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Original Article

Bringing an end to the silence: identifying priorities and solutions to addressing the mental health consequences of child marriage

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Abstract

Despite its inclusion in Sustainable Development Goal 5 to end all harmful gendered practices by 2030, child, early and forced marriages continue to be a pervasive problem globally. While there is consistent evidence on the physical health consequences of child marriage, there is a lack of evidence and inquiry into the mental health consequence. We completed a change-oriented Delphi study to establish consensus on priority areas of research and intervention in relation to the mental health consequences of child, early and forced marriages. Invited experts ($n = 11$), survivors ($n = 27$) and professionals ($n = 30$) participated in our Delphi. Four rounds of data collection included: a blended in-person and online workshop with invited experts, an online mixed-methods questionnaire, focus groups in Zimbabwe with women who are survivors of child marriage and a repeat questionnaire sent to the first round of experts. Quantitative data were analysed using descriptive statistics and ranking methods, consistent with other Delphi studies. Qualitative data were analysed using thematic network analysis. Findings coalesced around three areas: perspectives on the relationship between mental health and child marriage, policy actions and treatment-driven solutions. Consensus was reached on 16 items across these areas which included the need to prioritize psychosocial and social interventions to improve mental health outcomes for women and girls in existing marriages. They also called for new approaches to advocacy to drive awareness of this issue in policy circles. Implications for future practice are discussed.

Keywords: Child marriage, early marriage, adolescent health, mental health, change-oriented Delphi

Key messages

- Despite increased attention to health issues caused by child marriage (CM), early and forced marriage, addressing mental health concerns remains largely overlooked in policy and practice.
- Disciplinary and geographical diversity is a feature of staff working in the CM field, but there is a paucity of actors working in some regions: Latin America and North America in particular.
- Survivors and experts agreed on the importance of social factors in mediating the relationship between CM and mental health, as well as the need for advocacy to draw attention to this intersection.
- Priorities for future treatment approaches included psychological and social supports and the need to focus efforts on young women and girls currently within marriages.

Introduction

Globally, estimates suggest that 12 million girls experience early marriage, child marriage (CM) or forced marriage—unwanted marriage prior to the age of 18 years—every year (Girls Not Brides, 2017). Some of the highest rates of CMs exist in sub-Saharan Africa and South Asia (Nasrullah *et al.*, 2014; Yount *et al.*, 2016; Kidman, 2017; Petroni *et al.*, 2017; Tenkorang, 2019). In West and Central Africa, almost 4 in 10 young women are married before 18 years (UNICEF, 2022). CM also exists in high-income settings, including the USA and Canada, where it is more prevalent among minority and rural populations, who are more vulnerable to poverty and social inequalities (Zaman and Koski, 2020). Recent reports also suggest that numbers of forced and early marriages are also climbing among young men, with 4.5% of men aged 20–24 years found to have been in a union or married before 18 years (Gastón *et al.*, 2019).

CM is related to a range of poor health outcomes, although this evidence is overwhelmingly focused on *cis*-gendered women and girls (Gastón *et al.*, 2019). There is wide agreement on the capacity for social issues to increase the risk of CM, which include poverty, social norms and inequity, with a recent *Journal of Adolescent Health* series affirming these concerns (Psaki *et al.*, 2021). Less attention has been paid to mental health conditions linked to CM. Mental health, defined as an individual's state of well-being in which they can realize their own abilities, cope with the daily stress of life, be productive and contribute to its society (WHO, 2004), was explored only once in this new series, as a secondary outcome in work by Zahra *et al.* (2021).

A recent global systematic review identified only 21 papers exploring mental health and CM in the last 20 years (Burgess *et al.*, 2022). Depression was the most commonly explored mental health problem linked to CM, but other common mental health conditions such as anxiety, Post traumatic stress disorder and depression were also identified (Burgess *et al.*, 2022). Suicidal ideation has also been linked to the practice in some studies, including the work by Gage (2013), with girls twice as likely to have suicidal thoughts and attempts, after being promised in marriage or receiving marriage requests. Other mental health disorders included antisocial personality disorder, nicotine and alcohol dependence (Burgess *et al.*, 2022).

The relevance of mental health to CM is reinforced by its association with other social factors also known to impact mental health. For example, intimate partner and physical violence are associated with increased mental health challenges (Trevillion *et al.*, 2012) and CM (Yount *et al.*, 2016; Kidman, 2017).

Existing evidence illuminates gaps in our understanding. Only a small number of conditions (primarily common mental disorders) are explored, and entire populations affected by the practice (boys and people with disabilities) and regions in the world (Latin America, the Caribbean, the western pacific region and high-income countries) are overlooked. As such, our project seeks to advance discussions about this relationship through the completion of a Delphi study to establish a set of priorities for policy and practitioners working in the CM arena.

Background

Health service policy-making is typically anchored to priory setting methodologies (Rudan *et al.*, 2008). However, mainstream methods have been criticized as excluding those who are most affected by policy (Kapiriri, 2018). The contextual relevance of research findings is always increased by the involvement of appropriate stakeholders (Kapiriri, 2018), which in turn increases the likelihood that research will be used by those it is intended to benefit.

The Delphi method is a well-established policy research approach providing opportunities to systematically engage with diverse groups of stakeholders in order to further understanding of, and develop novel policy responses to, complex phenomena (Kezar and Maxey, 2016). The conventional Delphi uses questionnaires to generate expert opinion anonymously over a series of 'rounds' with the aim of reaching consensus among experts (Dalkey and Helmer, 1963). In mental health, the approach has been increasingly used to explore complex intersections and challenges. In Jorm's (2015) recent review on the use of Delphi in the mental health field, the approach was identified as helpful in making estimations for treatment and practice procedures in the face of incomplete evidence, determining collective values and defining core concepts in the field, such as developing guidelines for caregivers of individuals with bipolar disorder (Berk *et al.*, 2011).

Increasingly, Delphi studies are applied in patient research, as a route to including experts with experience in policy development processes. While Delphi studies are gaining wider use in African contexts to explore mental health (Jordans *et al.*, 2016) and women's health (Msibi *et al.*, 2018; Housseine *et al.*, 2019), in recent years, patients and survivor perspectives are less commonly included. Still, examples of style of Delphi from other settings remain. For example, Filler et al. (2020) recently explored the best routes for delivering patient-centred care for women using a two-round Delphi. In total, 21 women and 21 health professionals with expertise in women's health or patient-centred care reached consensus around the importance of responding to emotions and fostering the patient–physician relationship with future policy. In 2019, an Australian Delphi explored key factors shaping social inclusion from the perspective of mental health service users, carers and general community members (Filia *et al.*, 2019). Findings illuminated consensus around the importance of housing, personal motivation and support systems to promote social inclusion. Bond et al. (2019) implemented a Delphi to redevelop guidelines for the Mental Health First Aid course in Australia, basing their questionnaire on the 2008 guidelines and a systematic review of literature. Fifty-three participants, which included individuals with lived experience of depression (consumer or carer), and mental health professionals narrowed 352 items to 183 for inclusion in the new guidelines over three rounds. The improved guidelines focused on identifying the best person to approach an individual with symptoms of depression, in response to comments by participants with lived experience, who suggested that distorted thoughts should be acknowledged, but only if the first aider has the skills to do so. These findings highlight the ability of Delphi studies to build policy advances rooted in patient experiences.

