	0
Median		7.000	8.000
Mode		6.0 <sup>b</sup>	7.0

a. Worker Classification Code = IP (Independent practitioner)

b. Multiple modes exist. The smallest value is shown

**Figure 31: ‘Independent practitioner’ group confidence boxplot**



An exact Wilcoxon signed ranks test was conducted to determine the effect of the intervention on the confidence of the ‘independent practitioner’ group of healthcare worker participants. The null hypothesis ( $H_0$ ) states that any difference in this group’s confidence has arisen purely by chance ( $p \geq .05$ ). An alternative hypothesis ( $H_a$ ) contends that the difference in this group’s confidence has arisen as a result of the intervention and not by

chance. Again, the boxplot (Figure 31) suggests which hypothesis is likely to hold true. The test showed that there was no significant difference ( $T = 16$ ,  $z = .343$ ,  $p = .732$ ) between the 'independent practitioner' group's assessments of their confidence after the intervention compared to their initial pre-intervention confidence (see Table 38 below). This means that the null hypothesis ( $H_0$ ) is accepted, and the alternative hypothesis ( $H_a$ ) is rejected.

**Table 38: Wilcoxon test summary for Confidence in Independent Practitioner group**

<b>Related-Samples Wilcoxon Signed Rank Test Summary</b>	
Total N	9
Test Statistic	16.000
Standard Error	5.831
Standardized Test Statistic	.343
Asymptotic Sig.(2-sided test)	.732

### Triangulation evidence from healthcare worker interviews

HCW #35 did feel that using GMHAT/PC increased her confidence, saying:

*I think it does...increase your confidence I suppose if your diagnosis... if the computer agrees with you at the end, and also reassures you that you haven't really probably missed anything too else major because the tool was quite thorough.*

HCW #57, a mental health work worker, found it difficult to gauge the severity of patient symptoms and opined that GMHAT/PC helped her ask appropriate questions:

**Interviewer:** *So, you've been using a GMHAT tool sort of on and off over the last few months on a number of clients and I just wondered was there anything you thought that was actually good about it?*

**HCW #57:** *Yeah. I think that it covered a lot of issues, pretty much everything. It was quite helpful in terms of asking the right questions at the right time. Knowing how to ask them as well, you know, tentatively. I think the main thing with it that I found was useful was sort of...the way...I think...well what most useful, sorry, the most challenging part of it was trying to gauge ...cause it was sort of your own interpretation...*

**Interviewer:** *It was, yeah.*

**HCW #57:** *...of their...of their sort of experiences really and what they're saying, that was probably the most challenging part of it but with the assessment tool I found it helpful and quite easy to use in a way. It made me feel confident asking the question that I needed to ask really.*

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## 5.6 Summary

In this chapter, the two types of participants were described. Patient participants were analysed by age and gender. Healthcare worker participants were described by age and type, and then divided into three groups, undergraduates, those with their first healthcare qualification and working under supervision, and those licensed by their professional bodies to work independently.

Quantitative and qualitative data from patient participants were examined to answer the question of whether the use of GMHAT/PC was acceptable to them. Looking to the second question of feasibility, interviews from forty-seven (47) healthcare workers were thematically reviewed. And finally, quantitative and qualitative data from healthcare workers were explored to answer the third question of whether the use of GMHAT/PC had any impact on the healthcare workers' confidence and self-rated competence in mental health examinations. These findings are discussed in the next chapter.

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# Chapter 6 Discussion

## 6.1 Introduction

In this chapter the ethical conduct of the research is reviewed, the research findings and what conclusions one could draw from them are discussed, and finally, the implications for patients and healthcare workers are identified. Also, the strengths and limitations of the study are considered.

## 6.2 Review of the ethical conduct of the research

The General Medical Council's "*Good practice in research*" reminds the researcher that the research must be stopped if results indicate that participants are at risk of significant harm (General Medical Council, 2013). In this study, there was no suggestion of any harm to participants requiring the research to be stopped.

Second, any adverse findings must be reported "*as soon as possible to the affected participants, to those responsible for their medical care, to the research ethics committee, to the research sponsor and to any appropriate regulatory body*". No adverse findings were identified in this research.

Finally, if the lead researcher should believe that any participant is at risk of significant harm by taking part in research or by the behaviour of anyone conducting research, they must report their concerns to an appropriate person. No risk to any participant was identified either from their involvement in the research or the behaviour of anyone involved in collecting research data.

Reflecting the issue of internal confidentiality identified by Floyd and Arthur, care was taken to protect the anonymity of the participants (Floyd & Arthur, 2012).

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## 6.3 Acceptability of GMHAT/PC

This research answers the first question about the acceptability of GMHAT/PC to patients in primary care quite clearly. The triangulation of quantitative and qualitative data provided by patient participants in this project tells us that patients presenting in UK primary care with mental health symptoms find the use of GMHAT/PC acceptable in their assessment. This is in keeping with the findings from the literature review which showed that over a broad number of international and cultural settings, tools to assess mental health symptoms are generally acceptable to patients.

The literature review identified issues with the acceptability of questions about alcohol and other drug usage, peri-natal mental health issues and domestic violence. GMHAT/PC does include questions about alcohol and illicit drug usage. Previous researchers found participants to be coy about disclosing their alcohol usage or less likely to disclose their alcohol habit and other sensitive lifestyle issues to human interviewers (Adams & Stevens, 1994), (Lucas, R W, Mullin et al., 1977), (Johnson, Hougland Jr et al., 1991). In this study, no patient objected or expressed concern about the questions about alcohol consumption or illicit drug usage. One possibility is that questions about alcohol usage are more acceptable in the context of a mental health assessment than when posed in isolation in a context of screening or case-finding.

GMHAT/PC does not include questions specifically related to depression in the peri-natal period. It does contain several questions pertaining to depression and its associated symptoms. This project did not set out to focus on peri-natal mental health issues. The clinical details of patient participants were not recorded. I personally interviewed one woman with peri-natal mental health issues. She found the use of the tool acceptable. However, this patient had made a decision to seek help for how she felt, and it is likely that any intervention that supported her assessment and management would be acceptable to her in that circumstance.

GMHAT/PC does not include questions specifically about domestic violence. It does include several questions about mental health issues that might arise as a consequence of domestic violence, such as depression, anxiety, and post-traumatic stress disorder. In its opening sections, the tool does present open questions about the patient's general circumstances that could lead to a disclosure of domestic abuse (Figure 32 on page 252). This project did

not set out to specifically research related issues between domestic violence and mental health and, again, the patient participants' clinical details were not recorded in this project. No patient or healthcare worker participant provided any feedback about any issue related to domestic violence and it is not possible to make any comment about the acceptability of GMHAT/PC with mental health symptoms related to domestic violence.

**Figure 32: GMHAT/PC questions about general circumstances**

**Background details**

**How have you been recently? Do you have any problems? (if so) When did they begin?**

**Duration**

**Have you ever had any problems with your mental health in the past?**

**Has any one in the family suffered from any kind of mental health problems?**

**Please tell me, if there is any thing about your personal or social life, including physical health, housing, work and finances etc, which you find distressing? Have you ever suffered from any trauma or abuse (Physical  emotional  or sexual )?**

**End Interview**      **<--Previous Question**      **Next--> Next Question**

Dowrick opined that “*despite general practitioners' caution about measures of severity for depression, these may benefit primary care consultations by increasing patients' confidence that general practitioners are correct in their diagnosis and are making systematic efforts to assess and manage their mental health problems*” (Dowrick, Leydon et al., 2009, p.663). This observation was borne out in this research with many patients appreciating the depth and scope of the GMHAT/PC interview. Patients recognised and appreciated the comprehensive nature of the assessment they were receiving, with some comparing it favourably to either assessments conducted with the aid of a simpler tool, or to the less comprehensive nature of standard assessments conducted without the use of a tool. Some found that the scope of the enquiries allowed them to talk more freely about things that had been concerning them and that opportunity to do so might not have been available in a non-

GMHAT/PC interview. Shaw et al had similar findings, reporting that the assessment tools were acceptable to patients who felt that the resulting symptom scores reflected their perception of the severity of their depression (Shaw, Sutcliffe et al., 2013).

Some patients reported gaining some therapeutic benefit from the interview. This research project did not set out to show whether a GMHAT/PC-guided interview would enhance patient insight into their mental health or whether use of the tool had any therapeutic effect. In particular, we do not know if a similar number of patients assessed without GMHAT/PC would report a similar effect. At first, I wondered if experienced healthcare workers had interviewed these patients but found that a wide selection of interviewers had been involved, including relatively inexperienced 3<sup>rd</sup>-year medical students and junior doctors still in training. It will take another study to determine if the greater consultation structure provided by the semi-structured GMHAT/PC interview and probably additional consultation time, provides patients with greater insight and any therapeutic benefit than a relatively unstructured, non-tool-assisted, time-curtailed “standard practice” consultation.

One patient participant expressed concern about a question in the GMHAT/PC interview exploring whether she might have a personality disorder. She had added a free-text comment to the acceptability questionnaire (see page 175). In her interview she said:

*There was one question which I struggled to understand what it meant. I thought, is it asking me if I've got a personality disorder. She looked at it, the Doctor looked at it again as well. We worked out, in the end and it wasn't asking that, but it was very clumsily worded somehow.*

*I can't remember what the question exactly was. I thought, no, I haven't got personality disorder. I just suffer from depression due to extreme stress.*

Clinically, this patient participant's concerns were felt to relate more to acceptance of diagnosis, a topic that is beyond the brief of this study but is nonetheless a key issue in acceptability. Non-acceptance of diagnosis is probably multifactorial but stigma or the fear of stigma are key issues. Dinos et al found that stigma “may influence how a psychiatric diagnosis is accepted” (Dinos, Stevens et al., 2004, p.176). Identifying this issue suggests that the clinical skill of sharing the diagnosis with the patient should be highlighted in consultation skill training for healthcare workers.

Perhaps patients should have the last words on patient acceptability. First, PP#102 who felt that GPs should use GMHAT/PC:

**Interviewer:** *And is there anything else you want to say about the research?*

**Participant:** *Only that I now think that all GPs should definitely use it.*

**Interviewer:** *Oh right! And why do you say that?*

**Participant:** *Because it was so much easier for me, as a patient, and I always think that I'm really, really strong...*

**Interviewer:** *You are.*

**Participant:** *...and you know, nothing bad could happen and... I could sort things out. So, if it worked for me, I think it would definitely work for others.*

... and PP#87, a woman who had been depressed for about 11 years before being eventually diagnosed:

**Interviewer:** *Do you think it helps the health worker to have a script and be following the script?*

**Participant:** *Yes. Because obviously the questions have been chosen carefully, I assume. It's going to be the right questions to ask somebody who's suffering mental health. I think it should continue to help people.*

These results form the basis of the following presentations:

- Poster and two oral presentations at the World Congress of Psychiatry 2018, Sante Fe, Mexico.
- Poster presentation at the Royal College of General Practitioners conference 2018, Glasgow, UK.

Presentation at doctoral research seminar, University of Chester.

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## 6.4 Feasibility of GMHAT/PC

First, let us explore GPs' attitudes to templates, tools and other items supporting assessment and structured care, key factors in the feasibility of any related innovation or paradigm shift in primary care. An understanding of these issues is essential to appreciate the feasibility of deploying any new tool in primary care. The Quality and Outcomes Framework includes indicators for patients with significant mental health illnesses (SMI) such as psychotic disorders and bipolar affective disorders. These indicators relate to encouraging cervical cytology uptake in women with SMI (reducing or avoiding a healthcare inequality), encouraging monitoring of renal and thyroid function in patients on lithium, and encouraging primary care to have an annual conversation, a mental health review, to explore, inter alia, the patient's current care arrangements, their work and social life and what they would like to happen, or not to happen, if they should suffer a deterioration or exacerbation of their mental health problem.

In the first iteration of the framework (2004), there were two indicators for depression, measuring the use of a validated questionnaire, such as the PHQ-9, to assess the problem severity. The indicators were unpopular with general practitioners though, and the Chairman of the National Institute for Clinical Excellence's Quality and Outcome Framework Advisory Committee said in a committee discussion about their continuing utility that they were the most complained about indicators<sup>7</sup>. The level of complaints and adverse comments received by the NICE committee is reflected in findings from several researchers. Dowrick et al, writing about the incentivisation for GPs to use tools to measure depression severity, identified that "*general practitioners considered their practical wisdom and clinical judgment ("phronesis") to be more important than objective assessments and were concerned that the assessments reduced the human element of the consultation*" (Dowrick, Leydon et al., 2009, p.663). Investigating the same theme, Mitchell et al, in a qualitative research exercise, found that "*the use of depression-assessment instruments such as the PHQ-9 within the '10-minute' primary care consultation was a new concept, usually seen by GPs as counterintuitive, intrusive, and unnecessary*". However, general practitioners viewed their clinical judgement as more valuable than the assessment tool. They also felt the tools compromised the patient-doctor relationship, interfered with the consultation process and that they were "*mechanistic and intrusive*" (Mitchell, C, Dwyer et al., 2011, p.e281). Gunn et

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<sup>7</sup> I was a member of the committee at the time.

al reported similar results from their Australian setting: “*Validated or structured symptom checklist tools to assist with diagnosis were spontaneously mentioned within some groups, usually in the context of not adding much to what was already known by the doctor*” (Gunn, Palmer et al., 2010, p.69). Further evidence of a disconnect between patient and healthcare worker views of the value of tools is seen in the problems deploying the Kimberley Mum’s Mood Scale where the Aboriginal patients highly valued the tool and the opportunity to talk about their issues, whereas their healthcare workers viewed it as unsuitable for educated women, taking too long and that the counselling aspects were not part of their job (Carlin, Spry et al., 2020). In consequence, many of the healthcare workers were not using the full tool.

