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Psychosocial stressors and coping strategies among fathers of young children: a qualitative study in Mwanza, Tanzania

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ABSTRACT

Objectives: To investigate the nature of paternal mental health problems, their causes, and coping strategies in fathers of young children under aged 2 years.

Design and setting: Using a qualitative phenomenological study design, we conducted in-depth interviews with fathers, mothers, and community stakeholders (i.e., community leaders and health workers) as well as focus group discussions with fathers-only, mothers-only, and mixed group of fathers and mothers. Data were analyzed using thematic content analysis.

Setting: The study was conducted in four communities in Mwanza, Tanzania.

Participants: Our total sample included 56 fathers, 56 mothers, and 8 community stakeholders stratified by community.

Results: Fathers endorsed a spectrum of mental health concerns including parenting stress, depressive symptoms, and anxiety. Parenting-related stress was the most reported mental health concern among fathers. Identified causes of mental health problems were poverty, child-related concerns, marital problems, and illness in the family. When asked about coping strategies, both fathers and mothers shared that many fathers engaged in negative coping strategies, such as paternal alcohol use and increased conflict with their partners, as a common means of dealing with their distress. However, positive coping strategies were also discussed regarding other fathers, which included seeking social support from their family and friends, engaging in physical and leisure activities, and relying on their faith.

Conclusions: Overall, this study highlights the importance of supporting paternal mental health as part of parenting and early childhood interventions. These findings can help inform the development of interventions to promote the well-being of parents and families of young children.

Keywords: mental health, qualitative research, community child health

Strengths and limitations of this study

- We identified various mental health problems, the sources of these psychosocial challenges, and coping strategies used by fathers of young children in Tanzania.
- This is one of the first known study to explore the mental health experiences of fathers of young children in a sub-Saharan African context.
- Our sample focused on fathers who co-resided with their partners and children, and therefore results may not be generalizable to male caregivers in other family structures.

INTRODUCTION

Poor mental health – broadly encompassing various symptoms such as psychological distress, depression, and anxiety – is a pervasive issue affecting parents globally [1]. It is estimated that the global prevalence of maternal perinatal depression ranges between 10-20%, with significantly higher rates in low- and middle-income countries (LMICs) (e.g., 25%) [2, 3]. While much of this evidence has focused on mothers for their roles as the primary caregiver of young children, studies are increasingly highlighting the significant burden of mental health problems in fathers.

Approximately 5-10% of new fathers experience perinatal depression [4, 5] and 5-15% for anxiety [6]. For some fathers, these mental health challenges can continue beyond the first postpartum year and persist across the early childhood period [7]. Various risk factors have been identified for fathers' mental health problems, including poverty, unemployment, having a depressed partner, poor marital relationships, and low social support [8, 9]. The consequences of fathers' poor mental health are also wide-ranging and can negatively impact not only men's health outcomes but also family caregiving relationships with their partners and children [10, 11]. For example, fathers who experience elevated stress and depression report poorer quality of co-parenting [12], greater marital conflict [13], and poorer parenting practices like increased spanking and fewer stimulation activities with their young children [14]. These constrained family relationship dynamics have been further shown to explain the negative direct effects between poor paternal mental health and early child behavior and development outcomes [15].

To date, most of this evidence on fathers' mental health has been examined in high-income countries primarily in North America, Europe, and Australia [9, 10, 16]. This has led to a major gap in our knowledge about the mental health experiences of fathers across cultures and contexts and particularly in LMICs, where over 90% of the population resides [17]. In LMICs, communities are more likely to face numerous risks that can jeopardize paternal mental health and well-being. Extreme poverty and its related challenges like lack of employment opportunities, low wages, and food insecurity are central and pervasive barriers to fatherhood and men's caregiving roles for children [18, 19]. Moreover, restrictive gender norms perpetuate divisions in maternal versus paternal caregiving roles within households especially in LMICs that in turn give rise to unique parental stressors for men versus women [20]. At the same time, social norms have been evolving in recent years with more fathers engaging in active childcare responsibilities and changing family expectations that increasingly value male partner support in multiple domains besides solely financial support [21, 22]. Thus, these evolving contemporary roles and contextual factors motivate the need to specifically investigate the mental health experiences of fathers in more contexts across LMICs.

Several notable prior studies have illuminated the mental health experiences of fathers in LMICs. For example, relatively small descriptive studies have documented rates of paternal depression at 24% in Pakistan [23] and 14% in Turkey [24]. Although only a handful of known qualitative studies have unpacked the mental health experiences of fathers in LMICs, prior research in Tanzania, Kenya, and South Africa have consistently highlighted the centrality of poverty, unemployment, and restrictive masculinities as major contributors to fathers' mental health problems [25-27]. Besides this emerging evidence on stressors, the contexts and approaches that men use when faced with elevated stress and other mental health challenges is even more scarce.

The objective of this present study was therefore to qualitatively investigate the nature of paternal mental health problems, their causes, and coping strategies used by fathers with children under aged 2 years in Mwanza, Tanzania. By focusing specifically on male caregivers who have been previously overlooked in the global mental health evidence base, we aim to shed light on the psychosocial challenges affecting men along with the extent to which male caregivers use positive coping strategies (e.g., seeking out social support) versus maladaptive coping strategies (e.g., substance use or avoidance). This research can better inform the design of psychosocial program components that could be integrated within fatherhood interventions to reduce the risk factors to paternal mental health and support fathers' positive coping strategies under such stressful circumstances and challenges in low-resource global settings.

METHODS

Study design

Data in this study were obtained from a broader phenomenological study that explored fathers' caregiving practices, couples' relationships, and caregiver mental health [21]. This larger study included in-depth interviews (IDIs) and focus group discussions (FGDs) with fathers and mothers and IDIs with community stakeholders to understand the barriers and facilitators to engaged fathering of young children under 2 years of age. See Jeong, McCann (21) for more details about the study design.

Study site and sampling

Data were collected from communities in Mwanza, Tanzania, which is a peri-urban setting on the shores of Lake Victoria in northwest Tanzania. Two coastal and two inland communities were selected via stratified sampling in collaboration with our study partner, Tanzania Home Economics Organization (TAHEA-Mwanza) and representatives from the local government. Caregivers were eligible for participation in this study based on the following criteria: biological parent (mother or father) who was aged 18-65 years; had child under two years of age; was in a relationship with the child's other biological parent; and resided in the same house as their partner and child at some point in the past month. In each of the four study communities, the community leader provided a list of all eligible caregivers from which participants were ultimately selected. In addition to caregivers, IDIs were conducted with the community leader and community health worker of each community.

Data collection

Topic guides were adapted for each of the unique stakeholder groups as well as for IDIs and FGDs and included semi-structured, open-ended questions that covered perceived causes of fathers' mental health problems as well as their coping strategies. For example, during IDIs fathers were asked questions such as "What causes you stress in your life?", "How, if at all does your child contribute to stress in your life?", and "When you are stressed because of your child what do you do to feel better?". During FGDs and community stakeholder IDIs, in addition to broadly asking about causes of fathers' stress, respondents were also specifically asked about positive and negative ways in which fathers in their community responded to stress (e.g., "What are negative ways that some fathers deal with stress?") and fathers' sources of social support (e.g., "Who do fathers turn to when they are feeling stressed?"). Beyond stress, fathers were

asked in the IDIs about other mental health problems and potential experiences with depression (e.g., sadness, anger for no specific reason, loneliness) and the sources of these feelings. Finally, during both the FGDs and IDIs respondents were asked about fathers' alcohol use, the context in which alcohol was used, and its impacts on fathers' relationships with their partner and young child.

