

**The clinical use of Subjective Units of Distress scales (SUDs) in child mental health  
assessments: A thematic evaluation.**

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**Abstract**

*Background:* Despite the ubiquitous use of Subjective Units of Distress scales (SUDs) in mental health settings to establish levels of distressing emotion, there has been little empirical research in this area. SUDs are commonly used in therapy and assessments, and are a particularly useful tool for establishing current and previous levels of distress in children and young people.

*Aims:* To explore the use of the SUD analogue rating scale in initial child mental health assessments to better understand its application in this context.

*Method:* The data corpus consisted of 28 naturally-occurring video recordings of children and young people attending their first assessment appointment at Child and Adolescent Mental Health Services (CAMHS). A thematic analysis was utilised to explore the specific interactional use of SUDs.

*Results:* Four themes were identified; recency, longevity, context and miscommunication. The first three themes were found to supplement the child's emotional score on the scale and were important in establishing the necessity for further therapeutic support. Miscommunication as a theme highlighted the need for clarity when using SUDs with children and young people.

*Conclusions:* Recommendations were suggested for practitioners working with children and young people relating to the extended use of rating scales in clinical assessments.

**Key words:** Assessment, Child mental health, Qualitative, Subjective Unit of Distress, thematic analysis, rating scales.

No interest to declare

## **Introduction**

A priority area for mental health services is to assess and provide appropriate support for the difficulties experienced by children and young people. Mental health difficulties affect approximately one third of children, covering emotional, neurodevelopmental and behavioural disorders (Merikangas et al., 2009) and many adults and children diagnosed experience discrimination and stigma (Hamilton et al., 2014). Differentiating developmental norms from mental health difficulties requires mental health services to provide an initial assessment. The initial assessment is central in establishing the mental health status of the individual, screening for potential problems and typically involves history taking and risk assessment (O'Reilly et al, 2015; Parkin et al., 2003; Sands, 2009).

Initial mental health assessments are an important first step in formulating an understanding of the child's presenting difficulties in order to establish whether or what kind of specialist mental health services may be needed. Although frequently parents attend with children and young people, it is important that children are engaged in the process in a child-centred way (O'Reilly & Karim, 2016). In other words, a vital part of this process is understanding the child's difficulties from their perspective. While the initial assessment of children and young people is not primarily intended to be therapeutic in nature, it can have therapeutic value when handled sensitively (Hartzell et al., 2010). Thus, direct communication with children to understand their difficulties from their personal perspective is an important part of this process.

One of the ways in which children can be engaged in the assessment is through the use of a variety of exercises and activities. Some of these activities can also serve the dual purpose of

assessing baseline functioning, such as the use of rating scales. Frequently in both adult and child therapeutic settings rating scales are used to establish a quantitative baseline against which to measure therapeutic progress. Many therapeutic modalities use rating scales regularly during therapy to quantify clients' subjective emotional experiences. Visual and analogue scales make discussion of emotions more tangible for clients. For example, the Distress Thermometer (Gessler et al., 2008) and the Emotion Thermometer tools have the advantage of being easy to understand, quick to administer and simple to score, making them relevant for all groups of patients (Mitchell et al, 2010).

One of the scales most frequently used is the Subjective Units of Distress scale (SUDs) which is a simple analogue scale usually from 0-10 which measures subjective intensity of the current distress experienced (Benjamin et al., 2010). Subjective distress refers to uncomfortable or painful emotions felt, and thus SUDs are used to systematically gauge the level of distress (Matheson, 2014). The SUD scale was developed by Joseph Wolpe (1969) and has been frequently used in Cognitive Behavioural Therapy (CBT) in particular to evaluate treatment progress. Importantly, SUDs are also used in initial assessments to formulate a baseline summary of the client's current experience of distress. In this context, they are used as an assessment tool, as opposed to a therapeutic marker for change.

Although the initial assessment is central to child mental health, there is a limited evidence base examining the process or outcomes within it (Mash & Hunsley, 2005). In particular, there is very little qualitative evidence on children's first encounters with mental health services (Hartzell et al., 2009). Equally, there is limited research examining the use of SUDs, and particularly in relation to the assessment encounter where it is used in a slightly different way and for a different purpose than in therapy.

### *Aims of the paper*

The aim of this study therefore was to specifically investigate how practitioners utilise analogue rating scales to measure SUDs in initial assessments with children and young people. Rather than using retrospective data collection methods such as interviews with clinical practitioners, a more naturally situated approach was deemed to be most appropriate for examining the real world practice of collecting and using SUDs. Thus, the use of naturally occurring data (Potter, 2002) in the form of recordings of the actual conversations between children and mental health practitioners was preferred. This is because the use of recordings of actual clinical practice is both a meaningful and useful resource for evaluation of practitioner interventions in the settings in which they occur and the results of this evaluation has more pertinent direct relevance to informing mental health practice.