Some Delphi methods deepen opportunities for inclusion using qualitative methods as a route to understanding the 'why' of consensus or identifying possible solutions to issues that gain consensus. Kezar and Maxey (2016) argue that the change-oriented Delphi drives decision-making through 'informed' consensus, as opposed to decontextualized opinions of various participants, which occurs when implementing surveys alone. By combining qualitative and participatory methods, it also reduces barriers to entry for research participants and responds to the need for priority setting to be more inclusive and accessible to all (through methods that enable participation across varied capacities and resources). The change-oriented Delphi also responds to another challenge facing Delphi; recommendations without much discussion of action to achieve these recommendations (Cammarota and Romero, 2011).

For example, Davis and Garb (2018) investigated the e-waste economy in South-West Hebron, where tensions existed between communities and professionals around responding to the issue, and they implemented the approach such that community members could engage with rather than explore the

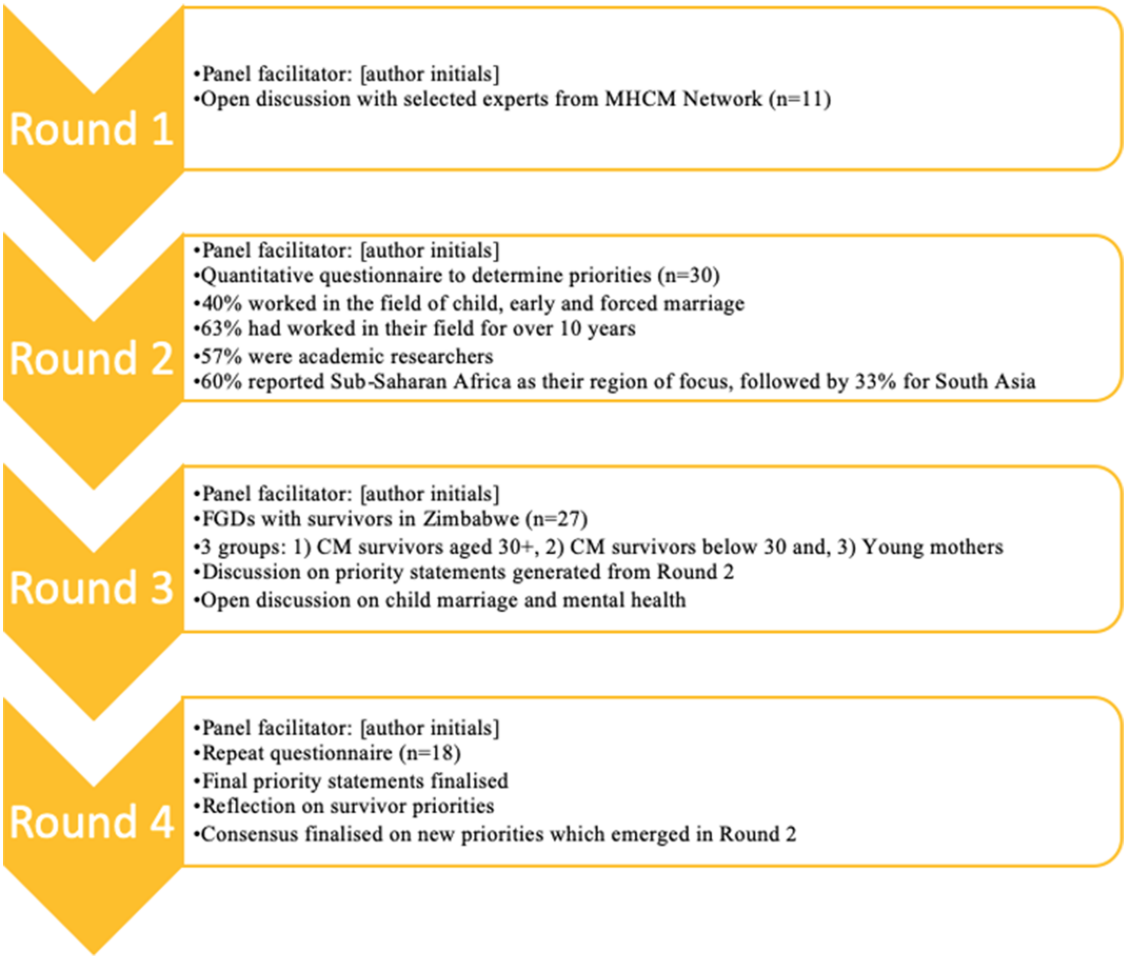

Figure 1. Summary of Delphi Stages, and coordinators

issue. Five 'rounds of communication' were run for nearly a year, hoping to identify issues in the e-waste economy and develop plans to overcome those issues. The anonymization present in each round allowed the conflicting groups to express their thoughts and voices equally. Their work resulted in regulations to the existing informal e-waste economy trades, which helps to preserve the livelihoods of hundreds who depended on it.

To our knowledge, ours is the first Delphi study in the CM field. A change-oriented Delphi is well suited to addressing the gaps in understanding the relationship between mental health and CM given (1) the complexity of contexts, drivers and factors linking these phenomena, which results in a wide range of stakeholders whose perspectives will be critical to future change related efforts; (2) that stakeholder perspectives may be at odds with each other—i.e. biomedical perspectives vs community and survivor interests so interrogating and illuminating points of divergence early on will be valuable to future efforts and (3) that the voices of the target population—people married early—have limited participation in service and policy planning processes. Furthermore, the target population is likely to have been denied access to education needed to participate in standard Delphi methods.

Methodology

We applied Kezar and Maxey's (2016) approach that allowed us to blend qualitative and quantitative methods to explore the understanding and meaning behind rankings and decisions made by stakeholders. Given the importance of work on sensitive topics that are rooted within lived experience and survivor narratives (Prosek and Gibson, 2021), we felt that meaningful consensus building required the inclusion of women who experienced CM. To make our study as accessible as possible, workshops ensured women from a range of backgrounds and capabilities could articulate their perspectives on the future work in this field.

Our Delphi study consisted of four rounds (see Figure 1). Informed consent was obtained at each stage from each participant. Findings from each Delphi round informed the next. Panel facilitators for each round were decided by their expertise and time commitments to the study. The entire process was supervised and coordinated by R.A.B. We discuss each round as a self-contained entity, presenting procedures, sampling and analysis methods for each.

Round 1 —blended workshop

This round was completed in January 2020, convening experts in the field of CM, gender or adolescent mental health, to establish the Delphi panel. Participants were recruited from the mailing list for the Global Network for Mental Health and Child Marriage, which is directed by R.A.B., A.A. and N.G. This sampling allowed us to ensure that our understanding of the state of the field was rooted in both literature and practical experience. Eleven participants completed the workshop and formed the core Delphi panel.

Figure 2. Gaps in the current literature in CM and mental health relationship

The 2h workshop was organized into two sections, lasting 1 h each on the topics 'Reflecting on the relationship between mental health and CM' and 'Reflecting on opportunities to address mental health in existing interventions'.