Data collection was conducted over a three-week period in June 2022 by a team of five research assistants from TAHEA-Mwanza who were bilingual in Kiswahili and English, resided in Mwanza, and received a 7-day training. The research assistants all had bachelor's level education and prior qualitative research experience. None of the research assistants had prior knowledge of study participants. Both IDIs and FGDs were carried out in private, centrally located settings in the community such as early childcare centers or community leaders' offices. IDIs lasted approximately 60-90 minutes while FGDs were slightly longer at approximately 90 minutes. For IDIs, all caregivers were provided the option of being interviewed by either a male or female interviewer, although most indicated no preference. Once interviews and discussions were complete, an independent team of bilingual translators from Tanzania transcribed and translated the audio recordings into English for analysis. A subset of approximately 15% of transcripts were randomly selected to be reviewed for quality assurance. Additional details of data collection can be found elsewhere [21].

Data analysis

Data were analyzed using thematic content analysis to understand the sources of fathers' stress and other mental health problems as well as the coping strategies fathers employed in response to these issues. Three researchers independently coded the English transcripts using Atlas.ti 22 with approximately 30% of these transcripts randomly selected to be independently coded by a second analyst. During weekly meetings, research analysts reviewed findings and emerging themes and resolved any coding discrepancies, if applicable. Two researchers independently reviewed the codes to conduct a narrative synthesis of results, which were further reviewed and validated by a third researcher.

Ethics approvals

The protocol for this study was approved by the Institutional Review Board of Harvard T.H. Chan School of Public Health (IRB22-0235) and the National Institute for Medical Research in Tanzania (NIMR/HQ/R.8a/Vol.IX/4076). All participants included in this study provided their written informed consent. The consent forms were administered aloud in Kiswahili by the research assistants who were conducting the interviews, and all participants were provided with the opportunity to ask any clarifying questions.

Patient and Public Involvement

Patients or the public were not involved in the design and conduct of this research.

RESULTS

Across all stakeholder groups, we interviewed a total of 120 participants including 56 mothers, 56 fathers, 5 community leaders, and 3 community health workers. Among the sample of fathers, 29 participated in IDIs, 18 participated in fathers only FGDs (4 groups with 5 fathers

on average per group) and 9 participated in mixed fathers' and mothers' FGDs (4 groups with 3 fathers on average per mixed group). Among mothers, 23 participated in IDIs, 17 participated in mothers' only FGDs (2 groups with 8 mothers on average per group) and 16 participated in mixed mothers and fathers FGDs (4 groups with 4 mothers on average per mixed group). The mean age of fathers was 36.1 years (range 22-55 years), and the mean age of mother was 27.0 years (range: 18-49 years). For most fathers (88%) and mothers (84%), primary school was the highest level of education completed.

Symptoms

Fathers endorsed a spectrum of mental health concerns. With respect to parenting stress, fathers described it in terms of having serious *"problems"*, *"worries"*, or *"hardships"* and symptoms which included *"feeling down", "thinking too much", and "not having peace"*. In addition to parenting stress, roughly half of fathers reported experiencing more clinical symptoms of depression and/or anxiety, such as difficulty sleeping, a loss in appetite, lack of energy due to *"getting so much thoughts"*, feeling *"evil spirits",* extreme sadness or loneliness. For example, one father shared: *"I always think about not having money and life hardships. That makes me feel very bad. It is normal for me to have trouble sleeping." (Father IDI, #23)* Fathers who reported more elevated levels of parenting stress were more likely to also report feelings of anxiety and depression. A handful of fathers even highlighted personal experiences of suicidal ideation or talked about other men in the community facing these challenges. For example, in a focus group discussion, one father shared: "*Most men think about their families, children, school fees, food and other needs at home. Many of our wives do not work, they cannot support us. This makes other men commit suicide because they don't see a way out of this." (Mixed FGD, #5)* These mental health challenges were perceived as undermining men's physical health. "*A lot of men suffer from blood pressure problems because of stress. When we sleep, we keep thinking about what would get us through the next day. It is difficult to get opportunities to earn money. This is why most men are suffering from blood pressure problems." (Mixed FGD, #5)* Finally, a few respondents – including fathers, mothers, and community stakeholders – even highlighted how suicide or suicidal ideation affected fathers and especially those under significant stress and psychological problems.

Causes

Poverty. The primary source of mental health problems among fathers was poverty. Fathers frequently experienced stress over being financially insecure and not having the resources to provide basic needs for their child and family. Couched within restrictive gender norms and societal expectations of fathers as the main breadwinner of the family, many fathers felt pressure to be financially responsible for all family necessities. Failure to financially provide for the family caused stress for many fathers because they perceived this as not meeting up to their ideals of what it means to be a "good father". For example, one father said, *"When I fail to provide for my family, my family goes to bed hungry because I haven't earned… What makes me sad and stressed is when my family is not peaceful because as a father, I haven't provided for them." (Father IDI, #18)* Another father during an FGD echoed a similar point about the interconnections between men's failure to provide, feeling like they are disappointing others, and

increased stress: *"What brings stress is when you go to work, and you don't earn anything and come back home with nothing. You will not be okay. You will not have peace. You will be feeling down, and you will pass that to the family. The family expects that you will bring something, but when you come home with nothing, they will feel disappointed." (Fathers FGD, #3)* A few fathers specifically attributed financial instability as causing *"men to commit suicide because they don't see a way out of this [poverty]."*

Child-related concerns. In addition to poverty, fathers commonly noted specific aspects about parenting a young child as contributing to poor mental health. A prominent concern relating to fathers' financial-related stress was providing for child-related expenses specifically. For example, one father highlighted his concerns about not being able to provide food for his child: *"When you completely lack money… you lack sleep. You ask yourself, 'Will my children eat tomorrow?' And I start saying, 'Tomorrow go do this and this. I must get money"… And you go to get money for your children." (Father IDI, #29)* Financial stress in providing for young children was especially a concern when children became sick. One father contextualized this stress by highlighting the additional expenses when his child became sick, *"It gives me stress when he is sick and needs something like food or medicine and I don't have it because then I haven't given his right." (Father IDI, #17)* Fathers' stress about child illness was not only due to financial reasons, but also included other more general concerns such as the type of medical treatment they would seek for the child's illness. *"When a child is sick you will ask "how is the child doing?" and if she is not doing fine you will then start thinking. 'What should I do? Should I take her/him to the hospital, or I just leave her/him for today?'" (Father IDI, #19)*

Multiple fathers also suggested that child age impacted mental health. For example, building upon the previous point about children's illness being a source of stress, several fathers noted how children's illness more frequently occurred with infants and that it was particularly stressful with young children because they cannot yet explain how they are feeling. For example, one father shared, *"I worry a lot when he is sick. I think about a lot of things because he cannot express how he feels... I think of how I could help him get better." (Father IDI, #6)* Fathers discussed other stressors associated with caring for particularly young children, such as the infant not sleeping through the night or crying more incessantly and again with fathers worrying due to not understanding their child's needs. *"Children give us stress when they are young and cannot pronounce words. They cry all the time and cannot communicate what they need. That is the challenge in our lives." (Fathers FGD, #3)* Finally, a few fathers also noted how behavioral problems, such as children misbehaving, fighting with their sibling(s), being disrespectful to family members and neighbors, caused them stress. For example, one father in a FGD shared, *"Children can cause so much stress to their fathers. For example, I have a child who can be stubborn. Even when I talk to him, he doesn't listen. I realized that he was not disciplined. So, children can really stress their fathers." (Mixed FGD, #1)* One father worried that children's misbehaviors would have negative consequences on their behaviors in school and "future life".