In this research, most healthcare worker participants valued the support and logical approach offered by both the various general medical templates in their electronic patient record computer program and GMHAT/PC. Many recognised that using tools helped to ensure a more complete patient assessment. Indeed, some patient participants made similar observations. Nonetheless, this research found that some healthcare workers resent templates in general, expressing a view that they interfere with the matter of dealing with patients’ presenting complaints. Others, reflecting Dowrick et al’s findings, felt that the structured care implied by a templated list of questions or items of clinical assessment reduced the consultation to a “tick-box” exercise and led to the loss of “*the art of medicine*”. A cynic, in an unkind moment, might suggest that the “*art of medicine*” is a synonym for unstructured and unevidenced care and that it ended on the day the first computers landed on general practitioners’ desks up and down the country. “*Tick-box medicine*” probably started on that same day too. These GP attitudes towards templates, tools and other items supporting structured care shape the background of the considerations of GMHAT/PC’s feasibility in primary care.

Kendrick et al researched the impact of teaching general practitioners to carry out structured assessments of long term mentally ill patients. Their research is not directly comparable to this study as they were looking more at the longitudinal monitoring of patients’ physical and mental health, but they note that “*Structured assessments are time consuming, and this study suggests they are not generally feasible in routine surgery appointments. Special sessions may be necessary to assess patients, perhaps with help from community psychiatric nurses or practice nurses, similar to the clinics for asthma and diabetes which are now widespread in general practice. If the contribution of general practice to the psychiatric*

*care of long term mentally ill people is to be increased and improved in a more generalised way then increased training will be necessary, together with increased resources such as more nurse time” (Kendrick, Burns et al., 1995, p.97).*

The issue of time as a barrier to feasibility of GMHAT/PC in general practice was a repeated theme from healthcare worker participants. Some too identified that they had 15-minute appointments for each patient and some still in training observed that some other practices only provided 10-minute appointments. The RCGP encourages the shift to longer appointments to support the care of the aging population with its poly-morbidities (Royal College of General Practitioners, 2019). However, there is a counter-pressure from the NHS in England towards ensuring a minimum number of appointments per one thousand patients. The recommendation is currently 72 appointments per one thousand patients per week. Some Clinical Commissioning Groups have provided practices with software to monitor appointment availability. These different viewpoints present a volume versus quality conflict and where the volume paradigm prevails it is likely that the care of patients with complex needs (such as mental health issues) or poly-morbidities will be less well served (Quinn, B N, 2020).

Notwithstanding the pressure to offer more appointments, it seems apparent that addressing the needs of mental health patients necessitates some shift in the general practice paradigm to facilitate their assessment and management. Miller et al recognise the wide variation in family practice. They note too the constancy of practice, which of course allows locum tenens doctors to move easily enough from practice to practice, and the resistance to change that obstructs modifications to the model’s delivery of care that might improve care for patients, especially those with complex needs or poly-morbidities. They viewed practices as *“complex adaptive systems...[with] the primary purpose of seeing patients for everyday health concerns to assist them in getting on with their daily lives”* (Miller, W, McDaniel et al., 2001, p.872). The individuals working in the practice, their relationships, and the external influences such as the health care system, finances and regulations dynamically influence the behaviour of the system. Couple this system complexity with Gunn et al’s observations on *“the limited uptake of guidelines for depression management”*, and that *“education interventions alone [are] unlikely to facilitate much required organisational and system-level change”* and it becomes clear that an appropriate practice response to an updated clinical research or a new diagnostic or management tool requires more than simply announcing its publication (Gunn, Palmer et al., 2010, p.73).

When looking at how to improve the quality of health care, Ferlie and Shortell identified “*four essential core properties of successful quality-improvement work*” that drive change at any of four levels, individual, practice team, healthcare community and nationally. These four components are:

- Leadership at all levels.
- A pervasive culture that supports learning throughout the care process.
- An emphasis on the development of effective teams.
- Greater use of information technologies for both continuous improvement work and external accountability (Ferlie & Shortell, 2001, p.282).

These four components are required at more than one level of implementation, e.g., National, and then also team levels as a minimum, when seeking systemic change. Campbell et al, reviewing the care of people presenting with mental health symptoms in a hospital emergency department after hours, note that “*diagnostic practice within the nursing profession remains controversial. Traditionally, medical diagnostic practice has been the primary responsibility of medical officers and considered to be outside the scope of practice of nurses*” (Campbell, Massey et al., 2019, p.409). In studying the themes exposed in the interviews with the healthcare workers, I specifically looked for negative views of GMHAT/PC’s feasibility in primary care. No participant opined that GMHAT/PC was not feasible in primary care. Nearly all healthcare worker participants identified time as a barrier to feasibility; subject to management of the time issue, GMHAT/PC is a feasible tool in primary care.

The strategies proposed by participants to manage the time barrier to feasibility included scheduling another longer appointment with the patient or delegating the GMHAT/PC interview to another healthcare worker with less time pressures. This research clearly demonstrates that GMHAT/PC interviews do not always have to be conducted by a fully certified medical practitioner. This research has shown that a variety of other healthcare workers such as practice nurses, physician associates and GP assistants, once provided with appropriate training and support, can competently conduct a GMHAT/PC interview.

Perhaps the last words on the feasibility of GMHAT/PC in UK primary care should go to HCW #8, an established GP partner:

**Interviewer:** *How do you feel about the feasibility of the actual practicality of using GMHAT in primary care?*

**HCW #8:** *It's feasible. I think it would just have to be factored into your working day. You know, we frequently will have booked double appointments for patients who've got complex problems. As in with something like GMHAT it'd have to be a double appointment. It's a complex problem, it's a full assessment. It's a holistic assessment to somebody's mental health. If you think about these individuals who are only seen in secondary care, they'll probably sit with a specialist nurse or a psychiatrist for up to an hour, maybe longer.*

**Interviewer:** Mm.

**HCW #8:** *So, I suppose it's only right that we give patients in primary care a little bit more time.*

**Interviewer:** *Right. OK, (Name), we're nearly at the end of the interview. I've got one last question for you. One last question. Is there anything else you thought I must say this about the research or I must say that about the research, was there anything else you felt you had to mention about the research?*

**HCW #8:** *No, no not at all. Not at all. As I say back to what I said initially which is it's a good holistic assessment erm...I used it for diagnostic uncertainty and to support my diagnosis. The only negatives I have with it are, you know, the time it took but again, that's something that can be solved.*

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## 6.5 Impact on healthcare workers' ability to conduct mental health assessments

Acknowledging the concerns of Wittchen et al, Smith et al and Howe that general practitioners are not well equipped to recognise and diagnose mental health symptoms, the third question sought to measure the impact of using GMHAT/PC on the healthcare workers' ability to conduct mental health assessments (Wittchen, Mühlig et al., 2003), (Smith, Robert C., 2011), (Smith, R. C., Laird-Fick et al., 2014) and (Howe, A, 1996).

The evidence was clear for the 'undergraduate' and 'working under supervision' groups of healthcare workers that they gained statistically significant improvements in their confidence and self-rated competence in mental health assessments. The evidence for the "independent practitioner" group was however less clear. This group had nine (9) participants only, and while some did identify improved confidence and appreciate the benefit of the logical approach provided by the GMHAT/PC interview, no statistically significant improvement in competence or confidence was shown. The small number of participants is a factor here – but not the major factor. Theoretical modelling with a hypothetical 288 participants providing the same pattern of responses provided by the nine participants in this study does still not yield statistical significance for any increase in competence and only begins to approach significance for an increase in confidence. The discriminatory power of the self-rating is probably a significant factor in the failure to demonstrate an effect on confidence and competence in this group. The "independent practitioners" group comprised fully accredited health care workers, mainly doctors, licensed to practice independently in their chosen field. A different tool will be needed to answer the question of whether there is any benefit in competence and confidence for this group.

In the early healthcare worker post-intervention/ exit interviews, a theme of 'surprise diagnoses' was identified, where healthcare workers reported that using the tool had facilitated the diagnosis of a previously unrecognised disorder. Subsequent healthcare workers were asked specifically whether they had encountered any such "surprise diagnoses". Some had, and one, while not reporting any surprise diagnosis, felt that the tool had helped her realise the severity of a patient's problem. There is a saying in medicine that *"if you don't think of a diagnosis, you won't make it [the diagnosis]"* and this idea of GMHAT/PC revealing "surprise diagnoses" is probably an example of this maxim holding true. The likely mechanism at play was that using GMHAT/PC had helped the healthcare

workers conduct more comprehensive assessments, reducing the effect of any cognitive biases, enabling them to reach the right diagnosis.

There was a repeated theme of GMHAT/PC serving as a vehicle for the healthcare worker to ask sensitive questions, e.g., about abuse including sexual abuse in particular, suicidal ideation, libido, alcohol habits and drug habits. Several researchers have reported on inconsistent questioning of patients about their alcohol habits. McGlynn et al found that only about one in ten patients with alcohol problems were assessed appropriately and referred for treatment (McGlynn et al., 2003). Adams and Stevens found that despite alcohol's known effects on health services, healthcare workers frequently failed to identify or respond to patients with alcohol problems. They identified "*poor routines in taking drinking histories and note keeping*" amongst the possible reasons for this and talked too about "*the social taboos associated with talking to someone about their drinking*" and a sense of "*transgressing social norms*" (Adams & Stevens, 1994, p.193). Thorley et al, investigating alcohol habits in attendees at a sexual health service in the West Midlands attributed "*staff experiencing difficulties initiating alcohol related conversations in the clinical setting*" for "*poor referral rates*" to a local alcohol service (Thorley, Hettiarachchi et al., 2012, p.587). GMHAT/PC does include questions about alcohol and other drugs, and these may have reminded or prompted the healthcare worker and served as a vehicle to pose them to the patient.

The same applies to asking questions about abuse, particularly sexual abuse. Some healthcare workers expressed embarrassment or reticence asking about abuse with some saying that they would prefer to put these questions at a later consultation when they had developed their relationship with the patient. While this might fit somewhat with social mores, it does mean that disclosure of any abuse is delayed with all that means for a delay in diagnosis, appropriate signposting, and the risk of ongoing abuse for the patient. Several healthcare workers found value in GMHAT/PC as a vehicle to pose the questions about abuse to patients.

The findings of increased confidence and self-rated competence in 'undergraduate' and 'working under supervision' groups match the findings from Goldberg who used communication skills training and videoed role-play consultations with trainee family doctors, and more recently, results from a pilot project in Somalia where the World Health Organisation's mhGAP Intervention Guide was used to teach psychiatry to medical students

(Gavaghan, Hughes et al., 2018; Goldberg, D P, Steele et al., 1980; World Health Organization, 2016).

Undergraduate training in psychiatry mainly comprises personal reading, some didactic or group teaching and experiential exposure to mental health patients in hospital or community mental health clinics. The patients will generally suffer from the more severe, but less common, mental health disorders. Training for GP trainees will generally be similar. Some will not complete any post-graduate mental health attachment. All of which means that newly accredited general practitioners will often only have experiential training in the more common mental health problems of anxiety and depression.

This research shows that training students and those still in training in the use of a semi-structured tool which they then use in their clinical practice increases their confidence and self-rated competence in mental health assessments. This approach has the potential to facilitate undergraduate teaching and improve the skills of future primary care physicians – helping to ensure that more patients presenting with mental health symptoms are diagnosed and managed correctly.

This research showed the statistically significant effect on the confidence and self-rated competence of the “undergraduate” and “working under supervision” healthcare worker groups, whose members included trainee physician associates, a practice nurse, and a GP assistant. This illuminates a road forward for the use of GMHAT/PC in management of the under-recognition and under-management of mental health disorders in primary care. In the face of the current shortfall in the doctor workforce, those GPs in leadership positions could exercise that leadership to develop a supportive and educative team culture where other appropriately trained healthcare workers could support the care of patients with mental health symptoms.