The workshop discussion also explored initial findings of a systematic narrative review (see Burgess *et al.*, 2022), to ensure questions were informed by current literature alongside experience of experts (Supplementary Appendix A). The workshop was audio-recorded and transcribed by M.J.

Analysis

A rapid thematic analysis was conducted mapping basic themes, which were used to generate 11 broad statements that summarized gaps in the field (see Figure 2). These were redistributed to participants for comment.

Round 2— online questionnaire

Recruitment

In line with mainstream Delphi approaches, the recruitment of experts for the online questionnaire used targeted sampling. We identified four categories of experts, based on the Knowledge Resource Nomination Worksheet approach (Okoli and Pawlowski, 2004): non-government organizations (NGOs), mental health professionals, researchers and gender specialists. The first participants were identified via the Global Network on Mental Health and Child Marriage and then through an internet search of academics who had recently published papers in the field. Emails were sent to 55 identified experts. Snowball sampling was used to expand our list of participants by asking recipients of the questionnaire to forward it on to colleagues also working in the field. A total of 30 participants responded to the invite to complete the survey.

Instrument development

Survey questions were written in consultation with members of our Delphi panel, R.A.B., A.A., G.L., M.J. and C.C., drawing on themes from the analysis of workshop discussions. Demographic details including backgrounds, training and areas of expertise were collected.

Five ranking questions explored broad areas of interest felt to be important to the field, but where consensus was lacking in the available literature. For example, given the evidence which suggests that social phenomena are important to the CM contexts (Burgess *et al.*, 2022), we asked experts to 'rank order the kinds of social factors that were most important to the mental health of people who marry early'.

Nine Likert-scale questions were used to help establish priorities relating to contexts where the current evidence in the field was clearer. For example, given the high consensus on the relationship among intimate partner violence (IPV), mental health and CM (Hong Le *et al.*, 2014; Wusu, 2014; Yount *et al.*, 2016; Tenkorang, 2019; Wahi *et al.*, 2019; Sezgin and Punamäki, 2020), we attempted to build consensus in this area immediately.

Members from the Delphi panel were invited to give feedback on questions before they were distributed to survey participants. Questions from the Round 2 survey can be found in Supplementary Appendix B. All questions included an open-text option to allow participants to justify their choices where possible.

Analysis

Descriptive statistics were used to describe the demographics of participants. For the wider analysis, we defined consensus as >80% of participants ranking a statement as '4' or '5' on the Likert scale (Keeney *et al.*, 2006; Worth *et al.*, 2010). An item was selected as a priority from this round if this criterion was met.

For ranking questions, an item was identified as a priority if the majority of the sample (over 50%) ranked it as the most important. If two items were approaching priority, both items were selected. This method resulted in a list of initial 10 statements reflecting priority areas for the field. This method allowed our selection of priority items to be driven entirely by our anonymous group of experts.

Open-text answers from Round 2 were copied and pasted into a word document and uploaded to NVivo (version 12) for analysis. Coding was entirely data-driven, as the aim here was to identify any new areas of focus not highlighted in Round 1 or the literature review.

We used thematic network analysis (Attride-Stirling, 2001), with initial coding being conducted by I.K. and R.A.B., with themes verified by F.S. We began by identifying specific ideas in the data, allocating a code to each meaning unit (section of text) to exhibit our interpretation of the unit. This resulted in 357 individual codes. These codes were then

analysed, compressed and organized into themes. After verification, we identified four global themes: (1) the neglect of mental health after marriage, (2) contemporary dynamics that have an impact on the practice, (3) research and policy priorities and (4) treatment: barriers, types and interventions. The codebook is presented in Supplementary Appendix C.

Round 3— focus groups with survivors of CM in Zimbabwe

Round 3 included three focus group discussions (FGD) held with 27 women in the Shamva District, Zimbabwe, in October 2020. Women were recruited using targeted sampling to include a range of women affected by the practice, current survivors of CM under age 30 years ($n = 9$), older survivors who were women married as children (≥30 years; $n = 11$) and young mothers ($n = 7$) currently within marriages.

FGD were organized around two activities: (1) understandings of mental health and its links to CM broadly and (2) a participatory consensus activity, where they were given the 10 statements that had reached consensus in Round 2 and asked to rank them in order of importance based on their lived experience of the practice. The discussion was audio-recorded and transcribed by the facilitator and a local co-researcher.

Analysis

FGD transcripts were analysed by F.S., R.A.B. and F.G., using the same method applied to the open-text data from Round 2. We do not report on the findings from this analysis in depth here, as we will devote an entire publication to this elsewhere. However, where relevant we include quotes from women to illuminate how their perspectives contributed to the final analysis.

Round 4—Final questionnaire

All participants who completed the questionnaire in Round 2 were invited via email by F.S. to complete the final questionnaire (Supplementary Appendix D). Out of the initial 30 participants, 18 responded (60%), a response rate that is similar to other Delphi studies. For example, Vogel *et al.* (2019) have argued that a minimum of 12 actors are required to achieve consensus.

The final questionnaire presented participants with three types of data:

(1) The set of 10 statements where consensus had been achieved in Round 2: participants were asked to rank these statements in terms of their general importance to the field.
(2) Survivors' rankings of the 10 statements from Round 2, with the opportunity to reflect on the difference between the two sets of rankings.
(3) Fifteen revised or new questions in the Likert scale and ranking format, which explored thematic areas identified in our analysis of open-text responses from Round 2.

Participants were also asked three open-answer questions.

Analysis

To finalize the ranked order of statements from Round 2, we used a weighted ranking procedure to generate a clear ranking order (Chebotarev and Shamis, 1998). Consensus for all new questions was determined using the same methods as described in Round 2, but consensus was defined at >70% ranking a statement as '4' or '5' on the Likert scale in line with other studies. Our decision here was linked to our smaller sample size for the final round (Diamond *et al.*, 2014; Vogel *et al.*, 2019).

Findings

Round 1

Thematic analysis of the transcripts from the focus group identified a list of 10 gaps in the current field with respect to the mental health consequences of CM. These were used as the initial areas to organize the second-round questionnaire and are summarized in an infographic (see Figure 2).

Round 2

Out of the 30 respondents, 19 had worked in more than one field. In total, 40% had worked on CM and early and forced marriages, and 30% had worked in the field of mental health. Others worked in similar fields such as gender equality (27%), NGOs (23%) and medical professions (13%). The majority was academic researchers (57%); however, advocates, healthcare professionals and programme designers were among the experts. Of respondents, 63% had worked in their field for >10 years. In total, 60% had worked in sub-Saharan Africa, and 33% had worked in South Asia, which are areas with the highest prevalence of CM rates globally. No respondents worked in North America.

The scores for all statements in the questionnaire from Round 2 are highlighted in Table 1. All statements that reached consensus are highlighted in bold. All five statements in the category 'perspectives on early marriage, CM and forced marriage and its relationship to mental health' reached consensus. Two statements in the category 'perspectives on policy approaches in the field' reached consensus. None of the questions that were approached using a ranking reached consensus. However, we have included the items that were ranked the highest by participants, so there is some understanding of the perspectives of the group.