Marital problems. Challenges in fathers' relationships with their partners and other family members was another cause of mental health problems that was commonly described by fathers. Some fathers described how arguments and conflicts within their spousal and family relationships lead to increased stress. For example, when asked about causes of stress one father said: "*When there is an argument in my family like with my wife, I get too much thoughts. I may not be able to pay attention when are talking with my friends." (Mixed FGD, #2)* Specifically

pertaining to their relationships with their partners, many fathers also described how disagreements and feeling disrespected by their wives contributed to stress and sadness. For example, a few fathers described how their wives making financial decisions without consulting them was a source of stress, *"What can contribute to our stress from our partners is when they don't obey us. Like we have planned what they should do when we are away, but you come back to see they haven't done anything as agreed. That gives us a hard time." (Fathers FGD, #3)* One father specifically mentioned women earning more income than men as a particular source of stress for fathers. *"When women's income increases, they tend to be less obedient to their husbands, they become arrogant and they don't treat their husbands as they used to because at this point you are belittled from her eyes. This stresses husbands." (Mixed FGD, #2)*

Marital separation and concerns about infidelity was another source of paternal stress that was described by fathers, mothers, and community leaders. For example, one father shared, *"When I am told that my wife is cheating, it makes me think too much. Even when I am at work I'll be thinking about things at my home." (Mixed FGD, #3)* Moreover, a few fathers worried that their inability to provide money and a good life for their family would lead their partner to leave them or be unfaithful. For example, one father explained:

> *"Financial difficulties is one of the reasons for mental health problems. When you don't have money, your wife can start to be unfaithful and engage with multiple men in order to ask money from them. When a woman asks you to give her money for braiding her hair but you don't have the financial capacity to do, this causes men to be stressed." (Mixed FGD, #6)*

Family illness. Finally, family illness and death were mentioned as additional sources of mental health problems for fathers. Fathers described how the loss of close loved ones, including parents and siblings, triggered sadness and stress even long after they passed. *"I feel sadness from losing my mother. It makes me feel bad whenever I remember my mother because I wish she could be there and see my family." (Father IDI, #12)* Many fathers were also deeply affected by illness in their families and partners, with multiple fathers reporting loss of sleep when their wives were sick: "*I also feel sad when my wife is sick, I think about what I could do to help her; this makes me lose my sleep." (Father IDI, #17) S*tress related to family illness was further exacerbated by financial challenges as fathers worried about not being able to provide money for treatment, as noted by the following father, *"I get too much thinking when someone at home gets sick but while I don't have money for the treatment. I start to think very much on what to do." (Father IDI, #22)*

Coping strategies

Fathers used a variety of strategies to cope with stress and other mental health problems. Heavy alcohol use was a common negative coping strategy that respondents described turning to in the face of stress. At the same time, many fathers also described positive strategies including seeking social support from family and friends, engaging in physical activity, and turning to religion.

Negative coping strategies

Alcohol use. Fathers, mothers, and community stakeholders all described heavy drinking as the most common coping mechanism fathers used when experiencing mental health problems. Many fathers turned to alcohol as a temporary escape from the negative emotions and psychosocial problems they faced in their everyday lives. For example, one father shared, *"[alcohol] helps because it removes you from the state you were and makes you in another state and starts to think different things for that time." (Fathers FGD, #1)* However, another father believed being drunk allowed some fathers to verbally express the problems they were facing to others: *"When they are drunk they are not sane so they can avoid thinking about their problems or when they are drunk they can express their grievances. He will say anything that he wants." (Fathers FGD, #3)* However, nearly all respondents acknowledged how the stress relief of alcohol was temporary and did not lead to any tangible resolutions. For example, when probed about the effects of alcohol on fathers' stress and other issues, a community leader shared, *"You don't solve anything, when you are sober your problems will still be there." (Community leader IDI, #2)*

Furthermore, fathers' coping through alcohol use further exacerbated other problems such as financial hardships and marital conflicts, both of which fathers commonly described as causes of stress in the first place. One father highlighted this cyclical nature of stress and alcohol use saying, *"[fathers] think that drinking alcohol will make them feel better and less stressed. In reality, they end up using money irresponsibly and increasing stress." (Mixed FGD, #1)* The financial implications of alcohol use additionally had negative downstream impacts on family and childcare. Specifically, many respondents described how fathers who drink frequently spent all the money they earned on alcohol instead of food and other necessities for their family and children, which negatively impacted their children and families. For instance, one community leader remarked, *"For the one drinking, he will say it helps. But it adds to the problems. If you had 10000 or 5000 shillings it will be gone, and in the morning the family will be needing to buy flour, but you have added to the problems." (Community leader IDI, #3)* Similarly, one mother recounted how father's alcohol use negatively impacted her and her child:

> *"The alcohol that he uses impacts the family, me, and the children. The money that he gets, let's say 50000 shillings goes to alcohol and he hasn't left any at home, children may have no food and ask you for food and at the same time their father comes home drunk. A child will be affected because a father doesn't provide while he has money. A child will have stress that is beyond his age. If he is in school, he will be thinking about the problems back home." (Mother IDI, #2)*

Family conflict including violence against women and children. Respondents also highlighted how fathers often became angrier, more argumentative, or even more withdrawn and detached from their families in times of stress, which often exacerbated their already strained relationships with their wives. *"When I am very stressed but my wife forces me to talk without valuing my stressed mood, then I become angry." (Father IDI, #12)* Moreover, several respondents noted how marital problems, mistrust between partners, and even men's perpetration of violence against their partner and children increased in times when fathers had mental health problems.

> *You know that the man is worried about low cash. But then you also become stressed thinking, "where did he go?" When he returns home there is a quarrel at home, without doing anything. He's hitting women or forcing them to have sex and doing things she is not ready for because he is affected psychologically, economically, and sexually. He*

thinks it is right because he is the father of the family, but then mother is affected. (Mother in Mixed FGD, #4)

These forms of aggression and family conflict were even more likely when fathers used alcohol. For example, one father shared in an FGD, *"[When he's stressed] he forgets about the family and just drinks alcohol. He will even take some money to outside woman. Hence this results in more conflicts in marriage." (Father FGD, #1)* Another father described how fathers' coping through alcohol perpetuated family violence, *"Alcohol is not good for the children. We have seen that when a father drinks to escape his problems he can beat children and their mother. Children will be told by their mother to stay quiet because your father has arrived and you will be beaten. And then they are beaten for real." (Father FGD, #2)*

Positive coping strategies

Although negative coping strategies were more frequently mentioned, many fathers also reported using healthy coping strategies. Most examples pertained to fathers seeking support from their social networks, but also included several reports of fathers engaging in stress-relieving activities such as sports, turning to their faith, or finding practical solutions to reduce stressors.

Partner support. The most frequently discussed form of positive coping by fathers was through seeking out support from their partners. For example, when describing improved ways that men should manage their stress, one father in a FGD noted, *"First you need to identify whatever problem that is causing you stress then you need to seek advice from your partner about that problem. If you do that, it is possible for you to solve that problem" (Mixed FGD, #2)* Fathers especially sought practical support from their partners when faced with child- or work-related stressors, such as child illness or financial challenges affecting their ability to support family needs. For example, one father shared how jointly discussing care seeking options with his partner helped to reduce paternal stress in times of child sickness, *"What I will do is sit with my wife and together we can know what to do if a child is sick. We will discuss what to do for our child to be better. Discussing will make me feel better." (Fathers FGD, #3)*

Peer support. Besides their partners, fathers also found solace in their friends, turning to them for practical, emotional, and even financial support. Fathers valued discussing their problems related to child illness and financial challenges with their friends. One father shared, *"I go to my friends. I tell them, "Friends, I have this and this". And they start advising you like, "Just relax…" and that makes me feel good because they have advised me." (Father IDI, #16)* Another father described how listening to his friends' problems helped to put his own challenges into perspective: *"When I am stressed, I usually go to my friends or neighbors to talk. After that my thoughts are reduced… we talk about different topics, sometimes I may listen to other people talking about more difficult encounters, it makes me feel that my problem is easier." (Father IDI, #5)* Many fathers also described receiving financial support from their friends including loans to help them with their business or money to purchase medicine, treatment, or food for their child. When speaking of the support from his friends, one father shared, *"They always advise if you have stress, maybe that day you are in debt or maybe the child is sick, you can tell you don't have anything and if you get something to help like when the child is sick to buy medicine..."*

(Father IDI, #8) Finally, one father even suggested that turning to peers for social support could even prevent accumulation of stress that may even lead to suicidal ideation among men.