For a concluding word picture of the impact on healthcare workers, I asked healthcare worker #33, a 3<sup>rd</sup>-year medical student, “*In terms of helping you as a student developing your skills, how did you feel using GMHAT helped you?*”. Her response shows the value she got from her involvement in the research:

**Student:** *I thought it's the best mental health training that I've had since I entered medical school. It's the most that I've learned about mental health history since I went to medical school. Now, if you asked me to take a mental health history from a patient, I would try and think of the GMHAT template in my mind because you can remember things you start off with and then-- I think it's been really useful.*

These findings were the basis of the following presentations:

- *“Impact of using GMHAT on Medical Students’ confidence & competence in mental health assessments”*, a presentation to the 2018 7<sup>th</sup> Annual Postgraduate Research Conference at the University of Chester.
- Poster at the EURACT 2018 medical educators’ conference in Leuven Belgium.
- World Congress of Psychiatry, Sante Fe, Mexico:
  - o Poster presentation, *“The impact of using a semi-structured computerised mental health interview on the self-rated confidence & competence of medical students”*.
  - o Oral presentation, *“Training primary care professionals in mental health”*.
- Presentation Royal College of Psychiatry London *“Training GP’s using the Global Mental Health Assessment Tool (GMHAT/PC)”*.
- Workshop at WONCA Europe Conference 2019, Bratislava, Slovakia, *“GMHAT for Primary Care – A solution for a problem?”*.

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## 6.6 The relevance for this study for clinical practice

These findings suggest that healthcare workers in primary care should now finally shelve any reservation about using diagnostic and assessment tools in their assessments of people presenting with mental health symptoms. Patient participants in this study demonstrated significant insights into the utility of GMHAT/PC, recognising that it supported the frail memory of their physician, and provided them with a more complete mental health assessment, allowing them to explore their symptoms in greater depth.

While the healthcare workers in this study recognised the value of using GMHAT/PC in their consultations, they also had valid concerns about the time taken to run the tool. Senior clinicians determined to improve the assessment of their practice's patients presenting with mental health symptoms should consider their consulting schedules, introducing strategies to allow extended consulting time for these patients, with training and educational support for their healthcare workers. Practices should also consider the potential of new healthcare worker types, such as physician associates, to open other avenues of assessment for these patients.

## 6.7 Comparison with similar studies

Spitzer et al's PRIME-MD, from which the PHQ-9 was derived, set out to be "*a new rapid procedure for diagnosing mental disorders by primary care physicians*" (Spitzer, Robert L., Williams et al., 1994, p.1749). PRIME-MD has two component parts, the first a single page questionnaire completed by the patient before their consultation, and the second a twelve-page structured interview for the healthcare worker. Spitzer et al set out several study objectives, three of which resonate with this project such as consideration of the time taken by the healthcare workers to complete the assessment, evaluation of whether the use of PRIME-MD increased healthcare worker's ability to recognise mental health disorders, and finally, consideration of whether patients were comfortable with the evaluation. The authors found that the use of PRIME-MD helped the clinicians recognise much higher levels of mental health disorders, with a different clinical management regime being initiated for some patients. Comparable to this study, healthcare workers found the tool useful in helping them to understand and treat their patients. Looking at acceptability to patients, 96% were "somewhat" or "very" comfortable answering the questions, and 90% believed that their

responses should help their physician better understand and treat their problems. Time to administer the tool was also an issue in Spitzer et al's study: "*however, time constraints are a critical issue: medical clinic visits are typically much briefer than outpatient appointments with a mental health professional, and the need to address other medical problems and issues such as health maintenance further reduces the limited time available to evaluate psychiatric disorders*" – issues identified in this project too. Spitzer et al's solution was to investigate whether the US's Health Management Organisations would reimburse primary care physicians for the time spent on the PRIME-MD evaluation (Spitzer, Robert L., Williams et al., 1994, p.1756). PRIME-MD interviews in those with mental health disorders took an average of 11.4 minutes, with a maximum time of "less than 24 minutes" (p. 1752). In a later paper, Spitzer suggested that the tool's administration time had limited its clinical usefulness (Spitzer, Robert L., Kroenke, Kurt et al., 1999). The healthcare worker participants in the PRIME-MD study asserted themselves as being more interested in mental health than their colleagues and were provided with considerations such as a slightly reduced workload to compensate for the time taken to administer the tool. While not fully reflecting real world settings, this adjusted workload idea was one of the main suggestions in this study to manage the issue of time as a barrier to using GMHAT/PC.

Sharma et al interviewed 119 patients using GMHAT/PC (29, 24%, in a primary care setting), and reported that "*the interview was well accepted by all patients. Many patients were very pleased that the doctor asked about every aspect of their mental health*". The interviews lasted between 7 and 25 minutes, with a mean duration of 13 minutes. The GP investigator continued to use the tool in his routine practice and "*reported that he identified patients with some mental disorders by using the instrument, that he would have otherwise missed*" (Sharma, Vimal K, Lepping et al., 2004, p.117). In a subsequent study, Sharma et al researched the use of GMHAT/PC by health professionals other than doctors (Sharma, V. K., Lepping et al., 2008). In that project, nurses working in a cardiology rehabilitation unit in North Wales interviewed their patients using GMHAT/PC and achieved a high degree of correlation of diagnostic agreement with specialist psychiatrists.

Concurrent with this study, Hough et al were studying the utility of GMHAT/PC in assessing refugee mental health in Lebanon (Hough, O'Neill et al., 2019). Ninety-five per cent (95%) of their participants were comfortable with the questions asked but some reported discomfort with questions related to drugs, alcohol, and suicide – issues possibly related to cultural issues such as those identified in the literature review, see 2.1.2.5 on page 93.

## 6.8 Comparison with other tools used in UK general practice

There is no other semi-structured interview tool in common use in UK general practice. The mental health tools used with any frequency or persistence in UK general practice are the Public Health Questionnaire (PHQ-9) (Spitzer, R. L., Kroenke, K. et al., 1999), the Hospital Anxiety and Depression scale (HADS) (Zigmond & Snaith, 1983) and the Generalised Anxiety Disorder scale (GAD-7) (Spitzer, Robert L., Kroenke et al., 2006). In 2009, use of the PHQ-9 and HADS tools was promoted in primary care by the UK's Quality and Outcome Framework.

It does not seem appropriate to compare GMHAT/PC with any of the tools used with any regularity in UK primary care. The PHQ-9, HADS and GAD-7 have a narrow disease spectrum – each looking at the diagnosis or monitoring of depression or anxiety. GMHAT/PC has this diagnosis and monitoring functionality but covers a wider spectrum of mental health disorders, including psychotic disorders, eating disorders, alcohol abuse and illicit drug use. Use of tools with a single disorder focus has the potential to add to the clinician's confirmatory biases (Moran & Tai, 2001), distracting them from the possibility of a dual mental health disorder such as depression and alcoholism, or diagnosing the presenting symptom of depression as the key disorder when it is more a consequence of another issue, such as an eating disorder or a severe generalised anxiety disorder. PRIME-MD, discussed above, is not used to any significant degree in UK general practice.

The World Health Organisation is investing considerable effort into mental health, identifying that non-communicable diseases, which include mental health disorders, comprise nearly half of the world's disease burden (World Health Organization, 2002). Since the publication of its “*call to action*” in 2001, WHO has published two iterations of an mhGAP Intervention Guide, an evidence-based tool targeted at front-line healthcare workers in low and middle-income countries. More recently, they released a software application (an ‘app’) that will function on mobile devices produced by Apple© and Android© (World Health Organization, 2016). The app and documents are freely available and are used in over 100 countries. Hughes and Thomson report that “*there has been some use of mhGAP [in the UK] but not in any sustainable way*” (Hughes & Thomson, 2019, p.6). In a systematic review of literature relating to mhGAP, Keynejad et al found 155 papers, 38% of which related to mhGAP in healthcare worker training, 30% related to clinical use, and 16% relating to research applications. In keeping with the tool's target audience of low- and middle-income countries,

65% of papers came from researchers in Africa and South-East Asia, with only two (1%) coming from Europe (Keynejad, Spagnolo et al., 2021).

In contrast to GMHAT/PC, the current iteration of the mhGAP app does not have a diagnostic interview tool with an expert rule-based diagnostic algorithm to postulate likely diagnoses. However, mhGAP provides a reference tool for non-psychiatrists such as primary care healthcare workers, with summary advice for points of history, assessment, and holistic management strategies. Its value as a teaching tool is demonstrated by Murphy et al who used mhGAP in a transcultural problem-based learning exercise with UK and Somaliland medical students, and found that short-term peer-to-peer education interventions can reduce mental health stigma in this student population (Murphy, R, Clissold et al., 2017). Learning from mhGAP could be used to provide healthcare workers with a greater depth knowledge when they use GMHAT/PC to interview their patients.

## 6.9 Strengths and Limitations

### 6.9.1.1 Strengths

This study was conducted not in an academic research setting but instead in natural primary care clinical settings with real-world healthcare workers and patients interacting professionally in their community in suburban Wirral. It was not supported by a research grant.

The study included good numbers of participants, one hundred and ninety-eight (198) patients and fifty-five (55) healthcare workers in various stages of their professional training. The inclusion of different types of healthcare workers helped to consider the second question of feasibility and shone a light on strategies to manage the barriers to feasibility. The range of healthcare worker types and their differing levels of clinical experience helped to answer the question about the possible benefit of being trained in the use of GMHAT/PC and then using it in clinical practice on the healthcare workers' confidence and self-rated competence in mental health assessments.

The mixed methods research methodology provides a comprehensive view of the findings, with the multiple data sources allowing for analysis by triangulation.

#### 6.9.1.2 Limitations

The research was limited to training practices in Wirral. As well as the limitation of the research being conducted within one geographical area, the results might not be representative of non-training practices. Additionally, the research was limited to twenty-one (21) months.

Some healthcare worker participants reported that the time required to enrol the patient to the study affected its feasibility. A possible solution to this would have been to have enrolled the patient prior to the consultation. There were no resources for such a solution in this study and in any case this idea would not have worked for patients whose mental health symptoms were recognised only after the consultation had started.

There was a limited number of participants in the “independent practitioners” group. For this group, the healthcare worker self-rating questionnaire did not have enough discriminatory power to measure any change in their confidence and competence in mental health assessments.

The feedback questionnaire was completed by the patient participants shortly after the consultation finished. This may have resulted in some social desirability bias – the participants might have felt discouraged from providing negative responses. Cronbach identified problems with fixed-response items in questionnaires or forms. Fixed responses, where the subject or participant marks a statement from options ranging “A”, “a”, “U”, “d”, or “D” (complete agreement through to complete disagreement), are open to several response-set distortions:

- “Acquiescence” - a tendency to mark items “agreeable” more than “disagreeable”.
  - “Evasiveness” – a tendency to mark items as “uncertain”.
  - “Extremism” – a tendency to mark items as “very/ completely (un)agreeable” rather than “(somewhat/ partially) (un)agreeable”.
- (Cronbach, 1950).

Social desirability bias may be a limitation of this type of study although some observations suggest that this was not substantial in this project. Many patient participants added comments validating their Likert scorings and some made negative observations. Most healthcare workers identified the issue of time as a barrier to the use of GMHAT/PC and many had negative views about the use of tools in general.

Self-rating presents challenges for analysis as it is by its nature subjective. Subjective measurements by an individual of their own confidence cannot be standardised by any yardstick other than the individual themselves. Austin et al reported that “*self-report items can and do recognise more than the trait* [being assessed]” and their work with Scottish farmers did show that the individual demonstrated a reproducible performance in questionnaires which was independent of questionnaire content – suggesting while a bias did exist, it was a consistent bias for that individual and that any difference in measurement or assessment as the result of an intervention was a real difference (Austin, E J, Deary et al., 1998).

Recognising these limitations suggests a future research project, building on this work, that should be conducted in multiple settings across the UK, include a greater number of clinicians in the “independent practitioner” category, and use a different tool with greater discriminatory power.

## 6.10 Summary

This study adds to the existing knowledge by showing that a semi-structured mental health assessment that encompasses a wide spectrum of mental health disorders is acceptable to patients in UK primary care. Patients recognised the increased breadth and depth of the assessment and saw too that it helped their healthcare worker.

This study also shows that GMHAT/PC is feasible in primary care, subject to management of the time taken for the interview. Some participants identified strategies to manage this barrier, such as booking longer appointments, bringing the patient back at the end of a consulting session, or delegating the interview to another healthcare worker with fewer time pressures. This study also identified the antipathy of some healthcare workers to structured

tools, with some yearning for a bygone era where the “art of medicine” prevailed and the concept of “tick box medicine” was yet to be defined.

Further, this study adds to the existing knowledge by illustrating how training healthcare workers in the use of a semi-structured mental health interview tool supported them in their clinical practice, helping to increase the confidence and self-rated competence of undergraduate healthcare workers and those still in training.

The World Health Organisation’s mhGAP recommends that treatment for mental health disorders should be provided in primary care, with secondary care specialist services available to support more severe cases or diagnostic uncertainty (World Health Organization, 2002, p.8). However, mental health competes with many other pressures in primary care and other clinical activities vying for primary care’s time and other resources. The Kings Fund acknowledged that “*workload [in primary care] has increased substantially in recent years and has not been matched by growth in either funding or in workforce*” and that has been exacerbated by workforce shortages and a drop in the share of the NHS overall budget (Baird, Charles et al., 2016, p.3). This rising workload reduces the time available to healthcare workers in primary care for each patient they see. Time as a constraint was seen by the healthcare workers in this research as the most significant barrier to using a validated, acceptable, and educative tool in general practice.