Open-text responses

Data from the open-text responses highlighted four areas realted to the mental health and CM relationship, which moved beyond topics presented in the survey: (1) the neglect of mental health after marriage, (2) contemporary social dynamics that impact on the practice and mental health, (3) research and policy tensions and (4) barriers to and, types of interventions. Specific speakers are not identified, as data were pooled from the questionnaires and, in doing so, delinked from participants.

Participants felt that the initial questionnaire missed out on discussing the importance of addressing the mental health of young women who have been within CMs for some time. As noted by one expert:

> *Women who we have worked with have expressed feeling abandoned by their own families that forced them into these CMs, dealing with hopelessness, due to lack of means to change their lives, not having people to confide in or ask for help during tough times….*

Table 1. Summary of scores for statements ranked by experts using a Likert scale or ranking order in Round 2

	Likert-scale questions				
		Number of scored responses	Mean score	Number > 4	More than four out of the total responses (%)
Perspectives on early marriage, CM and forced marriage and its relationship to mental health					
1	**It is important to understand the mental health impacts of CM.**	**30**	**4.77**	**29**	**97**
2	**Changing social norms is a mandatory part of reducing mental distress caused by the practice of CM.**	**30**	**4.60**	**27**	**90**
3	**An individual's location within society has a direct impact on the relationship between mental health and CM (e.g. caste, ethnicity, race, sexuality, class and gender).**	**30**	**4.43**	**25**	**83**
4	**IPV poses significant risks to the mental health of those married young.**	**30**	**5**	**30**	**100**
5	**It is important to understand the intergenerational dynamics (i.e. in families or communities across generations) of CM.**	**30**	**4.83**	**29**	**97**
Perspectives on policy approaches in the field					
6	Future policy (and research) in this area should be driven by those who have survived CM.	30	4.03	23	77
7	An under-appreciation of mental health among donors and policymakers has contributed to the gaps in this area.	30	4.33	23	77
8	**Engagement with policy leaders in CM needs new forms of advocacy to highlight mental health as important.**	**30**	**4.47**	**27**	**90**
9	**Future policy (and research) must reflect the full range of communities where CM is practiced (e.g. Jewish Hasidic communities, Pentecostal/Mormon communities, Irish/Roma travellers and Muslim communities).**	**30**	**4.7**	**29**	**97**

	Ranking-scale questions			
		Number of scored responses	Number of experts who scored it as the top priority	Experts who scored it as the top priority (%)
Early marriage, CM and forced marriage and its relationship to mental health				
1	Gaps in understanding the impact of CM on different populations:			
	Girls and women	30	17	57
2	Social factors in order of their importance in promoting the mental health of those married early:			
	Laws and policies related to CM	30	4	13
3	Different stages of the life course, which stage is most important to form the focus of future research:			
	Early adolescence	30	16	53
Potential mental health interventions				
4	Importance of types of mental health promotion interventions:			
	Changing social norms	30	12	40
5	Which treatment approaches are most important in addressing the mental health consequences of CM:			
	Community-based programmes	30	10	33

Notes. Consensus statements are indicated in bold font (scored as '4' or '5' by >80%).The '4' and '5' scores are codes for 'slightly agree' and 'strongly agree'/'very important' and 'extremely important' on the Likert scale.
The 'number of scores for the highest ranking' shows the number of participants who chose the same option as ranking in the first place.

Other experts highlighted that an individual's social position within society creates an increased impact on the relationship between mental health and CM:

> *Gender and class are key factors linked to CM and this is likely to also be linked to poor mental health, reinforced by lack of access to services.*

Additionally, participants described the importance of nuance in understanding social dynamics related to CM and how they affect mental health. For example, the overemphasis on the role of poverty limits our understanding of how the process can work within more affluent settings:

> *On the other hand, forced marriage often occurs in families with a good deal of resources—it is not just poor immigrant families. It is families from a wide range of economic backgrounds.*

The result was that participants noted the importance of treatment that could deal with this complexity, calling for complex interventions:

> *Psychosocial support programmes should be conducted in order to address the mental health consequences of CMs, highlighting both the social and psychological factors.*

Research and policy tensions were highlighted, pointing to gaps in research, ethical limitations of current responses and tensions over who should shape policy, with one expert stating:

> *While laws and policies can be important in preventing CM, the existence of laws and policies does not always translate to better situation on the ground for those married as children. There is some evidence that laws and policies make these marriages and girls less visible*[pushing them underground] *and more at risk.*

Open-text responses also allowed us to better understand the contexts and reasons behind items, which failed to reach consensus during Round 2. For example, the statement 'Future policy (and research) in this area should be driven by those who have survived CM' did not reach consensus. When asked to explain their perspective on the statement, practitioners were split on the issue. The following statements reflect the diverging views. One of the experts stated:

> *They [survivors] are rights holders with direct experiences, and some can also be professionals in different fields. However, this should be combined with independent voices and expertise in order to reduce bias.*

While another noted that:

> *It is important that the people who directly experienced the problem be at the forefront in influencing policies.*

These insights allowed us to rephrase the statement as follows: 'Future policy (and research) should be driven by professionals, taking into account the lived experiences of CM survivors' and presented it in Round 4. All new statements in Round 4 were generated this way, by either adjusting the statement as demonstrated in the aforementioned example or creating a new statement from this thematic analysis, such as the statement 'How important is it to understand the mental health impact of CM on the children of those married before 18 years?'.

Round 3

As mentioned, the full analysis of survivor perspectives will be published in full elsewhere. However, women's perspectives relevant to the questionnaire and consensus statements are shared below.

The importance of economic stability to the mental health CM relationship was highlighted by survivors—but did not feature as a priority for experts. Women across all groups felt this was extremely important to consider when tackling the mental health consequences of CM. One participant from FGD 1 noted how one family agreed to CM because '*[the husband] would also help to take care of them*'. Another highlighted how the lack of economic stability leads to stress, '*the stress and the arguments come because as a young woman you have nothing of your own*'. Although economic independence seems more important than economic stability, one respondent from FGD 3 shared '*you can be married into a family with money and still there is not much happiness in that home*'.

Another theme was the emotional struggles that occur after CM, which aligned with a new theme identified by experts in their open-text responses. As noted by one participant in FGD 3, '*the challenge is you see, you are no longer a child, you have a child of your own, you want to play but you can see you are still no longer a child*'. This was similar to how another respondent felt, '*… sometimes you think back, maybe I should go back to my family. Once you see what is there, you wish to go back.*'

Women agreed with experts in the survey, questioning laws that are supportive of survivors' needs, and that these do not always help. One participant in FGD 1 expressed: '*I am not sure how the law would be able to help with my mental health, if they can barely ensure that even at the clinic they treat us nicely even though there is a law, then I don't see how it would work.*' This was supported further by a respondent in FGD 2 who explained: '*The laws really need to get to the people. Right now even if you go to some people in these villages and explain that there is this law in regards to what is troubling you, somehow they will not understand or know how to use the law which is supposed to stand up for them.*'

Finally, survivors were asked to rank the statements which reached consensus in Round 2. The order of the rankings was generated by mapping the rankings of the three different focus groups together to achieve a final ranking from 1 to 10 (Table 2).

