Review

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Reassessing the health impacts of trade and investment agreements: a systematic review of quantitative studies, 2016–20

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In order to ensure a high level of health protection, governments must ensure that health and trade policy objectives are aligned. We conducted a systematic review of the health impacts of trade policies, including trade and investment agreements (TIAs) to provide a timely overview of this field. We systematically reviewed studies evaluating the health impacts of trade policies published between Jan 19, 2016, and July 10, 2020. Included studies were quantitative studies evaluating the impact of TIAs and trade policies on health determinants or outcomes. We evaluated methodological quality and performed narrative synthesis. 21 out of 28 066 articles identified via searches met our criteria. Methodologically strong studies found reduced child mortality, deteriorating worker health, rising sugar, ultra-processed food, tobacco, and alcohol supplies, and increased drug overdoses following trade reforms [A: compared to what?]. However, associations varied substantially across contexts and socio-economic characteristics. Our findings show that trade policies, including TIAs, have diverse effects on health and health determinants. These effects vary substantially across contexts and socioeconomic groups. Governments seeking to adopt healthy trade policies should consider these updated findings to ensure that opportunities for health improvement are leveraged and widely shared, while harms are avoided, especially among vulnerable groups.

Introduction

Ensuring healthy lives for all individuals is central to global efforts to improve population health, reduce health inequalities, and achieve the 2030 Sustainable Development Goals.[1,2] To achieve this goal [A: correct?], WHO has called on governments to adopt a "Health in All Policies" approach that considers the health implications of policies outside of the health sector.[3] This perspective is particularly important for governments seeking to ratify trade policies, including trade and investment agreements (TIAs). TIAs set rules governing trade between states to promote cross-border trade. On Sept 20, 2020, 307 TIAs were in force globally.[4] TIAs are a mechanism of globalisation and are often introduced in response to multiple political and economic changes, alongside other market-oriented reforms.[5]

TIAs are not designed to influence population health. However, the many possible effects of TIAs on health are well established.[6,7] Potential consequences include improved child health due to income growth, reduced food insecurity as a result of food trade, and increased supplies of unhealthy commodities including tobacco, alcohol, and sugar-sweetened beverages (SSBs).[8–11] WHO, politicians, civil society, and academics have called for increased attention to the synergies and tensions between trade promotion and the protection and promotion of health and health equity.[12,13] Achieving this goal requires timely assessments of empirical evidence and the integration of findings from different disciplines.

Reviews published up to 2016 identified associations between trade policies and harmful commodity sales, and called on scholars to examine a wider range of outcomes using methodological approaches that better account for concurrent economic and political changes.[14,15] Scholars have since examined additional outcomes and

utilised quasi-experimental methods, which are suited to evaluating policies like TIAs which cannot be feasibly randomised.[16] It is, therefore, necessary to provide an updated evidence review. The aim of this systematic review is to examine studies from 2016–20 evaluating the