### **Method**

The study employed a qualitative design due to its focus on processes and its potential for providing recommendations for clinical practice. Involving children and young people in mental health research is essential to ensure that children's voices help to shape services (see for example, Mawn et al., 2015)

### *Participants and data collection*

Data for the research were provided by a UK-based Child and Adolescent Mental Health Service (CAMHS). A purposeful sampling approach was used and all consenting families

attending their initial assessment were included and video-recorded. Urgent referrals and acute cases were excluded. In total 28 families participated, with 64% male and 36% female. The mean age of the children/young people was 11 years ranging between 6-17 years. Each of the assessments lasted approximately 90 minutes.

The assessments were multi-disciplinary and were conducted by at least two mental health practitioners (except in one case) and all 29 practitioners from that team participated. The practitioners included consultant, staff-grade, and trainee child and adolescent psychiatrists, clinical psychologists, assistant psychologists, community psychiatric nurses (CPNs), occupational therapists, and psychotherapists.

### *Method of analysis*

The data were analysed using thematic analysis. Thematic analysis has the function of identifying core themes and utilises a data-driven strategy (Braun and Clarke, 2006). This analytic approach was utilised as it allows analysts to draw meaning from the data by examining the emergent patterns and identifying the salient issues (Boyatzis, 1998) and allows analysts to focus on the data in many different ways (Braun et al., 2014). In line with the aims of the paper, analysis was specifically focused on an investigation of the content of conversations and the functions of the talk of different speakers. This is a particular kind of thematic analysis which employs an interactional focus (see for example, Goodey, 1997) and allows the analysts to legitimately focus on a particular phenomenon in the data (Braun et al., 2014). In the data this was the interactional focus on SUDs. In order to generate initial codes all narratives related to the use of SUDs were identified in the data. This involved both authors locating and identifying recurring patterns within those particular interactions to

facilitate the development of a focused coding framework. This ensured inter-coder reliability (Armstrong, 1997). Once a coherent narrative was developed through continued discussion and attention to the coding frame, the key analytic messages were agreed upon and are reported here.

### ***Ethics***

In accordance with UK health research governance frameworks, the study was approved by the National Research Ethics Service (NRES). All participants, practitioners, parents, children and other members provided informed consent/assent before and after the assessment and were reminded of their right to withdraw. Pseudonyms were used throughout to protect the anonymity of all parties. A general thematic report of key findings was disseminated to all participating families.

### **Analysis**

Typically, in child and adolescent mental health assessments practitioners need to evaluate the extent of a child's distressing feelings such as anger, sadness, and anxiety. This is in order to assess whether the child's emotional state is chronically or acutely outside of the expected range and level of emotions for a child of that age. As in adult mental health settings, the standard measurement used to quantify emotions is the SUD scale. However, unlike adult settings, when working with children and young people, mental health practitioners often adapt the usual 0-10 analogue scale and use visual representations instead. In the data these included drawings of a glass, jug or teapot which were utilised to talk about how much of an





identified from the data where the communication between the child or young person and the practitioner in relation to the SUD scale was problematic.

***Theme one: Recency***

In order to conduct a thorough assessment of the level of subjective distress over a period of time, practitioners asked children and young people to comment on how recently that level of distress had been present in their life. For example, in the extract below the therapist was careful to establish how the current level of distress compared with previously '*would that have been different if I'd have asked you a year ago*'.

Extract 1: Family 2 (M=15-years)

Therapist At about a six. Is that now or generally?  
Child Generally  
Therapist Would that have been different if I'd have asked you a year ago  
Child Yep, be about eight, eight nine  
Therapist Right so really you felt a lot less happy over the last year  
(*child nods head*)

What becomes evident from extract one is that the child's level of distress can be understood to fluctuate, but was reported to have worsened over the past year. The following extract also demonstrates the theme of recency and highlights the importance of establishing a history.

## Extract 2: Family 1 (F=13-years)

Child           Very bad angry and stressful that's how it is stressful

CPN            Okay when was the last time it went lower than ten?

Child           Erm what dates?