Round 4

Ranked statements

Table 2 shows the final consensus statements from Round 2, which were ranked in order of importance by participants in Round 4. Weighted ranking of the participants' ranking scores was used to create a final ranking from 1 to 10.

The scores for all new statements in the questionnaire from Round 4 are highlighted in Table 3. All statements that reached consensus are highlighted in bold. All four statements in the category 'specific CM consequences on mental health' reached consensus. Five statements in the category 'Potential forms of mental health treatment and support' reached consensus. Questions that were explored using a ranking scale did not reach consensus; however, there is some value in understanding their distribution.

In terms of our questions to explore treatment and support options, promoting good mental health by shifting social norms, participants were presented with five different options. Four of these were ranked most important by four participants. This created a tie, with no opportunity to establish consensus given our small sample size (see Figure 3).

Open-text responses

The open-text responses in this round were focused on providing context and nuance to the final rankings and gaining perspectives on the difference in ranking between survivors and other experts. Out of 18 respondents, 17 answered at least one of the open-answer questions. The first question was answered by 17 participants and asked participants to reflect on any differences between their ranking and survivor rankings. While some participants stated that laws and policies should be placed higher, six respondents asserted that their rankings remained similar in a broad sense to survivors. As noted by one participant:

> [We're] *Similar in many ways—with social/economic issues in general still ranked higher than policy given what factors can have a more immediate and direct impact on girls and women.*

Table 2. Comparison of survivor rankings and expert rankings of general statements on the mental health and CM relationship in Rounds 3 and 4

Statements ranked in order of importance by survivors in Round 3	Statements ranked in order of importance by experts in Round 4
1. [tied first place] Addressing economic instability is the most important way to promote the mental health of those married early.	1. It is important to understand the mental health impacts of CM.
1. [tied first place] It is important to understand the mental health impacts of CM.	2. Addressing economic instability is the most important way to promote the mental health of those married early.
3. It is important to understand the impact of CM on girls and women.	3. Laws and policies related to CM are the most important way to promote the mental health of those married early.
4. A person's situation within society (e.g. caste, ethnicity, race, sexuality, class or gender) has a direct impact on their relationship between mental health and CM.	4. Changing social norms is a necessary part of reducing the mental distress caused by CM.
5. 5. Laws and policies related to CM are the most important way to promote the mental health of those married early.	5. It is important to engage with policymakers (e.g. politicians in local or national government) to highlight mental health as important in the matter of CM.
6. IPV poses significant risks to the mental health of those married as children.	6. It is important for us to understand the intergenerational dynamics (i.e. in families or communities across different generations) of CM.
7. Changing social norms is a necessary part of reducing the mental distress caused by CM.	7. IPV poses significant risks to the mental health of those married as children.
8. It is important for us to understand the intergenerational dynamics of the practice.	8. A person's situation within society (e.g. caste, ethnicity, race, sexuality, class or gender) has a direct impact on their relationship between mental health and CM.
9. It is important to engage with policymakers (e.g. politicians in local or national government) to highlight mental health as important in the matter of CM.	9. Policy and research must reflect the full range of different communities where CM is practiced (e.g. Jewish Hasidic communities, Pentecostal/Mormon communities, Irish/Roma travellers and Muslim communities).
10. Policy and research must reflect the full range of different communities where CM is practiced (e.g. Jewish Hasidic communities, Pentecostal/Mormon communities, Irish/Roma travellers and Muslim communities)	

Table 3. Summary of scores for statements ranked by experts in Round 4

	Likert-scale questions				
		Number of scored responses	Mean score	Number > 4	More than four out of the total responses (%)
Specific CM consequences on mental health					
1	**The impact of CM on mental health can include withdrawal, depression, anxiety, suicidal tendencies and a sense of abandonment.**	**18**	**4.94**	**18**	**100**
2	**The trauma experienced by people married young can impact their mental health.**	**18**	**5**	**18**	**100**
3	**To understand the mental health impacts of CM on the children of those married before 18 years.**	**18**	**4.67**	**18**	**100**
4	**To understand the mental health impact of people experiencing CM, who feel that their marriage is not living up to their expectations.**	**18**	**4.11**	**15**	**83**
Potential forms of mental health treatment and support					
5	Medication is not the most appropriate treatment for mental health issues caused by CM.	18	3.67	9	50
6	**Psychosocial treatments are beneficial for people married early to address the mental health consequences of CM.**	**18**	**4.44**	**16**	**89**
7	**Increasing the availability of general mental health support and services in rural or complex settings could benefit the mental well-being of individuals married early.**	**18**	**4.61**	**18**	**100**
8	**Working with older generations to influence social change (e.g. reducing stigma surrounding mental health) in order to prevent the mental distress caused by CM.**	**18**	**4.06**	**13**	**72**
9	**Social interventions to promote the mental health of people married early should be community-based and locally grounded for the biggest impact.**	**18**	**4.50**	**17**	**94**

(continued)

Table 3. (Continued)

	Likert-scale questions				
		Number of scored responses	Mean score	Number >4	More than four out of the total responses (%)
10	School-based mental health promotion interventions for those experiencing CM are unhelpful due to low school attendance in rural areas and the higher risk of mental stress of girls who are not in school.	18	3.11	7	39
11	**The social empowerment of women (e.g. through social-capital interventions) can help to increase autonomy and self-reliance, subsequently reducing CM and its impact on mental health.**	**18**	**4.22**	**17**	**94**
Future research					
12	Future policy (and research) should be driven by professionals, taking into account the lived experiences of CM survivors.	18	3.72	11	61

	Ranking-scale questions			
		Number of scored responses	Number of experts who scored it as the top priority	Experts who scored it as the top priority (%)
CM and its consequences on mental health				
1	Consider the following statements concerning CM and its consequences on mental health:			
	It is important to understand the mental health impacts of CM	18	10	56
2	Outcomes of abusive control within an early marriage relationship:			
	The impact on the mental health of the victim	18	12	67
3	Factors contributing to poor mental health among people married early:			
	Early pregnancy resulting in early parenthood	18	6	33
Potential forms of mental health treatment and support				
4	Proposed methods to shift social norms to promote the mental health of those experiencing CM:			
	Several	18	N/A	N/A
5	Different forms of social and economic empowerment, which could benefit the mental health of CM victims:			
	Influence social norms	18	6	33
Future research				
6	Possible areas of focus for future research in relation to mental health and CM:			
	Focus on the mental health issues of late adolescents married early	18	9	50
7	Social barriers that could be effective when addressing the mental health consequences of CM:			
	Isolation of people married early	18	7	39

Notes. Consensus statements are indicated in bold font (scored as '4' or '5' by >70%). The '4' and '5' scores are codes for 'slightly agree' and 'strongly agree'/'very important' and 'extremely important' on the Likert scale.

Others agreed with survivors on the complexities around law-based interventions:

> *The main difference is that they put laws at Position 4 where I ranked it much lower. In my experience, we have not seen minimum age at marriage laws translate into improved* CM *…. while laws can help to change norms, they are not in my opinion among the most important interventions for addressing mental health.*

Many experts expressed that they would not rank economic instability as highly as the women in Round 3 did: 'I placed economic stability lower down feeling that for this to improve policymakers need to understand the issues faced by people who are married as children first. From the women's level of importance, this appears to be key in driving CM.'