Key messages

- We systematically reviewed high-quality studies published since 2016 assessing the impact of trade and investment agreements (TIAs) and related trade policies on a range of health outcomes and determinants.
- Methodologically strong studies found that TIAs and related trade policy reforms corresponded to reduced child mortality rates. However, these associations varied according to household and country characteristics.
- Trade policies and agreements were also associated with deteriorating worker health and rising rates of deaths from drug overdoses in regions heavily exposed to tariff changes within TIAs. In contrast, select health improvements were experienced among higher-skilled and socioeconomically advantaged workers.
- Strong studies also found that signing TIAs with the USA corresponded to increases in the supply, imports, and sales of ultra-processed foods, sugar-sweetened beverages, tobacco, alcohol, and sugar.
- TIAs have diverse effects on peoples' opportunities for living long and healthy lives, both for better and for worse, and these effects vary substantially across contexts and socioeconomic groups. A health in all policies approach to trade negotiations appears necessary to ensure that the harms we identify are mitigated and that the health improvements we identify are realised and widely shared.
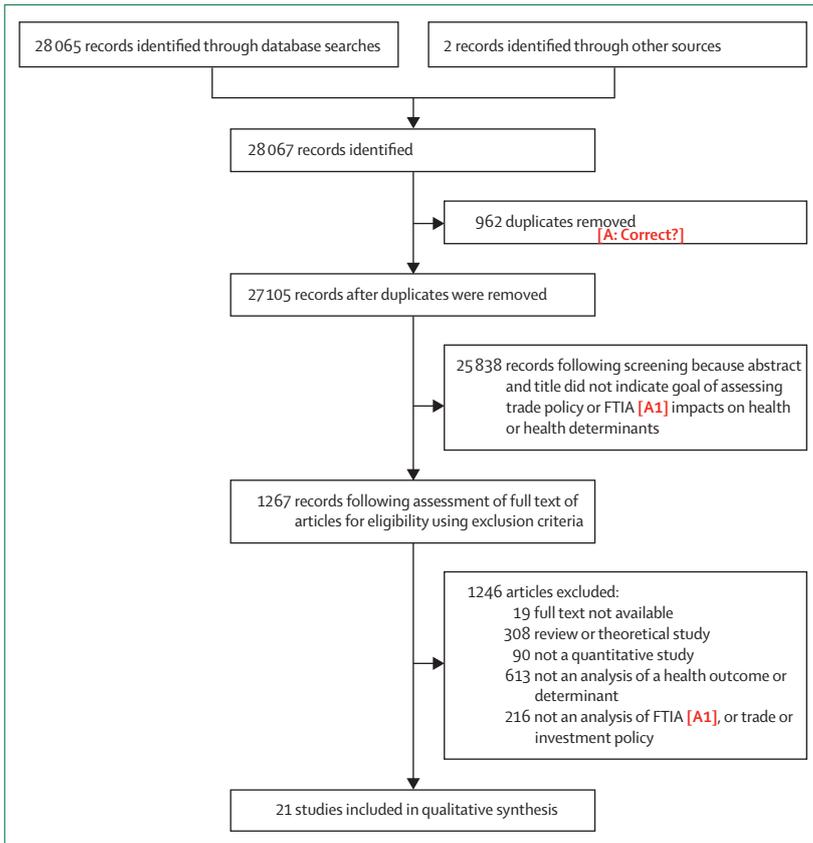
Figure 1: PRISMA diagram showing study identification procedures
[A1: what does FTIA stand for?]

impact of TIAs on the determinants of health and health outcomes.

Method

Search strategy and selection criteria

We followed the procedures in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement set out by Moher and colleagues (figure 1; appendix p 1 [A: please check that this is the right page number in the appendix]).[17]

We searched Web of Science, Scopus, PubMed, Embase, Ovid, Global Health Online, EconLit, WestLaw, and Lexis on July 10, 2020, for studies assessing the impact of TIAs, and trade and investment policies that are common components of TIAs (eg, tariff changes), on health determinants and outcomes. We applied language and date restrictions to identify studies published in English from Jan 19, 2016 (the day after the previous search was undertaken) to MMM DD, YYYY [A: please provide publication date of most recent included study) (appendix p 2).[14]

Studies were eligible for inclusion if they were quantitative empirical studies evaluating the effect of TIAs, or a trade or investment policy that is typically incorporated within TIAs (eg, tariffs, quotas), on a health

See **Online** for appendix

determinant or outcome (appendix p 3). Qualitative studies were excluded as our aim was to quantify policy effects. Full-text eligibility assessment was performed by RS. PB independently assessed the eligibility of a sample of records (n=82) to ensure consistency in applying the exclusion criteria. We reviewed cited studies within included studies and consulted topic experts to identify additional articles (n=2).