> *"When you have stress you don't have to be alone. You have to speak to people you trust. When you share with friends, they will give you heart. In recent years people commit suicide because they have stress and they don't share with others. Your friends may tell you something that you haven't thought of." (Fathers FGD, #2)*

Other family support. In addition to their partners and peers, fathers also mentioned seeking support from other family members including their parents and siblings. Fathers noted how they confided in close family members particularly regarding sensitive and personal problems as they trusted family members to advise on such concerns. When one father was asked why he confides in his own father in times of stress, he responded, *"Because he likes to listen to me. I also understand him well because he gives me better advice than anyone else. He is the first person I run to whenever I have a problem." (Father IDI, #6)* Fathers especially sought guidance from these family members in times of marital issues, which was a common source of stress. *"When you fail to solve your fight on your own, you can involve your mother and father and they can help to solve your fight." (Fathers FGD, #1)*

Exercise and leisure. Beyond seeking out social support, several fathers also mentioned engaging in physical activities or other leisurely interests to cope with stress. Physical activities included playing football, running, and taking walks. For example, one father in a mixed FGD shared, *"I usually go play football, run and play draft, by so doing, I am able to manage my stress." (Mixed FGD #2).* Other activities included reading the newspaper, listening to the radio, and watching sports and TV. For example, one father shared, *"I try to control myself so as to reduce stress in my head, I can even watch tv." (Father IDI, #13)* Some fathers carried out these activities alone to decompress by themselves, while others mentioned more of the social activities in group contexts to connect with others.

Religion. Finally, a few fathers also described turning to religion and faith leaders to cope with stress and other mental health problems. Specifically, when faced with stress, fathers described attending worship services, praying to God, as well as seeking support from individuals and leaders in their religious communities. For example, when asked about effective ways that fathers manage their stress, one father replied, *"When you go to church, you can share with your friends, and they may advise you. Religious people advise you very well." (Fathers FGD, #1)* Several additional fathers echoed this point about trusting in God and how faith helped them positively manage their stress. For example, one father shared, *"Firstly, when we see you are much stressed and you cannot solve it, since we are believers, you just pray to God so as to help what you are facing… It reduces worry and pain in my heart and makes my brain relax by knowing that God will intervene." (Father IDI, #3)*

DISCUSSION

In this study, we investigated the mental health experiences affecting fathers of young children in Mwanza, Tanzania. More specifically, we explored the nature of mental health problems, the stressors that contribute to poor mental health, and the coping strategies used by

fathers when faced with such psychosocial challenges. We found that most men described feelings of parenting stress with roughly half of fathers also reporting symptoms of depression and anxiety. The main sources of poor paternal mental health were lack of financial security and in turn the inability to provide for the family, marital conflict, and issues affecting children's health and development. Fathers described a range of coping strategies when faced with stress, which commonly included alcohol use, seeking social support from family and friends, and spiritual practices.

Of all the identified sources of paternal mental health problems, poverty and financial insecurity were consistently underscored as the most central concerns. Nearly all fathers defined their primary responsibility as breadwinners of the household, but the lack of employment opportunities and low wages limited fathers' ability to realize these roles and consequently contributed to economic strain and stress. Prior qualitative and quantitative studies across Tanzania and other similar settings in East Africa have underscored poverty and financial hardship as major contributors to poor mental health [28, 29], including among male caregivers of young children [25]. Also interconnected in this link between poverty and poor mental health, fathers discussed how restrictive gender norms further exacerbated these challenges with many fathers equating breadwinning as an indicator of their masculinity but failure to live up to these expectations resulting in disappointment, shame, and poor mental health. A few studies, primarily from western, high-income country contexts, have discussed gender role strain theory and the direct links between masculinities and men's depression and mental health problems [20, 30]. Our study extends support for this phenomenon in the Tanzanian cultural context and highlights the need for gender-based perspectives in the literature on fathers' mental health, especially in LMICs where patriarchal norms are prevalent.

In addition to poverty, parenting concerns and marital conflict were also frequently mentioned sources of paternal mental health problems. Beyond the worries of financially providing for the child, many fathers reported stress about how to provide optimal care when their child became ill, or they suspected potential developmental delays. Poor spousal relationship quality – such as conflict, lack of parenting alliance, and even jealousy and suspected infidelity – was another stressor among fathers. Child-related and partner-related sources of parental stress and depression have been well-documented among mothers [2, 31]. A relatively smaller but emerging literature, again from the U.S. and other high-income countries, has uncovered similar risks pertaining to parenting and partner relationship quality on fathers' depressive symptoms [32-34]. However, literature on the factors contributing to poor mental health among fathers in LMICs is more nascent and based largely on quantitative studies to date [23, 35]. Through our qualitative investigation, we extend support for poor caregiving dynamics involving the child and partner as psychosocial concerns affecting fathers as similarly shown among mothers. Our results highlight the importance of family-based interventions that counsel fathers on appropriate ways for supporting their child's health and development and address fathers' partner relationships dynamics (e.g., co-parenting, improved couples communication, conflict resolution skills) as an approach to reducing paternal stress [36]

When faced with mental health problems, fathers more commonly turned to maladaptive coping behaviors than positive coping behaviors. Overall, alcohol use was the most frequently reported coping behavior of fathers. A substantial body of evidence has documented a relatively high global prevalence of men's heavy drinking and shown links with a wide range of negative consequences, including poorer physical health, increased mental disorders [37], and increased perpetration of intimate partner violence [38]. Increasingly, studies have highlighted links

between heavy drinking among fathers and poorer family caregiving relationships [39], such as increased child maltreatment and marital conflict , as well as negative child developmental outcomes in LMICs [40]. Our results contribute to this broader body of evidence by revealing the salience of alcohol use among fathers with poor mental health [41] and how these challenges should be jointly addressed as part of psychosocial prevention strategies for fathers with young children.

Nevertheless, some fathers used positive coping strategies to manage mental health problems, such as seeking social support from trusted individuals, prayer, and exercise. These findings uncover different strengths-based approaches that are being employed by fathers in the local Tanzanian context. Explicitly promoting such positive coping strategies in lieu of negative behaviors (e.g., alcohol use, partner aggression) is likely to provide fathers with new skills and healthier approaches for managing their psychological distress. A few noteworthy couples-based preventive interventions in the United States have demonstrated the efficacy of integrating psychosocial support within parenting and couples interventions on fathers' coping, parental engagement with their children, couples relationship quality, and reductions in paternal stress [42, 43]. While relatively few programs have attempted to support the psychosocial wellbeing of fathers of young children in the general population in LMICs, our findings regarding the considerable burden of poor paternal mental health, associations with family caregiving relationships, and manifestation of negative coping strategies highlight how a similar multicomponent approach jointly addressing these various components and also tackling ideologies of restrictive masculinity may be effective for improving fathers' mental health in the Tanzanian context.