Another highlighted: 'For many girls, mental health problems will begin prior to marriage and so understanding the changes that take place after marriage is important. My hunch is that it is the relational dimension rather than the economic dimension which is going to be the most important determinant of change in mental health with marriage.'

Several experts also stated that they placed social norms higher: 'The difference is that I have placed social norms much higher up because it socializes the thinking and reinforces stereotyping values or norms that can perpetuate violence or limit a person from seeking solutions.'

The final open-text option asked respondents to highlight any additional factors that should be a priority when it comes to CM and mental health not already highlighted. Seven respondents answered this question making the following suggestions: (1) the possibility that girls with pre-existing mental health problems are more likely to enter a marriage, (2) the need for future longitudinal studies, (3) investigating the relationship between CM and mental health across countries, (4) exploring what girls and boys within a marriage can do to support each other and finally (5) the importance of referral pathways for mental health in communities. Figure 4 compiles all statements that reached consensus, which could be used to guide future research and programmatic work in the field of CM when addressing the mental health consequences of the practice.

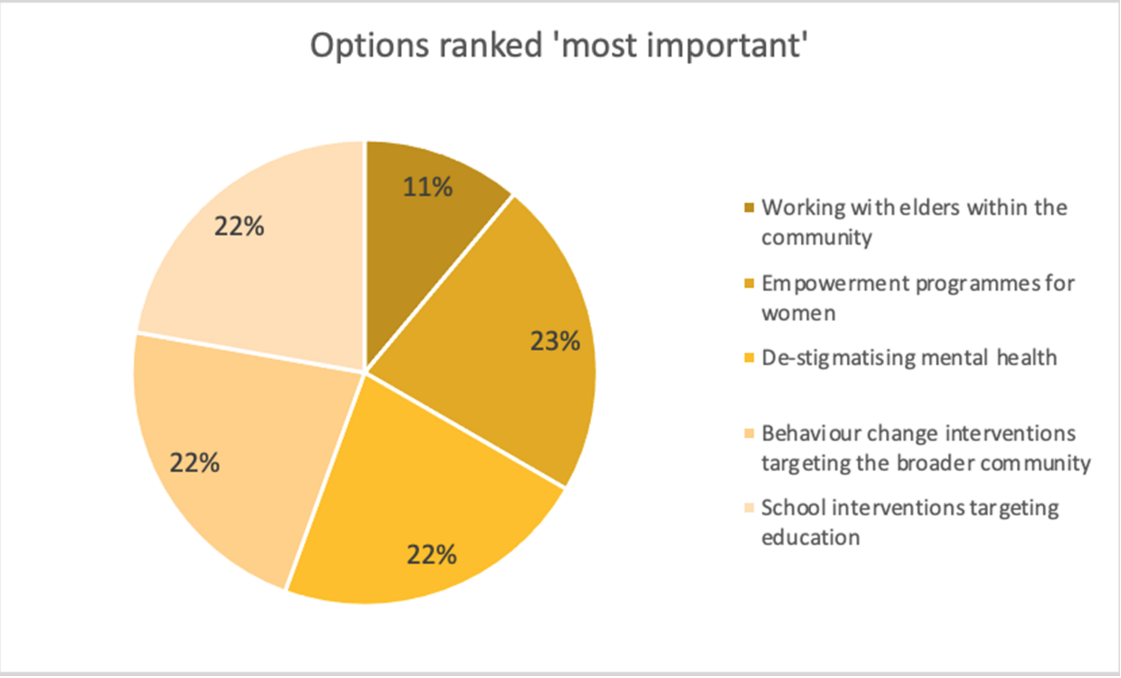

Figure 3. Options ranked by participants in Round 4 as most important for promoting good mental health by shifting social norms

Discussion

While much attention has focused on the elimination of CM, progress towards this goal ebbs and flows with changing political and economic landscapes. For example, programmatic cuts linked to the coronavirus disease 2019 pandemic led to 7–10-million excess early marriages (Yukich *et al.*, 2021). Given the likelihood that this practice will continue and many are already in marriages known to be harmful, advancing debates on and efforts to support the mental health of those affected by the practice is crucial. All experts, including those by experience, agreed on the need to support the mental health of those who are currently suffering within marriages, alongside work to end the practice—identifying priorities as well as suggested actions.

Our use of mixed-methods research enabled us to open participation to survivor perspectives, but barriers to their full inclusion remained. Tensions around how much of a role survivor perspective should play in the establishment of policy and planning emerged—with some professionals suggesting that survivors' positions could be biased (less objective), as they only knew their own positionalities and experiences, and calling for collaborative work between survivors and practitioners. The lack of consensus around this point, even following a reframing of the question following the analysis of open-text responses, supports wider claims in global health about barriers health professionals face when attempting to acknowledge embodied and practical knowledge generated by everyday people (Potter, 2017; Abimbola, 2021).

We also noted that survivors and some experts diverged on the importance of structural issues such as poverty to the mental health and CM relationship and solving associated challenges. This tension reflects what others in global mental health have identified as a common tendency to underappreciate the wider structural determinants of poor mental health (Pathare *et al.*, 2021). While not a specific recommendation from the Delphi panel, our work also suggests the importance of opportunities for researchers to have deeper engagements with survivor perspectives. One route to this would be for future research in this area to be co-produced, as these approaches centre knowledge by experience within intervention development (Burgess and Choudary, 2021).

The five items linked to treatment and support, which achieved consensus, highlight the importance of socio-cultural and psychological supports. The role of medication in these contexts did not reach consensus, but this may be understandable in the contexts where CM is high. As noted by some experts in our study, before the role of treatment can be discussed, knowledge and acceptability and functioning systems must be prioritized. Given that mental health systems are under-resourced in many contexts where CM prevalence is high (Patel *et al.*, 2018), it follows that advocating for improved mental health supports for CM also demands advocating for mental health system strengthening. Given resource constraints, the embedding of mental health into existing interventions for CM and wider care systems remains a priority exercise.