Data extraction and synthesis

Two team members extracted the data and assessed risk of bias of included papers [A: which authors were these?]. The following information was obtained from each study following a pre-defined plan: study title, author(s), journal, publication year, research question, study design, countries analysed, treatment and comparison groups, data sources, variable measurement, mediating or moderating variables, covariates, data analysis methods, results, and conclusions. We assessed scientific quality and risk of bias using the Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies.[18] Methodological components and aggregated scores were categorised into three levels: strong, moderate, or weak (appendix p 4). We further analysed co-citation patterns. Co-citation patterns capture the extent to which sources are cited together by other documents and is a proxy for whether insights from different fields are being acknowledged collectively (appendix p 5).[19,20]

Data synthesis was performed after data extraction and quality rating. A meta-analysis was not possible due heterogeneity of methods and measures studied. We therefore conducted a thematic analysis of included studies, with a greater weight to studies with higher quality scores than those with lower quality scores [A: OK?].[21] Note that risk of bias across studies could arise due to selective reporting and publication bias.

Results

Our searches identified 28 066 articles. After excluding duplicates and ineligible articles, we included 21 studies (figure 1; table).

Figure 2 shows the results from our quality assessment (appendix p 6). Most studies controlled for relevant confounders (15 of 21 studies), and all used appropriate data analysis methods (21 of 21 studies). All scored moderate on study design, as papers were either quasi-random or non-randomised studies, rather than randomised controlled trials, limiting definitive causal conclusions. Additional weaknesses arose because studies did not report or comment on measurement validity (eg, content validity)

Figure 3 plots our co-citation analysis. There was a moderately weak tendency of studies to cite papers published in journals in different disciplines. These results are consistent across alternative network clustering specifications (appendix pp 7–8).

	Country or countries	Years	Trade policy exposure	Outcome measure(s)	Outcome category
Son (2020)[40]	South Korea	2007–11, 2012–15	Korea–US FTA	Binary indicator of whether a drug approved in the USA was available in Korea; number of years between the US approval date and availability date on the Korean market	Health care and services: access to medicines
Panda (2020)[8]	30 LMICs in sub-Saharan Africa	2000–08	African Growth and Opportunity Act	Binary indicator of whether a mother's child had died before their first birthday or not	Health outcomes: child mortality
Barlow (2020)[41]	65 LMICs	1996–2015	Tariff rate	Government spending on health care and services per capita, in US$	Health care and services: health expenditure
Barlow et al (2020)[38]	132 LMICs and HICs	2014–17	KOF index of tariff and non-tariff trade policy liberalisation	Binary indicators of whether an individual experienced moderate or severe food insecurity, based on an eight-point questionnaire	NCD risks: diets and food environment
Fan et al (2020)[26]	China	1993–2011	WTO accession	Binary indicator of whether an individual has experienced illness or injury in the past 4 weeks or otherwise	Workers' health outcomes
Cowling et al (2020)[30]	10 LMICs and HICs with US FTAs	2002–16	US FTAs	Per capita sales of foods and beverages, in kg, grouped into three categories: ultra-processed, processed ingredients, minimally processed, and baby food	NCD risks: diets and food environment
Schram (2020)[50]	16 LMICs and HICs with Australian FTAs	1988–2016	Australian FTAs	Volume of imports of alcohol products from Australia; binary indicator of whether the country imports any alcohol from Australia	NCD risks: alcohol
Pierce and Schott (2020)[27]	USA	1990–2013	US Permanent Normal Trade Relations bill	Deaths per 100 000 inhabitants, in each county, disaggregated by cause, gender, and age group	Workers' health outcomes
Adjaye-Gbewonyo et al (2019)[24]	22 LMICs	1991–2010	Nominal Rate of Assistance to agricultural products that are considered tradable	Height-for-age BMI Z scores, weight-for-height BMI Z scores, and weight-for-age BMI Z scores	Health outcomes: child nutrition
Werner et al (2019)[34]	6 LMICs in Central America	1990–2010	Dominican Republic–Central America FTA	Imports of meats, cereals, processed vegetables, oils, and sweetened beverages; share of household expenditure on food and beverages; and index of food price changes across principal food categories compared with general price inflation	NCD risks: diets and food environment
Boysen et al (2019)[25]	101 LMICs	2007–13	Tariff rate	Prevalence of obesity, measured as the % of the adult population who were 18 or older with a BMI equal to or greater than 30 kg/m²; prevalence of underweight, measured as the percentage of the adult population who were 18 or older with a BMI equal to or less than 19 kg/m²	Health outcomes: nutrition
Unar-Munguia et al (2019)[31]	Mexico	1961–2013	North American FTA	Per capita supply of sugar and sweeteners, in kcal per day; sugar and sweetener supply as a percentage of daily per capita food supplies	NCD risks: diets and food environment
Cowling et al (2019)[36]	47 LMICs, UMICS, and HICs	1980–2013	WTO accession	Per capita supply, in g or kg, per year, of tobacco, alcohol, fruits and vegetables, nuts, seeds and legumes, seafood, red meats and animal fats, sugars, starches, and edible oils	NCD risks: tobacco, alcohol, diets, and food environment
Barlow (2018)[23]	36 LMICs	1963–2005	Wacziarg and Welch's [A1] dichotomous indicator of trade liberalisation	Number of newborn babies per 1000 live births who died before the age of 5	Health outcomes: child mortality
Barlow et al (2018)[29]	Canada	1978–2006	Canada–US FTA	Per capita supply of caloric sweeteners including high-fructose corn syrup, in kcal per day; per capita supply of total sugars and sweeteners, in kcal per day.	NCD risks: diets and food environment
Olper et al (2018)[22]	41 LMICs	1960–2010	Wacziarg and Welch's [A1] dichotomous indicator of trade liberalisation	Number of newborn babies per 1000 live births who died before the age of 5	Health outcomes: child mortality