CPN            Yeah can you remember the last time that you

Child           When I'm with my brother and my dad

Notably, during the assessment session the child reported maximum levels of anger and stress (citing a level ten just before this extract begins). However, in order to establish whether this was a common pattern for the child or an enduring difficulty, the practitioner sought clarification about the recency of this degree of emotion '*when was the last time it went lower than ten*'. The establishment of the scale and quantification was used in both examples as a starting point for contrasting current SUD with SUDs over a historic time-frame. While for the purpose of presenting analysis clearly we have separated out the themes, these often were combined during the clinical assessment and recency was typically considered alongside longevity of the difficult emotion.

### ***Theme 2: Longevity***

In addition to ascertaining how recently and how often the child was experiencing a particular level of distress practitioners also sought to ascertain how long the distressing emotion had been present for. Obviously longer periods of higher levels of distress would indicate a more serious problem. For example, in the extract below, not only did the occupational therapist establish recency '*how long ago was that?*', but also sought greater clarity about how often

and for how long that level of emotion had been experienced by the young person *'is that the only time'* and *'how long did it stay at three'*.

Extract 3: Family 2 (M=15-years)

OT            And how long ago was that?

Child        About four months ago

OT            Right is it the only time it's ever gone to three?

Child        Yeah

OT            Yeah an' how long did it stay at three did?

Child        About two weeks

Evident in this extract is that the young person was able to provide the practitioner with a clear indication of when the difficult emotion occurred *'about four months ago'*. The young person also described how long it lasted at that level for *'about two weeks'*, and confirmed that this was the only instance of its occurrence at that level *'yeah'*.

Extract 4: Family 21 (M=17-years)

CPN            So one is you don't feel any anger at all ten is you feel like as much anger as you could possibly bear what number do you think your anger's been?

Child        There's been ten a few times but not much but usually about six seven

CPN            Okay so six seven is your normal so that quite angry feeling quite angry a lot of the time

After clarifying the meaning of the numerical scale, the Community Psychiatric Nurse (CPN) in this extract asked in a very general way about the level of the young person's anger '*what number do you think your anger's been?*'. This formulation did not specify a length of time, however the young person answered quite comprehensively about the level and longevity of him being angry. What was established in this interaction was that a typical level of anger for this young person was about a six- or seven-out-of-ten, peaking to ten-out-of-ten, occasionally. This is a consistently high level of anger, and establishing these facts would be helpful in contributing to the overall assessment of the mental health of the young person.

### ***Theme 3: Context***

Another important element to establish in relation to SUDs that was indicated in the data was the context in which the distressing emotions were elevated. For example, in the extract below the psychiatrist took time to investigate what the SUDs level of nervousness was in the home context in comparison to that of the school and the clinic context.

#### **Extract 5: Family 3 (M=13-years)**

Psychiatrist	Tell me about a scale of ten. Ten being the most Nervous where do you rate yourself now?
Child	Five
Psychiatrist	Where do you rate yourself when you are at home
Child	one
Psychiatrist	Where do you rate yourself when Maria and her kids are round

Child                   Zero er one I think  
Psychiatrist        What about school?  
Child                   Zero

What this extract demonstrates is that in the clinic the young person's SUDs level was '*five*', compared to at home where it was '*one*', and at school it was '*zero*'. Understanding this variability gives insight into the possibility that there may be environmental factors impinging on the young person which were contributing to an increase in SUDs levels.

#### Extract 6: Family 22 (M=11-years)

Clin Psy    You show me with your finger how full it would be  
              ((*child indicates top of pot*))  
              WOW it'd be SO full that it would be over-spilling  
Child        Yeah  
Clin Psy    Yeah  
Child        I get angry over a lot of things  
Clin Psy    Do you?  
Child        Yeah  
Clin Psy    What kind of things?  
Child        When people ain't listenin' to me when they speak over  
              meh. When they hurt me  
Clin Psy    An' what kind of things do they do to hurt you what do  
              you mean?  
Child        Hurt my feelings

Similar to the relevance of the environmental context, was relational context. In this extract having visually established the level of anger as being as high as it could be 'over-spilling' the jug, the child initiated an elaboration that the level of anger was connected to a number of situations or contexts 'I get angry over a lot of things'. This afforded the clinical psychologist an opportunity to explore in more detail the kinds of things that might cause the child to become angry. This contextual information is extremely helpful in developing a psychological formulation to better understand the child's mental health.

#### ***Theme 4: Miscommunication***

One of the anomalous factors that arose from analysis of the data was that in some cases there was a miscommunication between the practitioner and the child with regard to either the emotion being rated on the scale or the meaning of the extremities of the scale. This appeared to cause a disruption in the assessment and confusion about what emotion was being discussed.

#### **Extract 7: Family 1 (F=13-years)**

CPN            If I asked you how your mood was at the minute how would you describe it?