Furthermore, some evidence suggests that medication on its own can provide mixed outcomes in contexts of disadvantage. A recent systematic review exploring the impact of socio-economic status (SES) on anti-depressant treatment outcomes highlighted that lower SES could lead to differential outcomes, even in the context of clinical trials when access to medication is guaranteed (Elwadhi and Cohen, 2020). From the patient perspective, evidence from high-income settings suggests that many prefer psychological treatments over medications (Dorow *et al.*, 2018), and recent arguments about the nature of the treatment gap suggest that social interventions may be more in line with the voiced needs of many marginalized groups, alongside, or instead of, medicalized supports (Roberts *et al.*, 2022). Future studies should

Future priorities for the mental health and child marriage field: final consensus statements

Perspectives on early, child and forced marriage and its relationship to mental health

1. It is important to understand the mental health impacts of child marriage
2. Changing social norms is a mandatory part of reducing mental distress caused by the practice of child marriage
3. An individual's location within society has a direct impact on the relationship between mental health and child marriage (e.g. caste, ethnicity, race, sexuality, class, gender)
4. Intimate Partner Violence poses significant risks to the mental health of those married young
5. It is important to understand the intergenerational dynamics (i.e. in families or communities across generations) of child marriage

Perspectives on policy approaches in the field

6. Engagement with policy leaders in child marriage needs new forms of advocacy to highlight mental health as important
7. Future policy (and research) must reflect the full range of communities where child marriage is practiced (e.g., Jewish Hasidic communities, Pentecostal/Mormon communities, Irish/Roma travellers, Muslim communities)

Specific priority areas for understanding mental consequences of child marriage on mental health

8. The impact of child marriage on mental health can include withdrawal, depression, anxiety, suicidal tendencies and a sense of abandonment
9. The trauma experienced by people married young and impacts on their mental health
10. Understanding the mental health impacts of child marriage on the children of those married before 18 is important
11. Understanding the mental health impact among people experiencing child marriage, who feel that their marriage is not living up to their expectation is important

Potential forms of mental health and psychosocial support

12. Psychosocial treatments are beneficial for people married early, to address the mental health consequences of child marriage
13. Increasing the availability of general mental health support and services in rural or complex settings could benefit the mental wellbeing of individuals married early
14. Working with older generations to influence social change (e.g. reducing stigma surrounding mental health), in order to prevent the mental distress caused by child marriage
15. Social interventions to promote the mental health of people married early should be community-based and locally grounded for the biggest impact
16. The social empowerment of women (e.g. through social-capital interventions) can help to increase autonomy and self-reliance, subsequently reducing child marriage and its impact on mental health

Figure 4. All statements that reached consensus by respondents

explore with communities where CM is practiced, what forms of intervention are best suited to their local contexts and communities.

Despite Round 1 panellists and a recent systematic literature review (Burgess *et al.*, 2022) highlighting limited understandings around excluded groups such as boys, people from sexually minoritised groups and people living with disabilities, they still were not identified as priority groups in the first round, and dropped from subsequent rounds. We maintain that future studies should explore these gaps, with other Delphi studies focusing specifically on excluded groups in the child and forced marriage field.

Our findings highlight that change-oriented Delphi approaches can still struggle to embrace complexity. Despite the use of qualitative methods, the diversity of our participants' disciplinary backgrounds likely contributed to difficulties in achieving statistical significance, as different fields would have differing views on the importance of certain population groups. It suggests that change-oriented Delphi studies may benefit from higher sample sizes when trying to work through more complex areas of importance to a field.

The above challenge highlights a limitation beyond what has been articulated elsewhere, such as threats to validity caused by social desirability bias within face-to-face methods (Kezar and Maxey, 2016). At times, it felt as although the method struggled to hold the tension between the expansion created by qualitative methods and informed consensus that relies on reductionist quantitative approaches which exclude these marginal items that fail to reach consensus. Notwithstanding, the approach still provides researchers with the opportunity to ensure a wider inclusion of voices in the policy and practice making space.

There are other limitations facing this work. Our sampling strategy meant that we partially reified the limitations within currently published work on CM, leading to limited voices from certain regions (such as North America, Latin America and the Caribbean), and higher representation from others (African and Asian regions). Although we introduced snowballing to expand our initial strategy, this did not result in as much geographical diversity as hoped. Future studies should attempt to unpack the continued silences that remain in the field, exploring the applicability of our suggested priorities in relation to CM linked to gender identity, disability and other geographical regions, including high-income countries.

Notwithstanding, our study identified a set of priorities that suggest the importance of numerous social factors in mediating the relationship between CM and mental health. Women currently in marriages, and their children, were identified as priority groups for developing interventions, particularly to address common mental disorders and trauma. Psychological and social development as treatment interventions were presented as critical, agreed by survivors and practitioners. The importance of advocacy about this relationship was a priority, which is not surprising given both issues face interlocking stigma in policy and wider social circles. Ultimately, to truly address the mental health challenges linked to CM, this will require that mental health is made a central focus for many working to achieve justice for women and girls—ending silences around both issues to allow us to achieve mental health for those who face multiple forms of disadvantage at the hands of this practice.

Supplementary data

Supplementary data are available at *Health Policy and Planning* online.

Data availability

All data linked to this article are available by request or are available within this article and its online supplementary material.

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Author contributions

R.A.B. conceived of this study. R.A.B. and G.L. secured the funding. R.A.B., A.A., G.L., C.C. and M.J. designed the Delphi. M.J., N.G., F.G., S.M. and F.S. coordinated various Delphi rounds, under supervision of R.A.B., N.G. and S.M. M.J., F.G., I.K. and F.S. analysed data under supervision of R.A.B. and G.L. R.A.B. and F.S. drafted the manuscript. All authors reviewed drafts and approved the final manuscript.

Reflexivity statement

The authors of this paper have expertise in several areas, including mental health, CM and adolescent health. We are informed by feminist scholarship and perspectives that centre survivor/experience-led knowledge. Most of our authors are members of minoritized backgrounds. Our senior author is an African activist and specialist working in the field of CM. Our authorship team also reflects actors from a range of career stages, and all junior scholars who contributed to the analysis also contributed to the finalization of the manuscript.

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References

Abimbola S. 2021. The uses of knowledge in global health. *BMJ Global Health* **6**: e005802.