(Table continues on next page)

	Country or countries	Years	Trade policy exposure	Outcome measure(s)	Outcome category
(Continued from previous page)					
Appau et al (2017)[39]	39 LMICs in Sub-Saharan Africa	2007, 2010, 2012, and 2014	Import taxes, KOF Index, bilateral investment treaties (with multiple countries)	Price of cigarettes, in $; affordability of cigarettes, calculated using price data and % of GDP required to purchase 100 packs; investments in tobacco manufacturing by company; and foreign exports of tobacco products, in $	NCD risks: tobacco
Barlow et al (2017)[14]	Canada	1985–2000	North American FTA	Total supply of calories per capita, per day; imports of processed foods to Canada from the US, in USD; and US foreign direct investment in the Canadian food and beverage sector, in USD	NCD risks: diets and food environment
Mendez Lopez et al (2017)[33]	44 LMICs	2001–14	Tariff rate	Per capita sales of sugar-sweetened beverages, in litres; total imports of sugar-sweetened beverages, in USD	NCD risks: diets and food environment
Ofa and Gani (2017)[35]	11 Pacific Island countries	2003–13	WTO membership, tariff rate	Per capita imports of processed foods, in kg, from each trade partner	NCD risks: diets and food environment
Baker et al (2016)[37]	Peru and Bolivia	1990–2013	US–Peru FTA	Per capita foreign direct investment inflows, in $; per capita soft drink imports, in L, and annual growth rate therein, in %; per capita sales of soft drinks, in litres, and annual growth rate therein, in %; and the volumes of sugar from soft drinks, in kg, and annual growth rate therein, in %	NCD risks: diets and food environment

LMICs=low-income and middle-income countries. HICs=high-income countries. UMICs=upper-middle income countries. FTA=free trade agreement. BMI=body-mass index. GDP=gross domestic product. NCD=non-communicable disease. WTO=World Trade Organization. [A1: Please include this citation in the references]