Child            On a scale of one to ten ten's worst ten

CPN            Have you done this scale thing before?

Child            No but it's just easier

CPN            Okay so on a scale of one to ten

Child            Yeah hang on ten's the worst?

CPN            Ten's the worst okay. What does ten mean?





For example, in this extract, after introducing the scale, the young person offered an alternative emotion '*angry*'. A communication problem arose when the CPN treated the quantification of the young person's anger '*ten*' as relating to the original happy-sad scale that was proposed. It seems therefore important to be very clear regarding the jointly agreed meaning of the SUD scale for it to be useful in the assessment.

## **Discussion**

Within everyday discourse the use of rating scales has become ubiquitous. They are now part of common parlance to rate a whole range of things, from potential romantic partners to satisfaction with purchased products. Even in the lives of children and young people, the phrase 'on a scale of one-to-ten' has been applied in myriad contexts. Despite the frequent anecdotal usage of these scales, there has been little empirical research examining their use, particularly in health settings. In mental health settings the rating scale that measures Subjective Units of Distress (SUDs) has become a central component in many therapeutic approaches (Wolpe, 1969). Frequently SUDs are used as a measure of treatment progressivity both between and within sessions, depending on the therapeutic modality. Additionally, SUDs information forms an important part of initial assessments, where the baseline levels of emotions are established. However, the use of SUDs in initial assessments to establish a baseline is different from their use in therapeutic encounters. Through the analysis we have demonstrated some of the ways that SUDs usage is unique in the context of initial child mental health assessments.

Four themes were identified through the thematic analysis of a large corpus of naturally occurring qualitative data. The analytic focus was on a particular interactional phenomenon

(Braun et al., 2014), which was the use of SUD scales in child mental health assessments. The themes identified in the data were in addition to establishing the current numerical score on the SUD scale. First, was the importance of recency, which linked to the current SUD score assigned by the child/young person to demonstrate how recently that emotion had been experienced. Second was longevity, which established the frequency and consistency of the emotion being rated. Third was the context in which the explored emotion was felt most strongly. Fourth, was miscommunication, which demonstrated that some of the ways in which the rating scales were used in some instances were problematic. What was demonstrated by these themes is the importance and relevance of collecting SUDs in an initial assessment. Furthermore, what the data illustrated was that in addition to a current SUD's level a number of other comparative factors also need to be established in order for the current SUD to have relevance and meaning. In this setting, understanding whether a child/young person had been experiencing distress at a high level for a long time in a range of different contexts is an important part of ascertaining their likelihood of requiring specialist support from CAMHS.

The clinical examples provided revealed good practice in relation to the creative use of container metaphors with children and young people that provided visual representation of emotion scales. The examples also showed that child engagement was enhanced through their use and that substantial information could be garnered through the extended use of SUDs in assessments. The extensions of recency, longevity and context that were used facilitated the collection of necessary information about the child's emotional state. Importantly the data illustrated that care needs to be taken when presenting the SUD scale for a child or young person as when dichotomous scales were used this tended to result in miscommunication.

The findings from this study are relevant and important for all mental health practitioners working with children and young people. This is particularly the case as the data were collected from naturally occurring settings where actual mental health practitioners were conducting their usual clinical assessments of children and young people. The value of using the actual talk of practitioners and children, is that it retains the original context and the nuances of the conversations. This is especially useful as the data is transparent and the audience is able to observe actual interactions of mental health practitioners. In this sense the data has enhanced field validity, which gives more credibility to the recommendations for practitioners that can be interpreted from the data.

The limitations of the work need to be contextualised in any translation of the key messages. The sample included in this study were drawn from one CAMH service and the work of the practitioners included may reflect the policies and guidelines of that local Trust. However, the practitioners represent a range of disciplines and training backgrounds and while local policies were influential, national guidelines informed their work. Furthermore, the assessment practice represented in the data reflects the activities of UK-based practitioners working within the National Health Service (NHS). Consequently, the assessment practices in other countries may differ in terms of communicating with children and young people about their difficulties. Despite this, the use of rating scales is, as aforementioned, ubiquitous and a tool utilised in most western health settings.

In conclusion, this study has highlighted the need for the extended use of SUD scales in initial child mental health assessments, to include gathering additional information about recency, longevity, and context. Without this additional information the current 'in-the-moment' SUD level has much less meaning to inform the clinical judgement of the

practitioner. The naturally-occurring data used in this study gives field validity to the findings, indicating the actual practices of clinical practitioners working with children and young people. The use of naturally-occurring data has enabled the shining of a spotlight on existing good practice and the fostering of sharing practice-based evidence.

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