Attride-Stirling J. 2001. Thematic networks: an analytic tool for qualitative research Qualitative Research **1**: 385–405.
Berk L, Jorm A, Kelly C. 2011. Development of guidelines for caregivers of people with bipolar disorder: a Delphi expert consensus study. *Bipolar Disorders* **13**: 556–70.
Bond KS, Cottrill FA, Blee FL *et al.* 2019. Offering mental health first aid to a person with depression: a Delphi study to re-develop the guidelines published in 2008. *BMC Psychology* **37**.
Burgess RA, Choudary N. 2021. Time is on our side: operationalising "phase zero" in coproduction of mental health services for marginalised and underserved populations in London. *International Journal of Public Administration* **44**: 753–66.
Burgess RA, Jeffery M, Odero SA, Rose-Clarke K, Devakumar D. 2022. Overlooked and unaddressed: a narrative review of mental health consequences of child marriages. *PLOS Global Public Health* **2**: e0000131.
Cammarota J, Romero A. 2011. Participatory action research for high school students: transforming policy, practice, and the personal with social justice education. *Educational Policy* **25**: 488–506.
Chebotarev PY, Shamis E. 1998. Characterizations of scoring methods for preference aggregation. *Annals of Operations Research* **80**: 299–332.
Dalkey N, Helmer O. 1963. An experimental application of the Delphi method to the use of experts. *Management Science* **9**: 458–67.
Davis J, Garb Y. 2018. Participatory shaping of community futures in e-waste processing hubs: complexity, conflict and stewarded convergence in a Palestinian context. *Development Policy Review* **37**: 67–89.
Diamond IR, Grant RC, Feldman BM *et al.* 2014. Defining consensus: a systematic review recommends methodologic criteria for reporting of Delphi studies. *Journal of Clinical Epidemiology* **67**: 401–9.
Dorow M, Löbner M, Pabst A, Stein J, Riedel-Heller SG. 2018. Preferences for Depression Treatment Including Internet-Based Interventions: Results From a Large Sample of Primary Care Patients-Data_Sheet_1.docx *Front. Psychiatry* **9**.
Elwadhi D, Cohen A. 2020. Social inequalities in antidepressant treatment outcomes: a systematic review. *Social Psychiatry and Psychiatric Epidemiology* **55**: 1241–59.
Filia K, Jackson H, Cotton S, Killackey E. 2019. Understanding what it means to be socially included for people with a lived experience of mental illness. *International Journal of Social Psychiatry* **65**: 413–24.
Filler T, Foster AM, Grace SL *et al.* 2020. Patient-centered care for women: Delphi consensus on evidence-derived recommendations. *Value in Health* **23**: 1012–9.
Gage AJ 2013. Association of child marriage with suicidal thoughts and attempts among adolescent girls in Ethiopia. *Journal of Adolescent Health* **52**: 654–6.
Gastón CM, Misunas C, Cappa C. 2019. Child marriage among boys: a global overview of available data. *Vulnerable Children and Youth Studies* **14**: 219–28.
Girls Not Brides. 2017. *Child Marriage Around the World: Where does it happen?* https://www.girlsnotbrides.org/where-does-it-happen/, accessed 12 October 2022.
Hong Le MT, Tran TD, Nguyen HT, Fisher J. 2014. Early marriage and intimate partner violence among adolescents and young adults in Viet Nam. *Journal of Interpersonal Violence* **29**: 889–910.
Housseine N, Punt MC, Browne JL *et al.* 2019. Delphi consensus statement on intrapartum fetal monitoring in low-resource settings. *International Journal of Gynecology and Obstetrics* **146**: 8–16.
Jordans M, Chisholm D, Semrau M *et al.* 2016. Indicators for routine monitoring of effective mental healthcare coverage in low- and middle-income settings: a Delphi study. *Health Policy and Planning* **31**: 1100–6.
Jorm A. 2015. Using the Delphi expert consensus method in mental health research. *Australian & New Zealand Journal of Psychiatry* **49**: 887–97.
Kapiriri L. 2018. Stakeholder involvement in health research priority setting in low income countries: the case of Zambia. *Research Involvement and Engagement* **4**: 19.
Keeney S, Hasson F, and McKenna H. 2006. Consulting the oracle: ten lessons from using the Delphi technique in nursing research *J Adv Nurs* **53**: 205–12.
Kezar A, Maxey D. 2016. The Delphi technique: an untapped approach of participatory research. *International Journal of Social Research Methodology* **19**: 143–60.
Kidman R. 2017. Child marriage and intimate partner violence: a comparative study of 34 countries. *International Journal of Epidemiology* **46**: 662–75.
Msibi P, Mogale R, De Waal M, Ngcobo N. 2018. Using e-Delphi to formulate and appraise the guidelines for women's health concerns at a coal mine : a case study. *Curationis (Pretoria)* **41**: 1–6.
Nasrullah M, Zakar R, Zakar MZ. 2014. Child marriage and its associations with controlling behaviors and spousal violence against adolescent and young women in Pakistan. *Journal of Adolescent Health* **55**: 804–9.
Okoli C, Pawlowski S 2004. The Delphi method as a research tool: an example, design considerations and applications. *Information & Management* **42**: 15–29.
Patel V, Saxena S, Lund C. *et al*. 2018. The Lancet Commission on global mental health and sustainable development. *The Lancet* **392**: 1553–98.
Pathare S, Burgess RA, Collins PY. 2021. World mental health day: prioritise social justice, not only access to care. *The Lancet* **398**: 1859–60.
Petroni S, Steinhaus M, Fenn NS, Stoebenau K, Gregowski A. 2017. New findings on child marriage in sub-Saharan Africa. *Annals of Global Health* **83**: 781–90.
Potter NN. 2017. Epistemic friction, affect and learning to know patients well: setting new norms for medical education. *European Journal for Person Centered Healthcare* **5**: 53.
Prosek EA, Gibson DM. 2021. Promoting rigorous research by examining lived experiences: a review of four qualitative traditions. *Journal of Counseling & Development* **99**: 167–77.
Psaki SR, Melnikas AJ, Haque E, Saul G. *et al.* 2021. What are the drivers of child marriage? A conceptual framework to guide policies and programs. *Journal of Adolescent Health* **69**: S13–22.
Roberts T, Miguel Esponda G, Torre C. *et al*. 2022. Reconceptualising the treatment gap for common mental disorders: a fork in the road for global mental health? *Br J Psychiatry* **221**: 553–7.
Rudan I, Gibson JL, Ameratunga S, El Arifeen S *et al* 2008. Setting priorities in global child health research investments: universal challenges and conceptual framework. *Croatian Medical Journal* **49**: 307–17.
Sezgin AU, Punamäki RL. 2020. Impacts of early marriage and adolescent pregnancy on mental and somatic health: the role of partner violence. *Archives of Women's Mental Health* **23**: 155–66.
Tenkorang EY. 2019. Explaining the links between child marriage and intimate partner violence: evidence from Ghana. *Child Abuse & Neglect* **89**: 48–57.
Trevillion K, Oram S, Feder G, Howard L. 2012. Experiences of domestic violence and mental disorders: a systematic review and meta-analysis. *PLoS One* **7**: 12.
UNICEF. 2022. *Child Marriage Is a Violation of Human Rights, But Is All too Common*. https://data.unicef.org/topic/child-protection/child-marriage/, accessed 12 October 2022.
Vogel C, Zwolinsky S, Griffiths C. 2019. A Delphi study to build consensus on the definition and use of big data in obesity research. *International Journal of Obesity* **43**: 2573–86.
Wahi A, Zaleski KL, Lampe J, Bevan P, Koski A. 2019. The lived experience of child marriage in the United States. *Social Work in Public Health* **34**: 201–13.
WHO. 2004. *Promoting Mental Health: Concepts, Emerging Evidence, Practice: Summary Report*. Geneva.

Worth A, Nurmatov U, Sheikh A. 2010. Key components of anaphylaxis management plans: consensus findings from a national electronic Delphi study. *JRSM Short Reports* **1**: 1–9.

Wusu O. 2014. Predictors and implications of intimate partner violence against married female youths in Nigeria. *Journal of Family Violence* **30**: 63–74.

Yount KM, Crandall A, Cheong YF *et al.* 2016. Child marriage and intimate partner violence in Rural Bangladesh: a longitudinal multilevel analysis. *Demography* **53**: 1821–52.

Yukich J, Worges M, Gage AJ *et al.* 2021. Projecting the impact of the COVID-19 pandemic on child marriage. *Journal of Adolescent Health* **69**: S23–30.

Zahra F, Austrian K, Gundi M, Psaki S, Ngo T. 2021. Drivers of marriage and health outcomes among adolescent girls and young women: evidence from sub-Saharan Africa and South Asia. *Journal of Adolescent Health* **69**: S31–8.

Zaman M, Koski A. 2020. Child marriage in Canada: a systematic review. *PLoS One* **15**: 3.