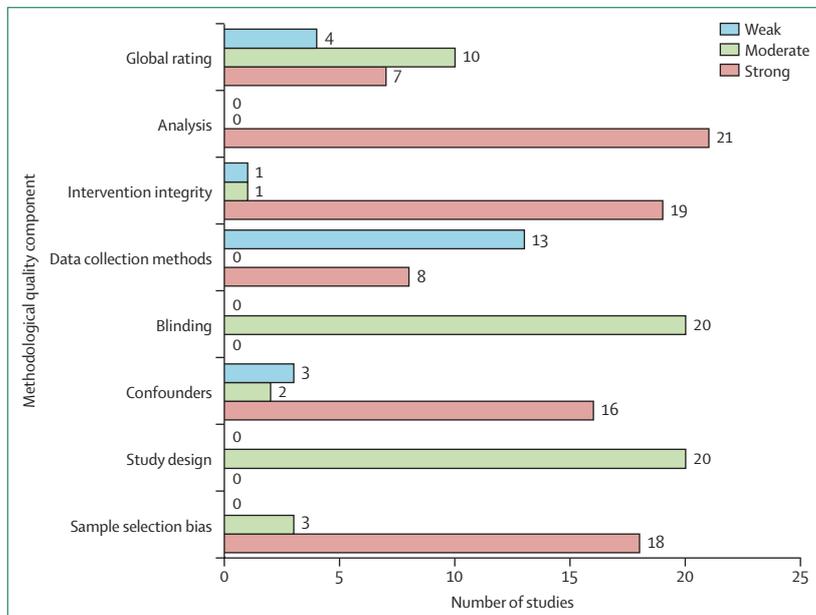*Table:* Studies on trade agreements and health meeting inclusion criteria

Figure 2: Quality assessment of studies chosen for systematic review [A: OK?]
Category definitions are adapted from Thomas et al.[18]

In terms of interventions, nine studies analysed the effect of TIAs, including three studies focused on the USA. Six studies assessed trade taxes (ie, tariffs [A: correct?]); two used binary indicators of trade liberalisation; two used composite measures of trade liberality; and one analysed a proxy for agricultural trade subsidies.

We discuss the studies in detail, grouped by outcome. Seven studies measured the direct impacts of policies on health outcomes, of which four assessed child health outcomes (child mortality and nutrition); two examined workers' health outcomes; and one assessed nutritive health among adults (overweight and obesity). 13 studies assessed indirect effects via changes to health determinants, including two on health care and access to medicines. 11 assessed non-communicable disease [A: correct?] risks, with six focused on diets and food environments.

Turning first to child mortality, three strong documented decreases in child mortality following trade liberalisation, TIA ratification, or both [A: OK?], were recorded [A: OK?].[8,22,23] One study analysing the effect of the African Growth and Opportunity Act in 2000–08, a US trade act affecting 30 sub-Saharan African countries, found that being born after the implementation of the act reduced the probability of infant and neonatal deaths by approximately 9–12% [A: edits OK?]. The largest reductions were in countries with large exports of agricultural goods and mineral ores, in children who lived rurally, and in children whose mothers were uneducated and worked in agriculture or manual labour. Barlow[23] further assessed the relationship between trade liberalisation and country-level child mortality rates in 36 low-income and middle-income countries (LMICs) in

1963–2005, and documented "no universal association" between these variables, with post-liberalisation changes in child mortality varying by ~40% across liberalisation episodes. Olper and colleagues[22] similarly found that rates of child mortality varied substantially following liberalisation reforms.

Two strong studies assessed the relationship between trade policy and health outcomes related to nutrition, including in children.[24,25] Adjaye-Gbewonyo and colleagues[24] analysed tariffs and subsidies, which can distort agricultural prices and are captured in the Nominal Rate of Assistance (NRA). The authors found that an increase in 5-year average NRAs was associated with improved child height-for-age and weight-for-age body-mass index Z scores [A: correct?]. Improvements were greatest among children with at least one parent earning wages in agriculture. Boysen and colleagues[25] modelled the links between import tariffs on highly processed foods and the prevalence of both obesity and underweight among adults, finding that in middle-income countries in sub-Saharan Africa, a 1·00% increase in the tariff differential (larger tariffs on processed *vs* unprocessed foods) corresponded to a 0·18% decrease in obesity prevalence.