A paradigm shift is needed to ease the societal burden of unrecognised and unmanaged mental health disorders. Hughes and Thomson take an unkind view of GP’s asking for additional resources with “*Primary care health workers often report that they have limited time for mental health. They sometimes ask for extra money or incentives. Yet no one would consider asking for extra money or incentives to manage diabetes, for example.*” (Hughes & Thomson, 2019, p.5). Their belief that no one would ask for resources to manage diabetes or mental health exposes a naivety or lack of knowledge about the delivery of primary care and the forces necessary to facilitate change. The stern reality is that the required paradigm shift will need leaders who share a vision and willingness to ‘make things happen’, and resources in the form of healthcare workers with extra money to manage and train them and fund their salaries – without that there will be no change in the status quo (Quinn, B, 2020).

The necessary paradigm shift must have at least three strands to it. First, a reduced reliance on clinician phronesis and sagacity which should in turn reduce the impact of cognitive biases on the accuracy of diagnoses. Second, an acceptance that the use of tools augments the healthcare worker at the clinical coalface, supporting and developing their confidence and self-rated competence. Finally, a dawning realisation that not all mental health assessments in primary care must be done by a doctor. Trained and supported appropriately, other healthcare workers such as physician associates and practice nurses can undertake this work.

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## Chapter 7 Conclusions, Reflections and Recommendations.

Some time back, identifying the non-recognition and under-diagnosis of mental health in primary care, we set out on a research journey. The vehicle of choice was a mixed methods approach, blending pragmatic qualitative research with quantitative data in a real-world setting, seeking answers to the three research questions of:

1. Is the use of GMHAT/PC in primary care acceptable to patients in the assessment of their mental health symptoms?
2. Is the use of GMHAT/PC feasible in UK primary care?
3. What is the impact of using GMHAT/PC on the healthcare worker's ability to conduct mental health assessments?

The intervention of teaching healthcare workers how to use GMHAT/PC and providing them with a setting that allowed them to gain experiential use with it in their clinical practice proved itself feasible and robust. It was not revised during the data collection process. We now know some answers to these questions. GMHAT/PC is acceptable to patients. Its use in UK primary care is feasible but healthcare workers repeatedly identified time as a barrier to using GMHAT/PC. Healthcare workers were concerned about the additional time required for a GMHAT/PC-assisted patient assessment. One seemingly unrecognised conflict is the balancing of the time spent using GMHAT/PC to augment a clinical assessment against the time and opportunity wasted by not using such tools.

What could be done with the findings from this research? Sullivan-Bolyai et al contend that *“there is also an important ethical mandate researchers must consider when working with vulnerable populations who are experiencing health disparities. Research results must be used in a constructive and purposeful way. It is not enough to simply publish the results. A plan to use the findings to improve the health of the population under study must ensue”* (Sullivan-Bolyai, Bova et al., 2005, p.132). That plan should include a paradigm shift in the delivery of mental health care. So-called *“blue sky thinking”* is required to move away from the current modus operandi of a standard number of consultations per healthcare worker per session, resulting in a situation where the emphasis is more on the number of patients seen

rather than the quality of care delivered.

From a national viewpoint, the plan could include the incentivised use of a semi-structured tool such as GMHAT/PC in primary care, using either the QOF or a national enhanced service incentive scheme. Professionally, changes in clinical governance perspectives could mean that a mental health assessment will be regarded as inadequate if a tool like GMHAT/PC is not used, in the same way as it has done for the use of computerised algorithms in the critical issue of warfarin dosing, or in asthma monitoring, where in 2020, primary care's Quality and Outcomes Framework was altered to include objective assessment using the Asthma Control Test (Nathan, Sorkness et al., 2004). On a more local level, leaders and innovators within primary care networks or practices may adjust clinical schedules to allow healthcare workers the necessary time with patients.

At the time of writing, UK primary care is experiencing a major forced paradigm shift as it responds to the COVID-19 pandemic. A major upheaval in the delivery of primary care was signalled by the Secretary of State for Health and Social Care when, in a statement to the House of Commons on 11<sup>th</sup> March 2020, he announced that health care had "*moved to a principle of "digital first" in primary care and with out-patients: unless there are clinical or practical reasons, all consultations should be done by telemedicine*" (Hansard, 2020, Col. 383). Murphy et al describe the ensuing real world changes and also report a statistically significant increase in consultation rates with patients with poor mental health, which they defined as severe mental illness, diagnosed depression, or prescribed antidepressants (excluding tricyclics) in the 3 months prior to July 2020 (Murphy, M, Scott et al., 2020).

Pierce et al recognise the profound impact of the measures taken to curb the spread of the COVID-19 infection on aspects of daily living. The impact on livelihoods and the worry about health and financial security have contributed to increased mental stress. Pierce et al conclude that the pandemic has not caused new mental health problems but rather exacerbated pre-existing mental health problems, most particularly those related to different life circumstances such as limited access to indoor and outdoor space, school provision, food security, social connectivity, and domestic violence (Pierce, Hope et al., 2020). Anecdotally, local primary care clinicians are reporting an increased mental health caseload. However, using diagnostic coding and prescription issues as proxy indicators of prevalence shows that 31.6% of patients at Blackheath Medical Practice had mental health issues in October 2019, compared to 32.8% in October 2020 – a clinically insignificant increase in

keeping with Pierce et al's findings, that the perceived raised mental health workload is the consequence of increased consultations from those already suffering from mental health issues.

Most primary care consultations are now delivered by telephone, video online consultations or through asynchronous communication vehicles such as *eConsult* (Cowie, Calveley et al., 2018). The loss of non-verbal communication, such as eye contact and body language cues, increases the risk of essentially unstructured conversations between acquaintances, replete with cognitive biases, masquerading as mental health assessments. At Blackheath Medical Practice, if the healthcare worker knows in advance that a telephone consultation is related to mental health symptoms, they will generally send the patient a text message asking them to complete the PHQ-9 and GAD-7 tools before the consultation. Increasingly, the healthcare workers are using the GMHAT/PC tool as a framework to guide them during their telephone consultations. Anecdotally, the time barrier seems to be much reduced in this “*digital first*” setting. *eConsult* includes the PHQ-9 and GAD-7 tools for patients reporting depression and anxiety symptoms. GMHAT/PC in its current form is a tool for healthcare workers. What if a new tool was created from it, let's call it “GMHAT/Patient”, a self-administered version of the tool that those with mental health symptoms could use on their own, in their own time, to assess their mental health wellbeing? In time, after validation studies, GMHAT/Patient could be included in the offerings from services like *eConsult*, or even simply available to all on an Internet page, eliminating at a stroke the time barrier for healthcare workers and delivering a more complete assessment of the patient's mental health symptoms at the point of presentation. Repeated use by the patient of such a tool at intervals could provide objective longitudinal assessment of their progress (Zimmerman, McGlinchey et al., 2008).

The need for an increased ability to conduct mental health assessments is likely to increase in the foreseeable future. The Centre for Mental Health predict that about 20% of England's population will have a new or additional need for mental health support, mainly for depression and/or anxiety. Additional caseload will come from front-line NHS workers suffering mental health problems such as post-traumatic stress disorder as a direct result of the COVID-10 pandemic. They predict that two-thirds of this demand will come from those with previously known mental health needs. This in turn implies a 50% increase in patient caseload, with all that means for primary care appointments, the need for accurate diagnosis

and signposting, and the availability of community-based mental health services (Centre for Mental Health, 2020a).

Self-administered tools are less demanding on healthcare worker time and have been shown to reliably reflect the extent of patients' illnesses. For example, Idler and Benyamini reviewed twenty-seven (27) studies of self-rating tools and found that they showed "*impressively consistent findings*", demonstrating that self-rated health was an independent predictor of mortality (mortality being the index event they chose as the measurable outcome). They concluded that "*self-ratings represent a source of very valuable data on health status*" and that they form an essential component of the assessment of an individual's health status (Idler & Benyamini, 1997, pp 21,34). More recently, Dowd and Zajacova had similar findings, reporting that self-reported health status correlated well with future mortality, although they found that this was more predictive for patients with higher income and education levels (Dowd & Zajacova, 2007).

Addressing medical education to better equip healthcare workers to address their patients' mental health issues is a challenging issue. Berwick and Finkelstein, considering what could be done to better equip health professional to address "*new designs and new methods*", note that "*proposing even small changes in medical education, let alone big ones, runs straight into a tangle of three constraints: (1) we can't give up the current content (because our students need to know it); (2) we can't merely layer new material on top of the old (because there is no spare time in the curriculum); and (3) we can't allow the status quo to persist (because we will thereby miss the social need)*". They suggest that "*The following question should guide us: 'What changes in medical education will produce the largest gains in health for both individual patients and populations?'*" (Berwick & Finkelstein, 2010, pp S56,S57).

Funding will always be an issue. Primary care is the Cinderella of the health service. While 90% of people with a common mental health disorder, such as depression or anxiety, are cared for entirely in primary care, only 7% of the NHS's mental health budget is spent there (London Strategic Clinical Network for Mental Health, 2014). The emphasis of care is predominantly on physical medical issues, e.g., lung disease, cardiovascular disease, and endocrine disorders. A different appreciation of the societal burden of mental health should lead to a rebalancing of funding and clinical priorities.

This research did show that supporting undergraduate healthcare professionals and those qualified but working under supervision in their mental health assessments with GMHAT/PC did statistically increase their confidence and self-rated competence. As part of a plan to use the findings to improve the health of the population, undergraduates and those working under supervision in primary care should be trained to use GMHAT/PC as part of their induction and expected to use it in their normal practice, to support their clinical practice and to develop their prudence and sagacity. In this research, healthcare worker and patient participants both reported that it is hard to remember everything that should be asked and by supporting healthcare workers in their learning and their day-to-day practice we accelerate their learning, support the continued and repeated implementation of that learning, increase the effectiveness of their clinical practice, and deliver better care to their patients.

This research did show that mental health assessments do not always have to be done by general practitioners. Other healthcare workers can be trained to use a tool like GMHAT/PC.

## **7.1 Recommendations for future research**

A future study could assess the impact on patient outcomes where GMHAT/PC is used in their assessment and monitoring. A prospective study would present ethical difficulties if one was to purposefully not use an assessment tool for research purposes. A retrospective study comparing the subsequent clinical and social progress of those interviewed with GMHAT/PC to those managed by standard non-tool practice would be more feasible. A mixed-methods research protocol would add colour and depth to the data that could include:

- Longitudinal data from repeated GMHAT/PC assessments over time to indicate changes in their mental health.
- A review of their physical health progress, e.g.,
  - o The prior and subsequent consulting habits of patient participants.
  - o The nature of their consultations.
  - o Changes in the management of physical conditions.
- A review of changes in their social health:

- Changes in employment status where appropriate (returned to work, found new work, left work on medical grounds, et cetera).
- Details of sick leave taken.
- Relationship data (relationship breakdown, re-married, new partner, no partner, et cetera).
- Examples of progress in social wellbeing, such as progress in work or school/college, other achievements such as social phobia victories, e.g., using public transport, answering the telephone, making telephone calls, delivering presentations or public speaking.

This study did not demonstrate any impact on the ability of independent practitioners to conduct mental health assessments. A future research project could look at this topic using a different rating scale with greater discriminatory power. An alternative strategy would be to measure the comprehensiveness of assessments through observer monitoring, or analysis of recorded consultations.

Some patients reported gaining some benefit from their GMHAT/PC interviews. Some even described it as a therapeutic benefit with others indicating the use of the tool had provided them with some greater insight into how they felt. Another study could assess the nature of any benefit and its impact for the patient.

## 7.2 Concluding statements

Crabtree opines that one needs to understand practice before making any attempt to change it (Crabtree, Miller et al., 2001). This research shines a light on the practice mores that influence the acceptability and feasibility of mental health assessment tools, such as GMHAT/PC.

In Chapter 1, we identified issues related to general practitioners' training in mental health - see "*General Practitioners' Training in Mental Health*" on page 30. This study demonstrated a positive impact on the ability of undergraduate healthcare workers and those qualified but still working under supervision to conduct mental health assessments, as evidenced by the statistically significant improvements in their confidence and self-rated competence. This

finding suggests that these primary care healthcare workers should always use a semi-structured interview tool in their assessment of patients with mental health symptoms. As well as supporting the healthcare worker in the clinical assessment, their patients' care would be maximised. Physicians concerned about loss of clinical freedom could consider using interview tools in the same way as they use other clinical equipment such as their stethoscope or sphygmomanometer, to inform and support their sagacity and phronesis.

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## **APPENDICES**



# Appendix A University of Chester Ethical Approval

AM/bh

30<sup>th</sup> July 2015

Dr. Bennett Quinn  
22 Ford Road  
Wirral  
Merseyside  
CH49 0TF



Faculty of Health and Social Care

Tel 01244 512600  
Fax 01244 511270

Dear Bennett

## Ethical Approval Granted

**FH&SC Ethics Number:** RESC0514-514  
**Course of Study:** PhD  
**Supervisor:** Prof. Vimal Sharma, Prof. Mike Thomas,  
Prof. Elizabeth Mason-Whitehead  
**Student Number:** 1327557

I am pleased to inform you that the Research Ethics Sub Committee of the Faculty of Health and Social Care approved your project  
***"To evaluate the acceptability of the use of computer assisted clinical interview (GMHAT/PC) to people presenting with mental health symptoms in primary care and to determine the feasibility of the use of such tools by healthcare workers in primary care"*** on 30<sup>th</sup> July 2015.