This is the first known study to uncover the mental health problems and coping strategies used by fathers of young children in an African context. It has many strengths, including using a qualitative methodology to examine fathers' experience of mental health problems, their stressors, and coping strategies in fathers' own words. Nevertheless, there are certain limitations that should be considered when interpreting the results. Firstly, our findings are specific to communities in and around Mwanza, Tanzania and may therefore not be generalizable to other settings in Tanzania or other countries in the region. Additionally, given that we specifically sampled fathers who co-resided with their partners and children, our findings may not be generalizable to other types of fathers (e.g., non-residential fathers, single fathers). Specifically, it is possible that the stressors and coping strategies of fathers with different familial living arrangements and lifestyles may differ from those of the fathers in our sample. Secondly, although questions about fathers' mental health experiences in the community were included in all FGDs, questions pertaining to fathers' direct experiences were only included in father IDIs. Therefore, although some mothers did discuss fathers' mental health in IDIs, we did not have enough data to triangulate mothers' versus fathers' perspectives on paternal mental health. Finally, the topic guides for IDIs and FGDs were part of a larger investigation covering a breadth and variety of topics, which may have limited in-depth analyses of specific themes pertaining to paternal mental health.

CONCLUSION

Over the past decade, there has been an increase in research on paternal mental health and its impact on children's health and development. However, the vast majority of this research has

focused on fathers in high-income countries. Our study contributes to the nascent literature on paternal mental health in LMICs and highlights the importance of acknowledging gender-specific and culture-specific experiences of paternal mental health problems, sources of stress, and coping strategies. The results suggest that programs to improve fathers' mental health and overall family wellbeing must address the underlying and multifaceted stressors, as well as the interactions between paternal mental health and family dynamics. Further research is needed to expand understanding of paternal mental health problems in LMIC-contexts and how they impact fathers' parenting, relationships with their partners, and children's health and developmental outcomes. Overall, such research can help contribute to the design of programs and policies to promote positive caregiver mental health and wellbeing globally.

Contributions: JJ conceptualized and designed the study, conducted data analysis, drafted the manuscript, and takes responsibility for all aspects of the work. JKM conducted data analysis and contributed to the drafting of results. DJ and MK conducted investigation and validation. MNA and SK contributed to interpretation of findings. All authors critically reviewed and approved the final manuscript as submitted.

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Fathers' depressive symptoms, psychosocial stressors, and coping strategies: a qualitative study in Mwanza, Tanzania

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ABSTRACT

Objectives: To investigate the nature of paternal mental health problems, their causes, and coping strategies among fathers of young children under aged 2 years.

Design and setting: Using a qualitative phenomenological study design, we conducted in-depth interviews with fathers, mothers, community leaders, and community health workers as well as focus group discussions with fathers-only, mothers-only, and mixed group of fathers and mothers. Respondents provided their perspectives on fathers' mental health challenges and how fathers responded to their mental health problems. Data were triangulated across stakeholders and analyzed using thematic content analysis.

Setting: The study was conducted in four communities in Mwanza, Tanzania.

Participants: Our total sample included 56 fathers, 56 mothers, and 8 community stakeholders stratified by community.

Results: Respondents highlighted a spectrum of mental health concerns affecting fathers, ranging from parenting stress, depressive symptoms, to anxiety. Causes of paternal mental health problems included poverty, child-related concerns, marital problems, and illness in the family. When asked about coping strategies, both fathers and mothers shared that many fathers engaged in negative coping strategies, such as paternal alcohol use and increased conflict with their partners, as a common means of dealing with their distress. However, positive coping strategies were also discussed regarding other fathers, which included seeking social support from their family and friends, engaging in physical and leisure activities, and relying on their faith.

Conclusions: Overall, this study highlights the importance of supporting paternal mental health as part of parenting and early childhood interventions. These findings can help inform the development of psychosocial interventions to promote the well-being of parents and families of young children.

Keywords: mental health, qualitative research, community child health

Strengths and limitations of this study

- This is one of the first known study to explore the mental health experiences and coping strategies of fathers of young children in a sub-Saharan African context.
- We interviewed fathers, mothers, community leaders, and community health workers to capture a broad range of perspectives pertaining to fathers' mental health.
- Our sample focused on fathers who co-resided with their partners and children, and therefore results may not be generalizable to male caregivers in other family structures.

INTRODUCTION

Poor mental health – broadly encompassing various symptoms such as psychological distress, depression, and anxiety – is a pervasive issue affecting parents globally [1]. It is estimated that the global prevalence of maternal perinatal depression, defined as the period from pregnancy and up to 1 year after birth, ranges between 10-20% [2, 3]. These rates have been shown to vary substantially by country income status, with significantly higher rates in low- and middle-income countries (LMICs) (e.g., 25%) than high-income countries (e.g., 16%) [3-5]. While much of this evidence has focused on mothers for their roles as the primary caregiver of young children, studies are increasingly highlighting the significant burden of mental health problems in fathers.

Meta-analyses have estimated that approximately 5-10% of new fathers experience perinatal depression [6-8] and 5-15% for anxiety [9, 10]. For some fathers, these mental health challenges can continue beyond the first postpartum year and persist across the early childhood period [11]. Various risk factors have been identified for fathers' mental health problems across the early parenting period (with children aged 0-5 years), including poverty, unemployment, having a depressed partner, poor marital relationships, and low social support [12, 13]. The consequences of fathers' poor mental health are also wide-ranging and can negatively impact not only men's health outcomes but also family caregiving relationships with their partners and children [14, 15]. For example, fathers who experience elevated stress and depression report poorer quality of co-parenting [16], greater marital conflict [17], and poorer parenting practices like increased spanking and fewer stimulation activities with their young children [18]. Constrained family relationship dynamics have been identified as one particular mechanism underlying the negative direct effects between poor paternal mental health and early child behavior and development outcomes [19].

To date, most of this evidence on fathers' mental health has been examined in high-income countries primarily in North America, Europe, and Australia [13, 14, 20]. This has led to a disproportionate imbalance in the global evidence and gap in our knowledge about the mental health experiences of fathers across cultures and particularly in LMICs, where over 90% of the population resides [21]. Nevertheless, a few small quantitative studies have estimated rates of paternal perinatal depression at 24% in Pakistan [22] and 14% in Turkey [23] suggesting a considerable burden of mental health problems among fathers in LMICs. Many fathers in LMICs are exposed to a compounding set of risks that can jeopardize their mental well-being. Extreme poverty and its related challenges like lack of employment opportunities, low wages, and food insecurity are central and pervasive barriers to fatherhood and men's caregiving roles for children [24, 25]. Moreover, restrictive gender norms perpetuate divisions in maternal versus paternal caregiving roles within households especially in LMICs that in turn give rise to unique parental stressors for men versus women [26]. At the same time, social norms have been evolving in recent years with more fathers engaging in active childcare responsibilities and changing family expectations that increasingly value male partner support in multiple domains besides solely financial support [27, 28]. Thus, these evolving contemporary roles and contextual factors motivate the need to qualitatively explore the lived experiences of fathers, their mental health challenges, and the approaches fathers use to manage their stress especially in understudied low-resource settings globally.

To our knowledge, only a handful of qualitative studies have been published based on interviews with fathers in LMICs and regarding their own mental health experiences. These

exceptional prior studies from Tanzania, Kenya, and South Africa have all underscored the centrality of poverty, unemployment, and restrictive masculinities as major contributors to fathers' mental health problems [29-31]. However, prior studies have not investigated fathers' mental health in terms of multiple psychopathologies (i.e., depressive symptoms and stress); conceptually from an integrated early child developmental and family systems perspective; the coping strategies that men use when faced with mental health challenges; and methodologically through interviewing fathers, mothers, and other stakeholders.