A further two strong studies assessed the effect of tariff changes on workers' health.[26,27] Fan and colleagues[26] assessed changes in work-related injuries due to increased working hours as a result of expanding trade following China's World Trade Organization (WTO) accession. The authors calculated exposure to changes in the tariffs on inputs used by manufacturing firms, and found a 1·00 SD reduction in tariff exposure was associated with a 0·27 SD (7·6%) increase in the probability of reporting an illness or injury.[26] However, tariff exposure correlated with a reduced probability of reporting illness or injuries among high-skilled workers and workers with the highest educational attainment. Pierce and Schott[27] analysed changing county-level mortality rates in the USA due to import competition with China, which affected local employment rates. The authors compared mortality rates among US counties with different degrees of exposure to imports affected by the removal of uncertainty over tariffs. They found that moving from the 25th percentile to the 75th percentile of exposure was associated with [A: is this what you meant?] an increase in the annual mortality rate from drug overdoses of 2–3 deaths per 100 000 people in each year after the policy.

12 studies evaluated the effects of TIAs [A: correct?] on non-communicable disease risk factors.[28–34] Studies of strong quality demonstrated that implementing US free trade agreements (FTAs) was associated with increased supply and sales of ultra-processed foods and sugars.[31,33,35,36] For example, one study found that supply and apparent consumption of high-fructose corn syrup tripled in Canada after a 5% import tariff was abolished as part of the 1994 North American FTA.[28] Another study found that the Canada–US FTA in 1989 was followed by a
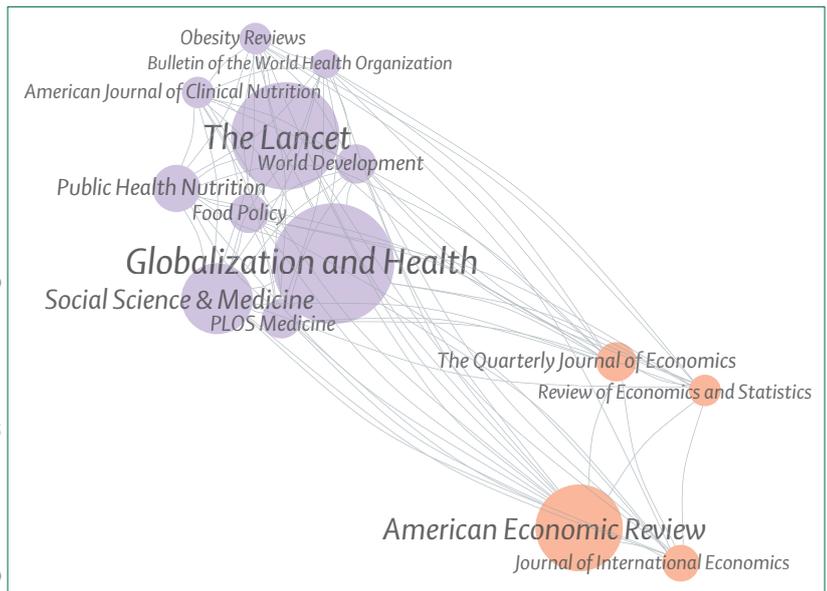
Figure 3: **Co-citation analysis**
Co-citation (tendency for sources to be cited collectively) of journals that were referenced at least 10 times across included studies. [A: what do the different colours (orange and purple) mean?]