Approval is subject to the above and following conditions:

1. That you provide a brief report for the sub-committee on the completion of your project.
2. That you inform the sub-committee of any substantive changes to the project.

We approve your application to go forward to the next stage of the approval process. If you are applying to IRAS and require a sponsorship letter and insurance documentation please contact Barbara Holliday.

If you have any questions or require any further assistance please contact Barbara Holliday on 01244 511117 or by email [b.holliday@chester.ac.uk](mailto:b.holliday@chester.ac.uk)

Yours sincerely

**Dr. Andrew Mitchell**  
Chair, Faculty Research Ethics Sub-Committee

cc Research Knowledge Transfer Office  
cc Academic Supervisor

University of Chester, Riverside, Castle Drive, Chester, CH1 1SL

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# Appendix B Health Research Authority Ethical Approval



Health Research Authority

Dr Bennett Quinn  
Lead Physician  
Blackheath Medical Centre  
76 Reeds Lane  
Moreton, Wirral  
Merseyside  
CH46 1SG

Email: [hra.approval@nhs.net](mailto:hra.approval@nhs.net)

06 December 2016

Dear Dr Quinn

## Letter of HRA Approval

**Study title:** An evaluation of the acceptability of the use of a computer assisted clinical interview (GMHAT/PC) to people presenting with mental health symptoms in primary care and to determine the feasibility of the use of such tools by healthcare workers in primary care.

**IRAS project ID:** 190943

**REC reference:** 16/EM/0467

**Sponsor** University of Chester

I am pleased to confirm that HRA Approval has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications noted in this letter.

### Participation of NHS Organisations in England

The sponsor should now provide a copy of this letter to all participating NHS organisations in England.

*Appendix B* provides important information for sponsors and participating NHS organisations in England for arranging and confirming capacity and capability. **Please read *Appendix B* carefully**, in particular the following sections:

- *Participating NHS organisations in England* – this clarifies the types of participating organisations in the study and whether or not all organisations will be undertaking the same activities
- *Confirmation of capacity and capability* - this confirms whether or not each type of participating NHS organisation in England is expected to give formal confirmation of capacity and capability. Where formal confirmation is not expected, the section also provides details on the time limit given to participating organisations to opt out of the study, or request additional time, before their participation is assumed.
- *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* - this provides detail on the form of agreement to be used in the study to confirm capacity and capability, where applicable.

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Further information on funding, HR processes, and compliance with HRA criteria and standards is also provided.

It is critical that you involve both the research management function (e.g. R&D office) supporting each organisation and the local research team (where there is one) in setting up your study. Contact details and further information about working with the research management function for each organisation can be accessed from [www.hra.nhs.uk/hra-approval](http://www.hra.nhs.uk/hra-approval).

### Appendices

The HRA Approval letter contains the following appendices:

- A – List of documents reviewed during HRA assessment
- B – Summary of HRA assessment

### After HRA Approval

The document “*After Ethical Review – guidance for sponsors and investigators*”, issued with your REC favourable opinion, gives detailed guidance on reporting expectations for studies, including:

- Registration of research
- Notifying amendments
- Notifying the end of the study

The HRA website also provides guidance on these topics, and is updated in the light of changes in reporting expectations or procedures.

In addition to the guidance in the above, please note the following:

- HRA Approval applies for the duration of your REC favourable opinion, unless otherwise notified in writing by the HRA.
- Substantial amendments should be submitted directly to the Research Ethics Committee, as detailed in the *After Ethical Review* document. Non-substantial amendments should be submitted for review by the HRA using the form provided on the [HRA website](http://www.hra.nhs.uk), and emailed to [hra.amendments@nhs.net](mailto:hra.amendments@nhs.net).
- The HRA will categorise amendments (substantial and non-substantial) and issue confirmation of continued HRA Approval. Further details can be found on the [HRA website](http://www.hra.nhs.uk).

### Scope

HRA Approval provides an approval for research involving patients or staff in NHS organisations in England.

If your study involves NHS organisations in other countries in the UK, please contact the relevant national coordinating functions for support and advice. Further information can be found at <http://www.hra.nhs.uk/resources/applying-for-reviews/nhs-hsc-rd-review/>.

If there are participating non-NHS organisations, local agreement should be obtained in accordance with the procedures of the local participating non-NHS organisation.

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### **User Feedback**

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please email the HRA at [hra.approval@nhs.net](mailto:hra.approval@nhs.net). Additionally, one of our staff would be happy to call and discuss your experience of HRA Approval.

### **HRA Training**

We are pleased to welcome researchers and research management staff at our training days – see details at <http://www.hra.nhs.uk/hra-training/>

Your IRAS project ID is **190943**. Please quote this on all correspondence.

Yours sincerely

Rekha Keshvara  
Assessor

Email: [hra.approval@nhs.net](mailto:hra.approval@nhs.net)

Copy to: *Prof Vimal Sharma*  
*Mrs Nicola Dooley, CRN: North West Coast | NIHR Clinical Research Network (CRN)*

## Appendix A - List of Documents

The final document set assessed and approved by HRA Approval is listed below.

<i>Document</i>	<i>Version</i>	<i>Date</i>
Covering letter on headed paper [Covering letter]		29 December 2015
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [University insurance document]	1	18 July 2016
GP/consultant information sheets or letters [GP Notification Letter]	1	06 October 2016
Interview schedules or topic guides for participants [Healthcare worker - semi-structured Interview]	2	14 November 2016
Interview schedules or topic guides for participants [Patient participant Phase II semi-structured interview]	2	14 November 2016
IRAS Application Form [IRAS_Form_03112016]		03 November 2016
Non-validated questionnaire [Healthcare worker self rating]	2	14 November 2016
Non-validated questionnaire [Patient participant Phase I questionnaire]	3	25 November 2016
Other [Cover letter and change log following feedback November 2016]	1	25 November 2016
Other [HRA SoE]	1	06 December 2016
Other [HRA SoA]	1	06 December 2016
Other [GMHAT summary of some published papers]	1	31 October 2016
Other [GMHAT Quick Tour]	1	31 October 2016
Participant consent form [Healthcare worker participant consent form]	2	14 November 2016
Participant consent form [Patient Participant Phase I Consent Form]	2	14 November 2016
Participant consent form [Patient participant Phase II (Interview) Consent form]	2	14 November 2016
Participant information sheet (PIS) [Healthcare worker participant information]	2	14 November 2016
Participant information sheet (PIS) [Patient Participant Phase I Information]	2	14 November 2016
Participant information sheet (PIS) [Patient Participant Phase II Information]	3	25 November 2016
Research protocol or project proposal [Research proposal]	2	31 October 2016
Summary CV for Chief Investigator (CI) [Chief Investigator Summary CV]	2	17 October 2016
Summary CV for supervisor (student research) [CV Research Supervisor Prof Sharma]	1	15 November 2015
Summary CV for supervisor (student research) [CV Research Supervisor Prof Mason-Whitehead]		15 November 2015
Summary, synopsis or diagram (flowchart) of protocol in non technical language [Workflow - Healthcare Worker Participation]	1	06 October 2016
Summary, synopsis or diagram (flowchart) of protocol in non technical language [Patient Participation Workflow]	1	06 October 2016

## Appendix B - Summary of HRA Assessment

This appendix provides assurance to you, the sponsor and the NHS in England that the study, as reviewed for HRA Approval, is compliant with relevant standards. It also provides information and clarification, where appropriate, to participating NHS organisations in England to assist in assessing and arranging capacity and capability.

**For information on how the sponsor should be working with participating NHS organisations in England, please refer to the, *participating NHS organisations, capacity and capability and Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria) sections in this appendix.***

The following person is the sponsor contact for the purpose of addressing participating organisation questions relating to the study:

Mrs Marie-Anne O'Neill  
 Email: [m.oneill@chester.ac.uk](mailto:m.oneill@chester.ac.uk)  
 Tel: 01244511481

### HRA assessment criteria

Section	HRA Assessment Criteria	Compliant with Standards	Comments
1.1	IRAS application completed correctly	Yes	No comments
2.1	Participant information/consent documents and consent process	Yes	IRAS ID to be added to the study Patient Information Sheets and the Consent forms.
3.1	Protocol assessment	Yes	No comments
4.1	Allocation of responsibilities and rights are agreed and documented	Yes	Statement of activities will act as agreement of an NHS organisation to participate.
4.2	Insurance/indemnity arrangements assessed	Yes	Where applicable, independent contractors (e.g. General Practitioners) should ensure that the professional indemnity provided by their medical defence organisation covers the activities expected of them for this

Section	HRA Assessment Criteria	Compliant with Standards	Comments
			research study
4.3	Financial arrangements assessed	Yes	No application for external funding has been made.
5.1	Compliance with the Data Protection Act and data security issues assessed	Yes	No comments
5.2	CTIMPS – Arrangements for compliance with the Clinical Trials Regulations assessed	Not Applicable	No comments
5.3	Compliance with any applicable laws or regulations	Yes	No comments
6.1	NHS Research Ethics Committee favourable opinion received for applicable studies	Yes	No comments
6.2	CTIMPS – Clinical Trials Authorisation (CTA) letter received	Not Applicable	No comments
6.3	Devices – MHRA notice of no objection received	Not Applicable	No comments
6.4	Other regulatory approvals and authorisations received	Not Applicable	No comments

### Participating NHS Organisations in England

*This provides detail on the types of participating NHS organisations in the study and a statement as to whether the activities at all organisations are the same or different.*

There is one type of participating NHS organisation; activities will be the same at all organisations.

The Chief Investigator or sponsor should share relevant study documents with participating NHS organisations in England in order to put arrangements in place to deliver the study. The documents should be sent to both the local study team, where applicable, and the office providing the research management function at the participating organisation. For NIHR CRN Portfolio studies, the Local LCRN contact should also be copied into this correspondence. For further guidance on working with participating NHS organisations please see the HRA website.

If chief investigators, sponsors or principal investigators are asked to complete site level forms for participating NHS organisations in England which are not provided in IRAS or on the HRA website, the chief investigator, sponsor or principal investigator should notify the HRA immediately at [hra\\_approval@nhs.net](mailto:hra_approval@nhs.net). The HRA will work with these organisations to achieve a consistent approach to information provision.

### Confirmation of Capacity and Capability

*This describes whether formal confirmation of capacity and capability is expected from participating NHS organisations in England.*

Participating NHS organisations in England **will be expected to formally confirm their capacity and capability to host this research.**

- Following issue of this letter, participating NHS organisations in England may now confirm to the sponsor their capacity and capability to host this research, when ready to do so. How capacity and capability will be confirmed is detailed in the *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* section of this appendix.
- The [Assessing, Arranging, and Confirming](#) document on the HRA website provides further information for the sponsor and NHS organisations on assessing, arranging and confirming capacity and capability.

### Principal Investigator Suitability

*This confirms whether the sponsor position on whether a PI, LC or neither should be in place is correct for each type of participating NHS organisation in England and the minimum expectations for education, training and experience that PIs should meet (where applicable).*

A Local Collaborator is expected to be in place at the NHS organisations.

GCP training is not a generic training expectation, in line with the [HRA statement on training expectations](#).

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### HR Good Practice Resource Pack Expectations

*This confirms the HR Good Practice Resource Pack expectations for the study and the pre-engagement checks that should and should not be undertaken*

Use of identifiable patient records held by an NHS organisation to identify potential participants should be undertaken by a member of the direct care team for the patient, so it would not normally be acceptable for this to be done by staff not employed by that organisation. A Letter of Access (or equivalent) would be expected for any external NHS/research staff undertaking all of the other activities for the study once consent from the participant is in place. The pre-engagement checks should include an enhanced DBS check and Occupational Health Clearance.

### Other Information to Aid Study Set-up

*This details any other information that may be helpful to sponsors and participating NHS organisations in England to aid study set-up.*

- The applicant has indicated that they do not intend to apply for inclusion on the NIHR CRN Portfolio.

# Appendix C Practice Information Leaflet

## GMHAT/PC Research Project – Practice Information

**Dear Senior Partner/ Lead Physician/ Practice Manager**

Thank you for your interest in this research which is looking at the use of a computer-based interview (GMHAT/PC) by healthcare workers such as medical students, nursing students, qualified nurses, and qualified doctors in the assessment of patients with mental health symptoms.

Previous research has shown that GMHAT/PC does help doctors and nurses to make diagnoses

This research seeks to measure the following:

- Is GMHAT/PC acceptable to patients?
- Is it feasible to use GMHAT/PC in a primary care setting?
- What effect does using the tool have on the healthcare workers' confidence and competence in undertaking a mental health assessment?

**What would you be committing the practice to do if you decide to take part in this project?**

1. You would allow Dr Bennett Quinn access to your staff, facilities, and premises. Such access would be by prior arrangement and subject to practice exigencies.
2. You would allow Dr Bennett Quinn to ask the healthcare workers (doctors, nurses, medical students) in your practice if they would be willing to participate in this project. This could be done at a practice team meeting.
3. Each healthcare worker agreeing to take part in the research project would:
  - a. Spend 20-30 minutes with Dr Bennett Quinn at the start of their participation in the research project.
  - b. receive training on the use of the GMHAT/PC software. This training would take about two hours.
  - c. spend 20-30 minutes with Dr Bennett Quinn at the end of their participation in the research project.