The objective of this present study was therefore to qualitatively investigate the nature of paternal mental health problems, their causes, and coping strategies used by fathers with children under aged 2 years in Mwanza, Tanzania. We interviewed fathers, mothers, community leaders, and community health workers and triangulated across their perspectives. By focusing specifically on male caregivers who have been previously overlooked in the global mental health evidence base, we aimed to broaden our understanding regarding the psychosocial challenges affecting fathers along with the extent to which male caregivers use positive coping strategies (e.g., seeking out social support) versus maladaptive coping strategies (e.g., substance use or avoidance). This research can better inform the design of psychosocial program components that could be integrated within fatherhood interventions to reduce the risk factors to paternal mental health and support fathers' positive coping strategies under such stressful circumstances and challenges in low-resource global settings.

METHODS

Study design

A qualitative descriptive study was conducted to explore fathers' caregiving practices (i.e., responsibilities pertaining to childcare and engagement with young children), couples' relationships, and caregiver mental health [27]. This parent study involved in-depth interviews (IDIs) and focus group discussions (FGDs) with fathers and mothers and IDIs with community stakeholders to understand the barriers and facilitators to engaged fathering of young children under 2 years of age. See Jeong, McCann (27) for more details about the study design. In this study, we conducted a secondary analysis of these data to delve specifically into fathers' mental health.

Study site and sampling

Data were collected from communities in Mwanza, Tanzania, which is a peri-urban setting on the shores of Lake Victoria in northwest Tanzania. Two coastal and two inland communities were selected via stratified sampling in collaboration with our study partner, Tanzania Home Economics Organization (TAHEA-Mwanza) and representatives from the local government. Caregivers were eligible for participation in this study based on the following criteria: biological parent (mother or father) who was aged 18-65 years; had child under two years of age; was in a relationship with the child's other biological parent; and resided in the same house as their partner and child at some point in the past month. Caregivers were not selected based on history or current mental health condition. In each of the four study communities, the community leader provided a list of all eligible caregivers from which participants were ultimately selected. In addition to caregivers, IDIs were conducted with the community leader and community health worker of each community.

Data collection

Topic guides were adapted for each of the unique stakeholder groups (i.e., caregivers, community stakeholders) as well as for IDIs and FGDs. All questions were semi-structured and open-ended. The topic guide was structured into three sections: fathers' caregiving roles, couples' relationship dynamics, and fathers' mental health. Specifically for the last section on caregiver mental health, questions aimed to understand perceived causes of fathers' mental health problems as well as men's coping strategies. For example, during IDIs fathers were asked questions about stress, such as *"What causes you stress in your life?"*, *"How, if at all does your child contribute to stress in your life?"*, and *"When you are stressed because of your child what do you do to feel better?"*. In addition to stress, fathers were asked about other mental health problems, such as experiences with depression (e.g., sadness, anger for no specific reason, loneliness) and the sources of depression. During FGDs and community stakeholder IDIs, in addition to broadly asking about causes of fathers' mental health problems, respondents were also specifically asked about positive and negative ways in which fathers in their community responded to stress (e.g., "*What are negative ways that some fathers deal with stress?"*) and fathers' sources of social support (e.g., *"Who do fathers turn to when they are feeling stressed?"*). Finally, during both the FGDs and IDIs respondents were asked about fathers' alcohol use, the context in which alcohol was used, and its impacts on fathers' relationships with their partner and young child (e.g., "*What circumstances cause parents to drink alcohol?*").

Data collection was conducted over a three-week period in June 2022 by a team of five research assistants from TAHEA-Mwanza who were bilingual in Kiswahili and English, resided in Mwanza, and received a 7-day training. The research assistants all had bachelor's level education and prior qualitative research experience. None of the research assistants had prior knowledge of study participants. Both IDIs and FGDs were carried out in private, centrally located settings in the community such as early childcare centers or community leaders' offices. IDIs lasted approximately 60-90 minutes while FGDs were slightly longer at approximately 90 minutes. For IDIs, all caregivers were provided the option of being interviewed by either a male or female interviewer, although most indicated no preference. Once interviews and discussions were complete, an independent team of bilingual translators from Tanzania transcribed and translated the audio recordings into English for analysis. A subset of approximately 15% of transcripts were randomly selected to be reviewed for quality assurance. Additional details of data collection can be found elsewhere [27].

Data analysis

Data were analyzed using thematic content analysis to understand the sources of fathers' stress and other mental health problems as well as the coping strategies fathers employed in response to these issues. First, a codebook was developed by 2 researchers and piloted against 3 transcripts. Then the full research team of 5 analysts independently piloted the codebook against a selected subset of 8 IDI and 2 FGD transcripts. After this piloting period, the analysis team assessed coding agreement from the pilot transcripts and reached an inter-rater reliability rate of above 0.85 (Cohen's Kappa), which indicated substantial agreement. Three researchers independently coded the English transcripts using Atlas.ti 22 with approximately 30% of these transcripts randomly selected to be independently coded by a second analyst. During weekly meetings, research analysts reviewed findings and emerging themes and resolved any coding

discrepancies, if applicable. Two researchers independently reviewed the codes to conduct a narrative synthesis of results, which were further reviewed and validated by a third researcher.

Ethics approvals

The protocol for this study was approved by the Institutional Review Board of Harvard T.H. Chan School of Public Health (IRB22-0235) and the National Institute for Medical Research in Tanzania (NIMR/HQ/R.8a/Vol.IX/4076). All participants included in this study provided their written informed consent. The consent forms were administered aloud in Kiswahili by the research assistants who were conducting the interviews, and all participants were provided with the opportunity to ask any clarifying questions.

Patient and Public Involvement

Patients or the public were not involved in the design and conduct of this research.

RESULTS

Across all stakeholder groups, we interviewed a total of 120 participants including 56 mothers, 56 fathers, 5 community leaders, and 3 community health workers. Among the sample of fathers, 29 participated in IDIs, 18 participated in fathers only FGDs (4 groups with 5 fathers on average per group) and 9 participated in mixed fathers' and mothers' FGDs (4 groups with 3 fathers on average per mixed group). Among mothers, 23 participated in IDIs, 17 participated in mothers' only FGDs (2 groups with 8 mothers on average per group) and 16 participated in mixed mothers and fathers FGDs (4 groups with 4 mothers on average per mixed group). The mean age of fathers was 36.1 years (range 22-55 years), and the mean age of mother was 27.0 years (range: 18-49 years). For most fathers (88%) and mothers (84%), primary school was the highest level of education completed. A summary of the overall study results in terms of the main themes and sub-themes are presented in Table 1.

Table 1. Overview of results regarding fathers' mental health problems and coping strategies.