170 kcal/person/day increase in the number of calories in the Canadian food supply.[29] Consistent findings were reported in additional studies [A: references for these studies?]. However, there were three exceptions to this general pattern of increased availability of harmful foods. One study found that, following accession to WTO, member states experienced immediate increases in the domestic supply of fruits and vegetables of 55 g/person/day on average, compared to non-member countries.[36] WTO membership was not associated with changes in supplies of red meats or edible oils, and changes in sugar availability were inconsistent across models. Another study identified a 122% increase in Peruvian soft-drink production after the US–Peru FTA, although overall sales of SSBs did not increase.[37]

We identified one strong study which assessed the relationship between cross-sector trade liberalisation and food security and found that in high-income countries, liberalisation corresponded to reduced food insecurity, whereas in low-income countries, households in the lowest-income group were more likely to report food insecurity where trade policy was more liberal.[38] A study of the Dominican Republic also found that consumers faced increasing household food expenditures following the Dominican Republic–Central America FTA.[34]

Three studies of mixed methodological quality identified effects on alcohol and tobacco [A: following free trade agreements?]. Baker and colleagues[37] [A: is this the correct reference?] found that implementing an FTA with Australia corresponded with a 65% increase in the share of Australian alcoholic beverage imports in partner countries' total alcoholic beverage import supply. Cowling and colleagues[36] further identified increases in

the mean supply of tobacco per year (6·2%) and alcohol per year (3·6%) following WTO accession, compared to non-members. A further study by Appau and colleagues[39] found mixed effects of trade liberalisation on tobacco investments and supply in sub-Saharan Africa, in 1990–2013. Finally, two studies rated as weak analysed relationships between trade policy and outcomes related to health-care access and services. Son[40] analysed the association between the implementation of the Korea–US FTA and the time taken for new drugs approved in the USA to become available in Korea (the so-called drug lag). The study did not identify a statistically significant impact of the TIA on drug lag.[40] A further study tested the hypothesis that tariff reductions correspond to declines in public-health expenditure via changes to government tax revenues. The authors found that tariff reductions corresponded [A: correct?] modestly in LMICs with low capacity to levy alternative taxes, whereas health spending increased when countries had moderate to strong capacities to levy alternative taxes.[41]

Discussion

This systematic review has identified considerable variation in the estimated impact of TIAs on health and health determinants across outcomes, socioeconomic groups, and country contexts. Several studies showed that individuals with a higher level of education [A: OK?], higher-income groups, and individuals working in export sectors experienced health gains (eg, reduced food insecurity, reduced child mortality, and reduced injuries), whereas lower-income households [A: OK?], workers with a lower level of education, or workers in less competitive industries did not experience these gains and experienced some health deteriorations (eg, injuries, drug overdoses).[8,26,27] Improvements in aggregate child mortality rates and food insecurity were also apparent primarily in high-income [A: OK?] countries, whereas low-income countries [A: OK?] did not experience these benefits.[22,23,38] TIAs were also associated with increases in the supply of alcohol and tobacco, and rising supply, imports, and sales of ultra-processed foods, SSBs, and sugars. Overall, a majority of included studies was rated as either strong (35%) or moderate (45%), and there was a moderately weak tendency for studies to cite studies published in journals in different disciplines.

The inclusion of new evidence from recent, high-quality, quasi-experimental studies in this field has generated new conclusions regarding the relationship between TIAs and health. First, in contrast to previous reviews, we identified studies examining a wide range of outcomes.[14] We found that whether TIAs yielded changes that were beneficial or deleterious to health varied markedly according to the outcome studied.[14] For example, some studies identified specific [A: correct?] improvements in child health following TIA implementation, whereas other studies identified increased tobacco, sugar, and ultra-processed food sales following TIA implementation, especially US FTAs.[23,30] Second, studies examined socioeconomic disparities and contextual differences in the effects of TIAs. For example, several studies documented associations between trade liberalisation and improvements in health or health determinants in relatively advantaged socioeconomic groups, whereas disadvantaged socioeconomic groups experienced harms [A: please elaborate on the meaning of advantaged and disadvantaged here].[9,26,27] Each of these sources of heterogeneity demonstrates that the nature, direction, and scale of TIAs and trade policy affects health determinants and outcomes depend on the outcome under study, individual socioeconomic circumstances, and country context.