4. You would agree to allow the installation of the GMHAT programme on computers used by participating healthcare workers.
5. You would agree to allow Dr Bennett Quinn to contact participating healthcare workers during their participation in the research project.

### **What are the possible disadvantages of taking part?**

- Participating healthcare workers will be unavailable for other duties if the training takes place during their working hours.
- Using GMHAT/PC in consultations is likely to add to the duration of the consultation. A GMHAT/PC interview takes about 15 minutes. This might put pressures on your service delivery.

### **What are possible benefits of taking part?**

- GMHAT/PC is a validated tool that will provide for a more standardised assessment of the practice's patients presenting with symptoms of mental health disorders with more reliable diagnosis facilitating sooner signposting to any appropriate service.
- More efficient use of healthcare worker time as patients are signposted to alternative services, freeing up consultation time for other clinical requirements.

### **Anonymity**

The anonymity of the practice's patients and healthcare workers will be protected unless someone tells me something that is a risk to either themselves or others. The practice will not be identified by name in any part of the research.

### **Who is organising the research?**

Dr Bennett Quinn, General Practitioner at Blackheath Medical Centre Moreton Wirral is organising the research. His email address is [1327557@chester.ac.uk](mailto:1327557@chester.ac.uk)

If you should wish, we can tell you if the research is published.

### **Is the research funded by a drug company or anything similar?**

No. The research is not funded by any external organisation such as a drug company.

### **Who has reviewed the study?**

All research in the NHS must be approved by Ethics Committees. This research project has been reviewed and approved by

- The University of Chester
- The NHS's Health Research Authority. The project reference is 190943.

If the practice consents to be part of this research both the University of Chester and the NRA will be informed.

**What do I do if I wish to complain?**

In the event of a complaint, you should contact Professor Annette McIntosh-Scott, Executive Dean, Faculty of Health and Social Care, University of Chester, Riverside Campus, Castle Drive, Chester, CH1 1SL. Tel: 01244 513380 or Email: [a.mcintosh@chester.ac.uk](mailto:a.mcintosh@chester.ac.uk)

## GMHAT/PC Research Project – Practice Access

We the undersigned grant Dr Bennett Quinn permission to access staff, facilities and premises at

Practice name	
Practice address	

### Signed

Print Name

Practice Role          Senior Partner / Partner / Practice Manager

Date

### Signed

Print Name

Practice Role          Senior Partner / Partner / Practice Manager

Date

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# **Appendix D Healthcare Worker Information**

## **GMHAT/PC Research Project**

### **Healthcare Worker Information Leaflet**

**Dear Dr/ Sir / Madam**

Thank you for your interest in this research which is looking at the use of a computer-based interview (GMHAT/PC) by healthcare workers such as medical students, nursing students, qualified nurses and qualified doctors in the assessment of patients with mental health symptoms in primary care settings.

#### **What is this research about?**

Previous research has shown that GMHAT/PC does help doctors and nurses to make diagnoses (Krishna, Lepping et al., 2009b; Sharma, B B, Singh et al., 2013 ; Sharma, Vimal Kumar & Copeland, 2009; Sharma, Vimal K., Jagawat, Savita et al., 2010; Sharma, Vimal K., Krishna et al., 2010; Sharma, V. K., Lepping et al., 2008).

This research seeks to answer three main questions:

- How acceptable is GMHAT/PC to patients?
- Is GMHAT/PC a feasible tool for primary care?
- What effect does using GMHAT/PC have on healthcare workers' confidence and competence in doing mental health assessments?

You do not have to take part in this research if you do not want to. Your decision to take part or not will not affect you in any way.

#### **What would I have to do if I take part in this research?**

##### **Initial training**

If you agree to take part in this research you would complete a brief questionnaire and have a brief interview with Dr Bennett Quinn who is the Chief Investigator for this research.

The questionnaire would take you less than 5 minutes to complete and the interview with Dr Quinn would take about 20 minutes.

You should return your questionnaire in the provided envelope to enable privacy and confidentiality.

We would then arrange training for you on the use of GMHAT/PC and a discussion on consent in research. This training would be delivered over a total of up to two days depending on your learning needs.

### **Patient recruitment**

Then we would ask that when you consider it clinically appropriate to use the GMHAT/PC program in the assessment of a patient presenting with mental health symptoms that you pause to provide them with information, verbal and written, about the research.

You must be familiar with guidance from the General Medical Council relating to consent in research. ([http://www.gmc-uk.org/guidance/ethical\\_guidance/consent\\_guidance\\_index.asp](http://www.gmc-uk.org/guidance/ethical_guidance/consent_guidance_index.asp)).

This will be discussed in the training session but will include the following:.

- The participant must have the capacity to decide.
- The patient must be provided with adequate time to read the information, reflect on the contents, pose any questions and come to a decision that they are happy with.
- Agreement to participate must be without pressure or coercion.
- Patients should not be pressured or encouraged in any way nor made to feel so.
- A participant can withdraw their consent at any moment without prejudice.
- Where it is known in advance that a patient is attending regarding mental health symptoms, e.g. what they told the receptionist when making the appointment, through a telephone triage process, or simply that it is a review appointment, then you should ask your receptionist to supply the patient with

the written information before the consultation if you intend to use GMHAT/PC.

N.B. You must still “consent” the patient.

You will ask consented participants to complete a satisfaction questionnaire at the end of your consultation.

You must provide the patients with normal medical care whether or not they have participated in the research.

### **Project conclusion**

Your participation in the research will finish in one of the following ways:

- You request to finish your involvement in the research.
- Your attachment to the practice comes to an end.
- The research project itself comes to a conclusion.

Provided that you still agree to be part of this research, we will once again ask you to complete a brief questionnaire and have a brief interview with Dr Quinn.

We would expect that the questionnaire would take you less than 5 minutes to complete and that the interview would take about 20 minutes.

Both interviews will take place at your place of work.

### **Travel expenses**

Where you have to travel to facilitate either one of the two interviews, travel expenses can be reimbursed up to the value of MerseyTravel day pass for the Liverpool and Wirral areas.

### **What are the possible disadvantages of taking part?**

The initial training would take up to 2 days depending on your learning needs and you would need to spend 25 minutes on two occasions with a researcher for the interview and the brief questionnaire.

Participating in this research is likely to add to the duration of the consultation. Allowing the patient time to read the information leaflet, address any questions they might have and give them the research questionnaire at the end of your consultation could add up to ten minutes to your consultation time.

The time impact on your surgery schedule could possibly be mitigated – if you anticipate using GMHAT/PC during the consultation you could arrange for the patient to read the information leaflet in the waiting room before they see you, but the process will probably still add at least five minutes to the consultation duration.

### **What are possible benefits of taking part?**

With appropriate reflection and identification of how your personal practice may have developed, the initial training and your involvement in the research project could contribute to your continued professional development and inclusion in your learning or appraisal portfolio.

GMHAT/PC is a validated tool and using it should help you in your assessment of your patients and may help with earlier signposting of your patient to their most appropriate care pathway.

### **Anonymity**

Your anonymity will be protected unless you tell us something that is a risk to you or others. If you tell us something that is a risk to you or others the issue would have to be raised with the appropriate authority. Examples of appropriate authorities include the practice's senior partner, the Police, Adult Safeguarding, Child Safeguarding, The CCG Caldicott Guardian or NHS England.

You will not be identified by name in any part of the research.

### **Privacy and Confidentiality**

You should return your questionnaires in the provided envelopes to enable privacy and confidentiality.

The recordings of both interviews will be encrypted as they are recorded and will require a passkey to decrypt and play back.

Quotations of what you say might be typed into the final research document to illustrate examples of the feedback you provide.

You will not be identified by name in these quotations.

**Who is organising the research?**

Dr Bennett Quinn, General Practitioner at Blackheath Medical Centre Moreton Wirral is organising the research. His email address is [1327557@chester.ac.uk](mailto:1327557@chester.ac.uk)

If you wish, we can tell you if the research is published.

**Is the research funded by a drug company or anything similar?**

No. The research is not funded by any external organisation such as a drug company.

**Who has reviewed the study?**

All research in the NHS must be approved by Ethics Committees. This research project has been reviewed and approved by

- The University of Chester
- The Health Research Authority. The project reference is 190943.

**What do I do if I wish to complain?**

In the event of a complaint, you should contact Professor Annette McIntosh-Scott, Executive Dean, Faculty of Health and Social Care, University of Chester, Riverside Campus, Castle Drive, Chester, CH1 1SL.

Tel: 01244 513380 or Email: [a.mcintosh@chester.ac.uk](mailto:a.mcintosh@chester.ac.uk)

**References**

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# Appendix E Healthcare Worker Consent Form

## GMHAT/PC Research Project – Healthcare Worker Consent Form

GMHAT/PC stands for “Global Mental Health Assessment Tool” to be used in primary care and general health setting.

I consent to taking part in this research project which I understand is looking at the acceptability and feasibility of using GMHAT/ PC in primary care and at whether the use of the tool has any effect on my confidence or competence in undertaking mental health assessments.

The lead researcher is Dr Bennett Quinn who can be contacted by telephone (07533253061) or by email (1327557@chester.ac.uk).

I have read the information leaflet for this research project.	Initial please
I understand that I do not have to take part in this research project.	Initial please
I understand that the interview will be recorded (voice, not video).	Initial please
I understand that I can stop the interview at any point and that I can withdraw from the research project at any point.	Initial please
I do / do not want to receive a copy of the recording.	Initial please
I do / do not want the research team to tell me when the recording and the backup have been destroyed.	Initial please

I do / do not want the research team to tell me if the research is published in any journal.	Initial please
The interview is confidential. However, if you say anything that presents a risk to you or to others, we would have to tell an appropriate authority. Examples of appropriate authorities might include your own GP, the Lead GP or Practice Manager at this surgery and for more serious issues, the Police or Child and Adult Safeguarding Teams.	Initial please

(Health care worker name)

.....

Doctor / Nurse / Medical student / Nursing student / Other

.....

At (practice)

.....  
 .....

Signed.....

Date.....

## Training Needs Assessment

Healthcare worker name	
Practice	
Date	

All healthcare workers will receive one training session (2-3 hours) covering the following points:

- Specific issues re symptom ratings that have occurred in previous studies.
- The available online resources for the study.
- The paperwork pack – information leaflets, consent forms, envelopes, stamps.
- Contact details for the Chief Investigator.
- Summary of points from Good Clinical Practice
  - What is informed consent?
  - Safety reporting
  - Data collection and documentation
- Problems
- Complaints.

Please complete the following section to help us gauge any additional training you may require:

Knowledge or Skill	Details
Do you know how to use the GMHAT/PC computer program?	

<p>Please describe your experience or previous training in eliciting and assessing mental health symptoms.</p> <p>E.g., None / medical student attachment/ post-graduate training</p>	
<p>Please describe any recent training in consent.</p>	
<p>Please describe any recent information governance training.</p>	
<p>Have you ever had training or completed online resources in Good Clinical Practice in research?</p>	

Please return this form to Dr Bennett Quinn. Email: [1327557@chester.ac.uk](mailto:1327557@chester.ac.uk)

Post : Blackheath Medical Centre, 76 Reeds Lane, Moreton, Wirral CH46 1SG. Please mark "Private/ GMHAT"

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# Appendix F Healthcare Worker Self-Rating

## GMHAT/PC Research Project - Healthcare worker self-rating

Your name \_\_\_\_\_

Age group:            18-25   26-35   36-45   46-55   55+   Prefer not to say

Gender:                Male / Female / Prefer not to say

Email address : \_\_\_\_\_

### Please select your current position:

<input type="checkbox"/> FY/ ST Doctor working in primary care	<input type="checkbox"/> Registered General Nurse
<input type="checkbox"/> Trained GP	<input type="checkbox"/> Registered Mental Health Nurse
<input type="checkbox"/> Medical student	<input type="checkbox"/> Nursing student

### Please select your psychiatric training/ experience:

- Have worked in mental health post in a senior position, e.g., registrar, consultant.
- Have worked in a mental health post, e.g., mental health nurse, junior doctor attachment.
- Clinical contact with patients with mental health symptoms in non-mental health posts, e.g., Accident and Emergency, GP
- In an experiential teaching situation only – no clinical responsibility
- Theory only – no real face-to-face patient contact
- No previous teaching

**A mental health interview is defined** as a series of questions posed to people presenting with mental health symptoms to determine if they are suffering from a mental illness and if so to confidently determine that illness. The range of illnesses to be considered includes anxiety, depression, alcoholism, obsessive-compulsive disorder, psychosis and mania.

### Please rate your competency in performing a mental health interview:

- I cannot perform a mental health interview.
- I can perform a mental health interview but require direct supervision and assistance.
- I can perform a mental health interview with some supervision and assistance such as “senior” support available on site or readily available by telephone; being able to access a protocol or prompt sheet or some other support tool.