Main theme	Sub-themes
Symptoms of mental health problems	• Parenting stress • Depression and anxiety • Suicidal ideation
Causes of mental health problems	• Poverty • Child-related concerns • Marital problems • Family illness
Negative coping strategies	• Alcohol use • Anger and violence against women and children
Positive coping strategies	• Partner support • Peer support • Other family support • Exercise and leisure

- Religion

Symptoms

Fathers endorsed a spectrum of mental health concerns. With respect to parenting stress, fathers described it in terms of having serious *"problems"*, *"worries"*, or *"hardships"* and symptoms which included *"feeling down", "thinking too much", and "not having peace"*. In addition to parenting stress, roughly half of fathers reported experiencing more clinical symptoms of depression and/or anxiety, such as difficulty sleeping, a loss in appetite, lack of energy due to *"getting so much thoughts"*, feeling *"evil spirits",* extreme sadness or loneliness. For example, one father shared: *"I always think about not having money and life hardships. That makes me feel very bad. It is normal for me to have trouble sleeping." (Father IDI, #23)* Fathers who reported more elevated levels of parenting stress were more likely to also report feelings of anxiety and depression. A handful of fathers even highlighted personal experiences of suicidal ideation or talked about other men in the community facing these challenges. For example, in a focus group discussion, one father shared: "*Most men think about their families, children, school fees, food and other needs at home. Many of our wives do not work, they cannot support us. This makes other men commit suicide because they don't see a way out of this." (Mixed FGD, #5)* These mental health challenges were perceived as undermining men's physical health. "*A lot of men suffer from blood pressure problems because of stress. When we sleep, we keep thinking about what would get us through the next day. It is difficult to get opportunities to earn money. This is why most men are suffering from blood pressure problems." (Mixed FGD, #5)* Finally, a few respondents – including fathers, mothers, and community stakeholders – even highlighted how suicide or suicidal ideation affected fathers and especially those under significant stress and psychological problems.

Causes

Poverty. The primary source of mental health problems among fathers was poverty. Fathers frequently experienced stress over being financially insecure and not having the resources to provide basic needs for their child and family. Couched within restrictive gender norms and societal expectations of fathers as the main breadwinner of the family, many fathers felt pressure to be financially responsible for all family necessities. Failure to financially provide for the family caused stress for many fathers because they perceived this as not meeting up to their ideals of what it means to be a "good father". For example, one father said, *"When I fail to provide for my family, my family goes to bed hungry because I haven't earned… What makes me sad and stressed is when my family is not peaceful because as a father, I haven't provided for them." (Father IDI, #18)* Another father during an FGD echoed a similar point about the interconnections between men's failure to provide, feeling like they are disappointing others, and increased stress: *"What brings stress is when you go to work, and you don't earn anything and come back home with nothing. You will not be okay. You will not have peace. You will be feeling down, and you will pass that to the family. The family expects that you will bring something, but when you come home with nothing, they will feel disappointed." (Fathers FGD, #3)* A few

fathers specifically attributed financial instability as causing *"men to commit suicide because they don't see a way out of this [poverty]."*

Child-related concerns. In addition to poverty, fathers commonly noted specific aspects about parenting a young child as contributing to poor mental health. A prominent concern relating to fathers' financial-related stress was providing for child-related expenses specifically. For example, one father highlighted his concerns about not being able to provide food for his child: *"When you completely lack money… you lack sleep. You ask yourself, 'Will my children eat tomorrow?' And I start saying, 'Tomorrow go do this and this. I must get money"… And you go to get money for your children." (Father IDI, #29)* Financial stress in providing for young children was especially a concern when children became sick. One father contextualized this stress by highlighting the additional expenses when his child became sick, *"It gives me stress when he is sick and needs something like food or medicine and I don't have it because then I haven't given his right." (Father IDI, #17)* Fathers' stress about child illness was not only due to financial reasons, but also included other more general concerns such as the type of medical treatment they would seek for the child's illness. *"When a child is sick you will ask "how is the child doing?" and if she is not doing fine you will then start thinking. 'What should I do? Should I take her/him to the hospital, or I just leave her/him for today?'" (Father IDI, #19)*

Multiple fathers also suggested that child age impacted mental health. For example, building upon the previous point about children's illness being a source of stress, several fathers noted how children's illness more frequently occurred with infants and that it was particularly stressful with young children because they cannot yet explain how they are feeling. For example, one father shared, *"I worry a lot when he is sick. I think about a lot of things because he cannot express how he feels... I think of how I could help him get better." (Father IDI, #6)* Fathers discussed other stressors associated with caring for particularly young children, such as the infant not sleeping through the night or crying more incessantly and again with fathers worrying due to not understanding their child's needs. *"Children give us stress when they are young and cannot pronounce words. They cry all the time and cannot communicate what they need. That is the challenge in our lives." (Fathers FGD, #3)* Finally, a few fathers also noted how behavioral problems, such as children misbehaving, fighting with their sibling(s), being disrespectful to family members and neighbors, caused them stress. For example, one father in a FGD shared, *"Children can cause so much stress to their fathers. For example, I have a child who can be stubborn. Even when I talk to him, he doesn't listen. I realized that he was not disciplined. So, children can really stress their fathers." (Mixed FGD, #1)* One father worried that children's misbehaviors would have negative consequences on their behaviors in school and "future life".

Marital problems. Challenges in fathers' relationships with their partners and other family members was another cause of mental health problems that was commonly described by fathers. This theme primarily emerged out of FGDs but included several examples of men sharing their personal experiences, which suggested this theme was not particularly sensitive in nature to fathers. Some fathers described how arguments and conflicts within their spousal and family relationships lead to increased stress. For example, when asked about causes of stress one father said: "*When there is an argument in my family like with my wife, I get too much thoughts. I may not be able to pay attention when are talking with my friends." (Mixed FGD, #2)* Specifically pertaining to their relationships with their partners, many fathers also described how disagreements and feeling disrespected by their wives contributed to stress and sadness. For

example, a few fathers described how their wives making financial decisions without consulting them was a source of stress, *"What can contribute to our stress from our partners is when they don't obey us. Like we have planned what they should do when we are away, but you come back to see they haven't done anything as agreed. That gives us a hard time." (Fathers FGD, #3)* One father specifically mentioned women earning more income than men as a particular source of stress for fathers. *"When women's income increases, they tend to be less obedient to their husbands, they become arrogant and they don't treat their husbands as they used to because at this point you are belittled from her eyes. This stresses husbands." (Mixed FGD, #2)*

Marital separation and concerns about infidelity was another source of paternal stress that was described by fathers, mothers, and community leaders. For example, one father shared, *"When I am told that my wife is cheating, it makes me think too much. Even when I am at work I'll be thinking about things at my home." (Mixed FGD, #3)* Moreover, a few fathers worried that their inability to provide money and a good life for their family would lead their partner to leave them or be unfaithful. For example, one father explained:

> *"Financial difficulties is one of the reasons for mental health problems. When you don't have money, your wife can start to be unfaithful and engage with multiple men in order to ask money from them. When a woman asks you to give her money for braiding her hair but you don't have the financial capacity to do, this causes men to be stressed." (Mixed FGD, #6)*

Family illness. Finally, family illness and death were mentioned as additional sources of mental health problems for fathers that emerged out of the IDIs with fathers but not FGDs. Fathers described how the loss of close loved ones, including parents and siblings, triggered sadness and stress even long after they passed. *"I feel sadness from losing my mother. It makes me feel bad whenever I remember my mother because I wish she could be there and see my family." (Father IDI, #12)* Many fathers were also deeply affected by illness in their families and partners, with multiple fathers reporting loss of sleep when their wives were sick: "*I also feel sad when my wife is sick, I think about what I could do to help her; this makes me lose my sleep." (Father IDI, #17) S*tress related to family illness was further exacerbated by financial challenges as fathers worried about not being able to provide money for treatment, as noted by the following father, *"I get too much thinking when someone at home gets sick but while I don't have money for the treatment. I start to think very much on what to do." (Father IDI, #22)*

Negative coping strategies

Fathers used a variety of strategies to cope with stress and other mental health problems. Overall, negative coping strategies were frequently discussed, and more specifically men's heavy alcohol use and aggression against their partners and children. We describe each in more detail below.