We acknowledge several limitations in this systematic review [A: OK?]. First, meta-analysis was not feasible given the heterogeneity of methods, outcomes, and measures. Second, we restricted our analysis to quantitative studies. Qualitative studies have provided useful evidence on mechanisms underlying the effects of TIAs on health and health policy, including pressure to delay, change, or repeal various [A: okay to change from diverse?] health policies to ensure alignment with trade obligations.[42–45] Third, we measured transdisciplinary engagement using co-citation analysis, which might not fully capture the degree of interdisciplinary engagement. Fourth, our findings could have poor [A: OK?] generalisability due to publication bias.

For studies included in this review, there were also methodological challenges. Researchers must necessarily rely on non-experimental observational analyses in the absence of feasible randomised experimentation of TIAs. Several studies exploited quasi-random trade policy assignment or exposure, or used other quasi-experimental methods to reconstruct counterfactual comparison units. Although these methods can address observed and sometimes unobserved confounding; they remain restricted [A: OK?] in their capacity to account for all possible unknown factors (eg, coinciding policy changes).

There are also measurement challenges, even where stronger quasi-experimental designs are used. For example, some studies used sales indicators as proxy for consumption levels, and there are few cross-national comparative databases containing individual-level data. This challenge has limited studies' capacity to link macro-level trade policy changes to individual outcomes and inequalities therein. Furthermore, researchers have typically focused their studies on a restricted [A: OK?] range of outcomes associated with specific components of TIAs. Although this focus helped identify quasi-random exposure to trade policy, it precludes holistic assessments of the TIAs in question. Thus, although import competition from Chinese manufactures could be associated with drug overdoses as the USA liberalises trade with China, for example, there might be social benefits from expanding US service sector employment and exports to China that the same policy engenders.[46]

The findings and limitations of this Review identify important areas for future research on TIAs and health. There is a need for further improvements in cross-disciplinary engagement in this field to ensure future research tests hypotheses that appropriately integrate and advance research. There is also scope in this field for quasi-experimental studies to evaluate individual-level changes to a wider range of outcomes (eg, tobacco, alcohol, health-care provision, health-care access). Notably, we did not identify any studies assessing the effects of TIAs [A: correct?] on pollution and environment-related outcomes and pathways, although evidence elsewhere indicates possible effects.[47] Further research is also needed to identify policy-relevant sources of heterogeneity in TIA effects, to identify what interventions might realise TIA benefits while preventing harms.

Taken together, the findings of this systematic review demonstrate that TIAs can have diverse effects on health, both for better and for worse, and these effects vary across contexts and socioeconomic groups. Our findings emphasise that, for any specific TIA, expected benefits (eg, economic growth) must be weighed against this evidence base and the varying effects of TIAs across socioeconomic groups that we identify. The effects of a TIA depend, at a minimum, on the provisions the TIA contains and the nature of the trade it affects. There should be no general statements about the effects of TIAs and no alternative to a detailed analysis of specific agreements.

Nonetheless, the evidence provided in this review can inform national and global strategies to ensure health and trade policy goals are aligned, as we have identified how TIAs can create both opportunities and harms for health promotion. This evidence, in turn, supports a health in all policies approach to trade negotiations. There are opportunities for policy makers to align TIAs with health goals, such as reductions in child mortality. However, the adverse effects we identified, for example on worker health, can have long-term, harmful consequences and can lead to rising health-care costs.[48] Recognising the long-term economic effects of these harmful health consequences could provide an economic incentive for effective mitigation and could help to align the goals of trade policy making, which typically targets economic outcomes, with health goals.

Action to raise the political priority and attention to health within trade policy will also be required. First, governance systems must ensure opportunities to protect and promote health are realised through cross-disciplinary engagement in trade policy scrutiny.[49,50] Second, it might be fruitful to prevent adverse effects through changes to TIA design (eg, avoiding tariff reductions on unhealthy commodities) or policy mitigations (eg, increased access to social security). Third, reframing TIA evaluations using a human rights framework can draw attention to how the right to health under international law, including among children, can be either sustained or undermined by TIAs.

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