- I can perform a mental health interview without assistance or supervision

Please rate your confidence in conducting a mental health interview on this 0-10 scale where '0' is 'no confidence' and '10' is 'complete confidence':

0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10



Please seal your completed questionnaire in the envelope provided for your privacy and confidentiality.

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# Appendix G Patient Phase I Information Leaflet

## GMHAT/PC Research Project – Patient Information Leaflet

**Dear Sir or Madam**

You are invited to take part in a research study. Please read this information carefully. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

You do not have to take part in this research if you do not want to. You will receive the same care and consideration whether or not you take part in the research.

### **What is the research about?**

A computer program called “GMHAT/PC” has been designed to help healthcare workers ask the right questions to assess mental health symptom and to help them make a correct diagnosis.

GMHAT/PC stands for “Global Mental Health Assessment Tool” – primary care version.

Previous research has shown that GMHAT/PC does help doctors and nurses to make diagnoses.

This research seeks to answer three additional questions...

- How acceptable is GMHAT/PC is to patients?
- Is GMHAT/PC a feasible tool for primary care?
- What effect does using GMHAT/PC have on healthcare workers’ confidence and competence in doing mental health assessments?

Your healthcare worker has decided to use GMHAT/PC today in your consultation. Your consultation with the healthcare professional will take about 15 minutes. You will be provided with all the care and consideration you would normally receive.

At the end of the consultation, we would like you to complete a questionnaire to tell us how satisfied you were with the consultation and whether you find the use of the computer program acceptable or not.

### **Consent**

It is entirely your decision whether or not you wish to take part in this research.

The healthcare worker will give you time to read the information, reflect on the contents, pose any questions and come to a decision that you are happy with.

You should not feel pressured to agree to take part.

You can withdraw your consent to take part in the research at any moment. This will not affect the care you receive – the healthcare worker is ethically bound to do their best to look after you.

### **Confidentiality**

Notes about the consultation will be recorded in your medical record at the practice in the same way as any other consultation you have with a doctor or nurse. The consultation will be subject to the same confidentiality rules as any consultation you might have with a doctor or nurse.

The research is **not** about your symptoms or illnesses and no detail about these will be included in the research.

The research is about your opinions and views about how acceptable you find the use of the computer program.

### **What would I have to do if I take part?**

The healthcare worker will use GMHAT/PC during your normal consultation.

At the end of the consultation, after you have been provided with all normal care, you will be asked to complete a short survey about how acceptable you found the use of the computer program during your consultation. It should take you 2-5 minutes to complete the short survey.



**Please seal your completed questionnaire in the envelope provided for your privacy and confidentiality.**

You will be asked if you wish to take part in further research related to this project.

**What are the possible disadvantages of taking part?**

The consultation should be no more stressful for you than any other consultation about your symptoms.

**What are possible benefits of taking part?**

Previous research has shown that GMHAT/PC helps doctors and nurses to make diagnoses in patients with mental health symptoms. GMHAT/PC could help your doctor or nurse and, in that way, enhance your care.

**Will my doctor be informed that I have participated in this research?**

Your doctor will not routinely be informed about your participation in this first strand of the research.

However, if you tell us something that presents a risk to you or to others, we would have to tell an appropriate authority. Examples of appropriate authorities might include your own GP and for more serious issues, the Police or Child and Adult Safeguarding Teams.

**Who is organising the research?**

Dr Bennett Quinn, General Practitioner at Blackheath Medical Centre Moreton Wirral is organising the research. His email address is 1327557@chester.ac.uk.

**Is the research funded by a drug company or anything similar?**

No. The research is not funded by any external organisation such as a drug company.

**Who has reviewed the study?**

All research in the NHS must be approved by Ethics Committees. This research project has been reviewed and approved by

- The University of Chester
- The Health Research Authority. The project reference is 190943.

**What do I do if I have other queries or need advice?**

If you have questions or need advice you may contact Wirral Clinical Commissioning Group's Patient Advice and Liaison Service (PALS). Their telephone number is 0151 363 3948.

Their email address is [wirralpals@wired.me.uk](mailto:wirralpals@wired.me.uk) or you could write to them at PALS, Wirral Information Resource for Equality and Diversity Ltd (WIRED), Unit 7, Wirral Business Park, Arrowe Brook Road, Upton, Wirral CH49 1SX.

**What do I do if I wish to complain?**

In the event of a complaint, you should contact Professor Annette McIntosh-Scott, Executive Dean, Faculty of Health and Social Care, University of Chester, Riverside Campus, Castle Drive, Chester, CH1 1SL. Tel: 01244 513380 or Email: [a.mcintosh@chester.ac.uk](mailto:a.mcintosh@chester.ac.uk)

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# Appendix H Patient Consent Form (Phase I)

## GMHAT/PC Research Project – Patient consent form (Phase I)

**GMHAT/PC stands for “Global Mental Health Assessment Tool” - a computer program that helps healthcare workers assess mental health symptoms.**

**I am willing to complete a questionnaire about my opinions and views about how acceptable I found the use of the GMHAT/PC computer program during my consultation.**

I have read the information leaflet for this research project.	Initial please
I understand that I do not have to take part in this research project.	Initial please
I understand that I will be asked to complete a survey at the end of my consultation.	Initial please
I understand that I can offer to take part in further research if I should wish.	Initial please
I understand that I can withdraw my consent and not take part in the research project at any point.	Initial please
The interview is confidential. However, if you say anything that presents a risk to you or to others, we would have to tell an appropriate authority. Examples of appropriate authorities might include your own GP and for more serious issues, the Police or Child and Adult Safeguarding Teams.	Initial please

Signed..... Date.....

Print Name please .....

Signature(s) of any accompanying person(s) .....

**Healthcare worker name:** \_\_\_\_\_

(Doctor / Nurse / Medical student / Nursing student/ Healthcare assistant)

**Place of consultation:** Blackheath / Kings Lane / Miriam Group/  
.....

The lead researcher is Dr Bennett Quinn who can be contacted by telephone (07533253061) or by email ([1327557@chester.ac.uk](mailto:1327557@chester.ac.uk)).

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# Appendix I Patient Phase I Questionnaire

## GMHAT/PC Research Project – Patient feedback following GMHAT/PC consultation

1. Did you find the computer assessment process helpful?

Yes [ ]

No [ ]

Not sure [ ]

2. Did it cover most of your concerns regarding your mental health?

Yes [ ]

No [ ]

Not sure [ ]

3. Did you find the questions easy to understand?

Yes [ ]

No [ ]

Not sure [ ]

4. Were you happy with the time taken for the interview?

Yes [ ]

No [ ]

Not sure [ ]

5. How acceptable was the GMHAT/PC-guided consultation to you?

(Tick the most appropriate box please)

Very unacceptable	Somewhat unacceptable	Somewhat acceptable	Very acceptable
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Why do you say that please? (Continue overleaf if necessary)

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## Appendix J Acceptability questionnaire free-text comments

This is a list of the comments provided by patient participants when completing the acceptability questionnaire – see Patient Phase I Questionnaire on page 311.

Well presented and given time to break when necessary

Was happy to help this research. Mental health very much a passion to me.

Was good for anxiety issues. Didn't really address anything OCD-related.

Very understandable and clear.

Very quick and easy.

Very nice and well paced

Very informative on my behalf about my health in understanding myself better.

Very direct and straight to the point. All good!

Very clear and explained.

Useful to triangulate my thoughts and actions regarding my physical and mental health; helped to validate my feelings and actions.

Understanding, empathetic, pleasant.

The students were very nice. It's very difficult to open up and be honest with them though because some of issues are extremely personal.

The range of questions allowed me to communicate many aspects of my mental health which I may not have brought up myself - or forgotten to.

The questions were easy to understand and didn't take too long at all.

The questions seemed appropriate.

The questionnaire covers all aspects of depression and anxiety alongside other disorders. Physical and psychological symptoms covered.

The doctor was very helpful.

The consultation touched on all aspects of my problem and felt it gave me some way forward. Thank you for that.

The consultation covered a lot of areas that wouldn't normally be spoken about.

Straightforward questions and answer choices

Simple questions asked - short time and even brought up some of my concerns.

Short, concise, well directed. Not a problem.

Questions were worded very well and helped give more clear answers

Questions were not too personal and covered a lot of ground.

Professional, coherent, friendly.

Painful

Opened few doors for me regarding my state of mind.

OK

Obviously, some of the questions weren't relevant to myself but it was interesting to note that the results mirrored my current mental health problems.

No problems, where unsure of what questions meant, doctor able to offer an explanation.

Needed to get off my mind; very good help.

Made me feel comfortable. Diagnostic was very helpful.

Left comment suggesting not happy with questions about personality disorder

It was very thorough and easy to understand.

It was very therapeutic and enlightening.

It was very easy to open up and get it off my chest.

It was simple to go through and stress-free.

It was painless and straightforward.

It was nice to feel comfortable and cover all aspects of my mental health.

It was interesting to see what the results were

It was helpful to me

It was fine.

It was easy to understand. I felt satisfied how it was explained to me.

It was a series of questions. Did not find hard.

It targeted all of the concerns I had.

It seemed alright; nothing intrusive or embarrassing

It opened my eyes to lot of questions.

It highlighted every aspect of mental health issues if applicable.

It helps you think about your circumstances in greater depth.

It helped me talk about issues I have struggled with

It helped me start thinking about areas that cause me problems.

It has made me think about changes that I must make in my lifestyle.

It got things out in the open and made it easier to understand.

It gave/ allowed me to get some context to the feelings/ problems I am having.

It gave me a bit more understanding of mental health.

It covers everything; very helpful.

It covered more of what I wanted to talk about

It covered everything I felt I needed to talk about without me having to pinpoint with the questions. I had the chance to say everything without missing anything.

It covered all my issues. Actually discussing these issues made me feel better.

It covered a lot of the issues I had before the consultation.

It covered a lot of questions I'd been asking myself but hadn't had a chance to speak about out loud.

Informative, patience and pleasant (sic); and well advised prior to procedure.

As questions are guided it will be universal

I thought it was fine and was quick to go through

I think it asked the right questions, to help determine what help I need.

I say this because I realise Dr NAME is doing his best and I realised that this will be valuable for future reference. I felt happy that what's said has been constructive, informative and helpful. Thank you.

I realised a lot about my mental health that I didn't actually know.

I learned things about myself I hadn't really noticed.

I just want help to feel me again.

I found the questionnaire easy to follow and understand. Very helpful.

I felt the questions were detailed and personal to me and not just a one word answer response to a normal yes or no question (Patient referring to PHQ9 or GAD7 tools). I found the questionnaire a step in the right direction to get the right support where needed and importantly the appropriate support for the individual.

I felt the options given to me in each question made the assessment easier to understand and efficient.

I felt OK throughout the questions.

I felt it was helpful in the fact it addressed a lot of what is going on in my life.

I felt I was listened to and the online assessment made it easier to discuss.

I felt good to get everything off my chest.

I feel asking the questions helped me to open up more.

I didn't initially expect the programme to be as comprehensive as it was and was pleasantly surprised. However, I think the ability and experience of the clinician is to deliver the questions in an empathic and relaxed way as well as develop and expand the consultation in the right direction is of huge importance. I found my experience and doctor exceptionally good.

I am unsure whether only covering the mental health and discounting any physical symptoms shows the whole person and could give a fake reading. Having the tool is good though to feel as though you can explain symptoms with the doctor.

Helped understand symptoms.

Helped me understand my feelings and concerns.

Helped me understand me, with what's happening with my life.

Helped me understand how I'm feeling more.

Helped me to clarify my own thoughts about depression and the causes.

Happy with consultation.

Good to talk; discussed what bothers me.

Good system which helped get things straight in my mind. Very thorough.

Good interview. Hit problems dead on.

Good

Gave me a chance to chat and get to know my doctor better.

Found it informative

Found helped discuss issues with doctor. May not have discussed in normal consultation.  
Felt reassured that what I'm feeling is OK.  
Easy to understand; simple process; none of the questions were tough to answer.  
Easy to understand.  
Easy to understand.  
Easy relaxed open simple process that covered areas not normally discussed directly.  
Easy process seemed to flow with Dr NAME.  
Easy consultation.  
Doctor was very helpful, explained everything to me and is willing to help.  
Doctor was very helpful and made me feel confident about talking about my issues.  
Doctor helped explain if didn't understand.  
Didn't have any problems with this.  
Covers how I feel.  
Covered my concerns and advice meets my needs I think.  
Covered most things.  
Covered most of my issues - lots of time taken to try and help me.  
Covered assessment well.  
Covered all possible problems  
Covered all areas; well questioned and phrased.  
Covered a lot of aspects and in detail.  
Considered all subjects of life  
Business-like and friendly 9/10.  
Broad questions but explained by consultant.  
Because it was well explained.  
Acceptable because [the doctor] explained and asked questions in more understandable way as I found some of the questions too clinical. I found eye contact with [the doctor] more comforting than the questions.  
A lot of worries were explained and put into context for me.  
A computer program is very impersonal by itself so having a doctor with me to talk to is very helpful as I know mental health issues are very serious.  
(very acceptable) because of above and the compassion shown to me throughout the questionnaire  
(I say that) because it helped me and it's better to be asked the questions.

## Appendix K Healthcare Worker – Semi-structured Interview

Questions marked “\*\*\*\*” below were not part of the original interview schedule.

- Introductions and thank-you. Comfort check
- Have you read the information leaflet? Do you feel you understand it? Have you any questions about it?
- Consent form signed?
- You will not be identified in this research. **However, let's discuss the consequences if you were to tell me something that presents a serious risk to you or to someone else. Have you any questions about that please?**
- What are your views about using computer-guided clinical interviews please?
- How do you feel when you have to do a mental health assessment?  
(Can you tell me more about that please?)
  - Do you feel confident? (Can you tell me more about that please?)
  - Do you feel competent? (Can you tell me more about that please?)
- You have been using GMHAT/PC for some of your mental health assessments?
- Does using the tool have any effect on your mental health assessments?
- \*\*\*\* Have you had any “surprise diagnoses” when using the tool? Unexpected diagnoses.
- \*\*\*\* The tool prompts you to ask some very personal and sensitive questions about abuse, including sexual abuse, and suicidal ideation. How do you feel about asking these questions?
- \*\*\*\* What do you think about the completeness of the assessment when using the tool? How does it compare to normal practice, not using the tool?
- What do you think about the feasibility, the practicality, of using GMHAT/PC in primary care? (Can you tell me more about that?/ Why do you say that?)
- Do you think we should use MH assessment tools? Why?
- What barriers do you see to using mental health assessment tools?
  - Personal issues – knowledge, awareness, belief in effectiveness
  - Organisational issues – time, support from colleagues.

- Is there anything that can be done about these barriers?
- Have you any questions for me? Is there anything else you want to say to me?
- Are you still happy to be part of this research? Thank you and good-bye.

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## **Appendix L Patient Information Leaflet for Interview (Phase II)**

### **GMHAT/PC Research Project – Patient information leaflet; Phase II (Interview)**

**GMHAT/PC stands for “Global Mental Health Assessment Tool” - a computer program that helps healthcare workers assess mental health symptoms.**

**Dear Sir / Madam**

You recently had a consultation with a healthcare worker. During your consultation the healthcare worker used the GMHAT/PC computer program and you completed a questionnaire about how satisfied you were with the use of that computer program.

At that point you indicated also that you might be willing to take part in further research.

The further research is an interview with Dr Bennett Quinn who is the lead investigator for this research study and could take place at your doctor’s surgery, or possibly at your own home.

The research team can refund travel costs up to the value of a Merseytravel day pass for the Liverpool and Wirral zones – about £5.20 (November 2016).

Thank you for your interest in this research. Please carefully read this information about the second part of this research. Ask us if there is anything that is not clear or if you would like more information.

Please take time to decide whether or not you wish to take part.

#### **Consent**

It is entirely your decision whether or not you wish to take part in this research.

You do not have to take part in this research if you do not want to.

The researcher will give you time to read the information, reflect on the contents, pose any questions and come to a decision that you are happy with.

You should not feel pressured to agree to take part.

You can withdraw your consent to take part in the research at any moment. This will not affect the care you receive – anyone involved in your care is ethically bound to do their best to look after you.

### **What is this research about?**

This research seeks to answer three main questions...

- How acceptable is GMHAT/PC is to patients?
- Is GMHAT/PC a feasible tool for primary care?
- What effect does using GMHAT/PC have on healthcare workers' confidence and competence in doing mental health assessments?

We would like to hear your thoughts and opinions about how the use of the computer program affected your consultation. The research is **not** about your symptoms or any aspect of your health or care.

### **What would I have to do if I take part in this second part of the project?**

For this further research we would take about 20 minutes of your time for the interview with Dr Quinn who is a doctor at Blackheath Medical Centre in Moreton and is duly registered with the General Medical Council.

The interview will not be about your health but will be more about your opinions, thoughts and feedback about the consultation you had using the GMHAT/PC program.

This interview will be recorded (voice, not video).

We can provide you with a copy of the recording if you should so wish.

### **What are the possible disadvantages of taking part?**

The interview should not in itself be stressful for you. However because it might remind you of issues in your current or past life it might be stressful for you in that way.

If you feel upset, the conversation can be paused for a moment or stopped straight away.

### **What are possible benefits of taking part?**

This research is looking at patients' opinions about doctors and nurses using GMHAT/PC. We know from other research that GMHAT/PC helps doctors and nurses to diagnose their patients accurately but we want to know if patients find the process acceptable.

By taking part you help us find out patients' opinions and feelings.

### **Will my doctor be informed that I have participated in this research?**

Yes. Your doctor will be told that you have taken part in this "interview" part of the research project.

Your doctor will not be told what you say during the interview unless you tell us something that presents a risk to you or to others.

If you tell us something that presents a risk to you or to others we would have to tell an appropriate authority. Examples of appropriate authorities might include your own GP and for more serious issues, the Police or Child and Adult Safeguarding Teams.

### **Confidentiality**

The recording will be protected by a password. It will not be possible to play the recordings without the password. The recording and one backup will be stored safely. The recording and the backup will be destroyed at the end of the research project. You can ask us to tell you when the recording is destroyed.

### **How will we use the recording?**

Quotations of what you say might be typed into the final research document to illustrate examples of the feedback you provide.

You will not be identified by name in these quotations.

You will be assigned a pseudonym.

Your true identity will be known only to the researchers.

*For example*, Andrew Kershaw has participated in the research. He is assigned the pseudonym "DL". If the researchers wish to include something he said in the final report then the entry would look like this...

*"Another patient, DL, said that [whatever]"*

If you should wish, we can tell you if the research is published.

### **Who is organising the research?**

Dr Bennett Quinn, General Practitioner at Blackheath Medical Centre Moreton Wirral is organising the research. His email address is 1327557@chester.ac.uk

**Is the research funded by a drug company or anything similar?**

No. The research is not funded by any external organisation such as a drug company.

**Who has reviewed the study?**

All research in the NHS must be approved by Ethics Committees. This research project has been reviewed and approved by

- The University of Chester
- The Health Research Authority. The project reference is 190943.

**What do I do if I have other queries or need advice?**

If you have questions or need advice you may contact Wirral Clinical Commissioning Group's Patient Advice and Liaison Service (PALS). Their telephone number is 0151 363 3948.

Their email address is [wirralpals@wired.me.uk](mailto:wirralpals@wired.me.uk) or you could write to them at PALS, Wirral Information Resource for Equality and Diversity Ltd (WIRED), Unit 7, Wirral Business Park, Arrowe Brook Road, Upton, Wirral CH49 1SX.

**What do I do if I wish to complain?**

In the event of a complaint you should contact Professor Annette McIntosh-Scott, Executive Dean, Faculty of Health and Social Care, University of Chester, Riverside Campus, Castle Drive, Chester, CH1 1SL. Tel: 01244 513380 or Email: [a.mcintosh@chester.ac.uk](mailto:a.mcintosh@chester.ac.uk)

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## Appendix M Semi-structured interview schedule for patient participants

### GMHAT/PC Research Project –Phase II (Interview) : Semi-structured interview

- Introductions and thank you
- Comfort check
- Information leaflet
  - Have you read the information leaflet?
  - Do you feel you understand it?
  - Have you any questions about it?
  - Can we talk about what would have to happen if you tell me anything that presents a risk to you or to others please?
- Consent form signed?
- I understand that you recently had a consultation with one of the healthcare workers here and that during that consultation he/she used a computer program to guide them through some questions. I want to assure you that I do not know anything that was discussed during that consultation. In any case I have a duty of confidentiality to you unless you tell me something that presents a serious risk to you or to someone else. Have you any questions about that please?  
I am interested in what you thought about the consultation itself and the use of that computer program. Is that alright? Have you any questions about that please?
- Can you tell me please how you felt about the healthcare worker using the computer program during your consultation?
- What, if anything, was especially good, or that you liked most, about the use of the computer program? (Generally? / For you?/ For the healthcare worker?)
- What, if anything, was not good, or that you did not like, about the use of the computer program?  
(Generally? / For you?/ For the healthcare worker?)
- Were you were surprised to be asked any particular questions - that they came “out of the blue”?
- How did you feel about the time taken for the interview?
- How did feel about the nature of the questions? Were they excessively personal?

- Was there any “digging over old ground” / revisiting unpleasant memories? How did you feel about that?
- Is there anything you think should be done differently about the use of the computer program?
- Have you any questions for me?
- Is there anything else you want to say to me?
- Are you still happy to be part of this research?
- Thank-you and good-bye.

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## Appendix N Presentations and Publications

25/08/2016	<p>Chapter: "The Challenges of Mental Health in Primary Care".</p> <p>In "Mental Health Training for Health Professionals: Global Mental Health Assessment Tool"; published by the Indian Psychiatric Society; 2017.</p>
04/11/2016	<p>Presentation on the use of GMHAT/PC to the Kenyan Defence Force Meeting hosted by NHS Warrington CCG, Birchwood.</p>
08/10/2017	<p>World Congress of Psychiatry, Berlin.</p> <p>Oral presentation and poster presentation...</p> <p>"A systematic review of the acceptability of mental health assessment tools".</p>
01/04/2018	<p>Poster submitted to NHS England North as part of the event to celebrate "70 years of the NHS".</p> <p>"Acceptability &amp; Feasibility of the Global Mental Health Assessment Tool in Primary Care".</p> <p><a href="https://www.england.nhs.uk/north/wp-content/uploads/sites/5/2018/05/Do-patients-find-it-acceptable-Use-of-Global-Mental-Health-Assessment-Tool.pdf">https://www.england.nhs.uk/north/wp-content/uploads/sites/5/2018/05/Do-patients-find-it-acceptable-Use-of-Global-Mental-Health-Assessment-Tool.pdf</a></p>
12/06/2018	<p>University of Chester.</p> <p>Presentation: "<i>Impact of using GMHAT on Medical Students' confidence &amp; competence in mental health assessments</i>".</p> <p>7<sup>th</sup> Annual Postgraduate Research Conference.</p>
21/09/2018	<p>EURACT 2018 Conference, Leuven, Belgium.</p> <p>Poster: "The impact of using a semi-structured computerised mental health interview on the self-rated confidence &amp; competence of medical students".</p>
24/09/2018	<p>Universidad el Bosque, Usaquen, Bogota, Colombia, and, Colombian Ministry of Health and Social Protection, Bogota. Colombia. GMHAT/PC presentations.</p>

28/09/2018	<p>World Congress of Psychiatry, Sante Fe, Mexico.</p> <p>Short oral presentation and poster presentation</p> <p>“The Acceptability of the Global Mental Health Assessment Tool to patients in UK primary care (preliminary results)”.</p> <p>Poster presentation: “The impact of using a semi-structured computerised mental health interview on the self-rated confidence &amp; competence of medical students”.</p> <p>Oral Presentations:</p> <p>“Training primary care professionals in mental health”.</p> <p>“GMHAT in Primary Care” (Short notice presentation).</p>
04/10/2018	<p>Royal College General Practitioners Annual Conference 2018, Glasgow.</p> <p>Poster presentation: “The Acceptability of the Global Mental Health Assessment Tool to patients in UK primary care (preliminary results)”.</p>
24/10/2018	<p>Royal College of Psychiatry, London.</p> <p>Presentation: “Training GP’s using the Global Mental Health Assessment Tool (GMHAT/PC)”.</p>
26/06/2019	<p>WONCA (World Organisation National Care Associations) Europe Conference, Bratislava, Slovakia.</p> <p>Workshop (90 minutes).</p> <p>“GMHAT for Primary Care – A solution for a problem?”</p>
01/02/2020	<p>Letter: “Volume versus quality”.</p> <p>British Journal of General Practice 2020; 70 (691): 60. <a href="https://bjgp.org/content/70/691/60.1">https://bjgp.org/content/70/691/60.1</a></p>
10/02/2020	<p>University of Chester.</p> <p>Presentation: “Acceptability &amp; Feasibility of the GMHAT/PC tool in UK Primary Care”.</p> <p>Doctoral research seminar.</p>

15/05/2020	<p>Clinical presentation at “Pulse Live” Birmingham.  “Dual diagnoses in Psychiatry – Anxiety &amp; Depression”.</p> <p>Cancelled due to COVID-19.</p>
01/06/2020	<p>Letter: Published in “Progress in Neurology and Psychiatry”, Vol. 24, Iss. 2, 2020, page 13.</p> <p>A response to Hughes, P., &amp; Thomson, S. (2019). mhGAP–the global scenario. Progress in Neurology and Psychiatry, 23(4), 4-6.</p> <p>No DOI assigned. Copy available direct from journal editor.</p>
23/06/2020	<p>Clinical presentation at “Pulse Live” Liverpool.  “Dual diagnoses in Psychiatry – Anxiety &amp; Depression”.</p> <p>Cancelled due to COVID-19.</p>
18/10/2021	<p>“Feasibility &amp; Utility of the GMHAT/PC tool in Primary Care”.</p> <p>Oral presentation, World Congress of Psychiatry Virtual Conference October 2021.</p>

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## Appendix O References

All Internet links checked on 18<sup>th</sup> February 2021.

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