Alcohol use. Fathers, mothers, and community stakeholders all described heavy drinking as the most common coping mechanism fathers used when experiencing mental health problems. Many fathers turned to alcohol as a temporary escape from the negative emotions and psychosocial problems they faced in their everyday lives. For example, one father shared, *"[alcohol] helps because it removes you from the state you were and makes you in another state*

and starts to think different things for that time." (Fathers FGD, #1) However, another father believed being drunk allowed some fathers to verbally express the problems they were facing to others: *"When they are drunk they are not sane so they can avoid thinking about their problems or when they are drunk they can express their grievances. He will say anything that he wants." (Fathers FGD, #3)* However, nearly all respondents acknowledged how the stress relief of alcohol was temporary and did not lead to any tangible resolutions. For example, when probed about the effects of alcohol on fathers' stress and other issues, a community leader shared, *"You don't solve anything, when you are sober your problems will still be there." (Community leader IDI, #2)*

Furthermore, fathers' coping through alcohol use further exacerbated other problems such as financial hardships and marital conflicts, both of which fathers commonly described as causes of stress in the first place. One father highlighted this cyclical nature of stress and alcohol use saying, *"[fathers] think that drinking alcohol will make them feel better and less stressed. In reality, they end up using money irresponsibly and increasing stress." (Mixed FGD, #1)* The financial implications of alcohol use additionally had negative downstream impacts on family and childcare. Specifically, many respondents described how fathers who drink frequently spent all the money they earned on alcohol instead of food and other necessities for their family and children, which negatively impacted their children and families. For instance, one community leader remarked, *"For the one drinking, he will say it helps. But it adds to the problems. If you had 10000 or 5000 shillings it will be gone, and in the morning the family will be needing to buy flour, but you have added to the problems." (Community leader IDI, #3)* Similarly, one mother recounted how father's alcohol use negatively impacted her and her child:

> *"The alcohol that he uses impacts the family, me, and the children. The money that he gets, let's say 50000 shillings goes to alcohol and he hasn't left any at home, children may have no food and ask you for food and at the same time their father comes home drunk. A child will be affected because a father doesn't provide while he has money. A child will have stress that is beyond his age. If he is in school, he will be thinking about the problems back home." (Mother IDI, #2)*

Anger and violence against women and children. Respondents also highlighted how fathers often became angrier, more argumentative, or even more withdrawn and detached from their families in times of stress, which often exacerbated their already strained relationships with their wives. *"When I am very stressed but my wife forces me to talk without valuing my stressed mood, then I become angry." (Father IDI, #12)* Moreover, several respondents noted how marital problems, mistrust between partners, and even men's perpetration of violence against their partner and children increased in times when fathers had mental health problems.

> *You know that the man is worried about low cash. But then you also become stressed thinking, "where did he go?" When he returns home there is a quarrel at home, without doing anything. He's hitting women or forcing them to have sex and doing things she is not ready for because he is affected psychologically, economically, and sexually. He thinks it is right because he is the father of the family, but then mother is affected. (Mother in Mixed FGD, #4)*

These forms of aggression and family conflict were even more likely when fathers used alcohol. For example, one father shared in an FGD, *"[When he's stressed] he forgets about the family and just drinks alcohol. He will even take some money to outside woman. Hence this results in more conflicts in marriage." (Father FGD, #1)* Another father described how fathers'

coping through alcohol perpetuated family violence, *"Alcohol is not good for the children. We have seen that when a father drinks to escape his problems he can beat children and their mother. Children will be told by their mother to stay quiet because your father has arrived and you will be beaten. And then they are beaten for real." (Father FGD, #2)*

Positive coping strategies

Although negative coping strategies were more frequently mentioned, many fathers also reported using healthy coping strategies. Most examples pertained to fathers seeking support from their social networks, but also included several reports of fathers engaging in stress-relieving activities such as sports, turning to their faith, or finding practical solutions to reduce stressors.

Partner support. The most frequently discussed form of positive coping by fathers was through seeking out support from their partners. For example, when describing improved ways that men should manage their stress, one father in a FGD noted, *"First you need to identify whatever problem that is causing you stress then you need to seek advice from your partner about that problem. If you do that, it is possible for you to solve that problem" (Mixed FGD, #2)* Fathers especially sought practical support from their partners when faced with child- or work-related stressors, such as child illness or financial challenges affecting their ability to support family needs. For example, one father shared how jointly discussing care seeking options with his partner helped to reduce paternal stress in times of child sickness, *"What I will do is sit with my wife and together we can know what to do if a child is sick. We will discuss what to do for our child to be better. Discussing will make me feel better." (Fathers FGD, #3)*

Peer support. Besides their partners, fathers also found solace in their friends, turning to them for practical, emotional, and even financial support. Fathers valued discussing their problems related to child illness and financial challenges with their friends. One father shared, *"I go to my friends. I tell them, "Friends, I have this and this". And they start advising you like, "Just relax…" and that makes me feel good because they have advised me." (Father IDI, #16)* Another father described how listening to his friends' problems helped to put his own challenges into perspective: *"When I am stressed, I usually go to my friends or neighbors to talk. After that my thoughts are reduced… we talk about different topics, sometimes I may listen to other people talking about more difficult encounters, it makes me feel that my problem is easier." (Father IDI, #5)* Many fathers also described receiving financial support from their friends including loans to help them with their business or money to purchase medicine, treatment, or food for their child. When speaking of the support from his friends, one father shared, *"They always advise if you have stress, maybe that day you are in debt or maybe the child is sick, you can tell you don't have anything and if you get something to help like when the child is sick to buy medicine..." (Father IDI, #8)* Finally, one father even suggested that turning to peers for social support could even prevent accumulation of stress that may even lead to suicidal ideation among men.

> *"When you have stress you don't have to be alone. You have to speak to people you trust. When you share with friends, they will give you heart. In recent years people commit suicide because they have stress and they don't share with others. Your friends may tell you something that you haven't thought of." (Fathers FGD, #2)*

Other family support. In addition to their partners and peers, fathers also mentioned seeking support from other family members including their parents and siblings. Fathers noted how they confided in close family members particularly regarding sensitive and personal problems as they trusted family members to advise on such concerns. When one father was asked why he confides in his own father in times of stress, he responded, *"Because he likes to listen to me. I also understand him well because he gives me better advice than anyone else. He is the first person I run to whenever I have a problem." (Father IDI, #6)* Fathers especially sought guidance from these family members in times of marital issues, which was a common source of stress. *"When you fail to solve your fight on your own, you can involve your mother and father and they can help to solve your fight." (Fathers FGD, #1)*

Exercise and leisure. Beyond seeking out social support, several fathers also mentioned engaging in physical activities or other leisurely interests to cope with stress. Physical activities included playing football, running, and taking walks. For example, one father in a mixed FGD shared, *"I usually go play football, run and play draft, by so doing, I am able to manage my stress." (Mixed FGD #2).* Other activities included reading the newspaper, listening to the radio, and watching sports and TV. For example, one father shared, *"I try to control myself so as to reduce stress in my head, I can even watch tv." (Father IDI, #13)* Some fathers carried out these activities alone to decompress by themselves, while others mentioned more of the social activities in group contexts to connect with others.

Religion. Finally, a few fathers also described turning to religion and faith leaders to cope with stress and other mental health problems. Specifically, when faced with stress, fathers described attending worship services, praying to God, as well as seeking support from individuals and leaders in their religious communities. For example, when asked about effective ways that fathers manage their stress, one father replied, *"When you go to church, you can share with your friends, and they may advise you. Religious people advise you very well." (Fathers FGD, #1)* Several additional fathers echoed this point about trusting in God and how faith helped them positively manage their stress. For example, one father shared, *"Firstly, when we see you are much stressed and you cannot solve it, since we are believers, you just pray to God so as to help what you are facing… It reduces worry and pain in my heart and makes my brain relax by knowing that God will intervene." (Father IDI, #3)*

DISCUSSION

In this study, we investigated the mental health experiences affecting fathers of young children in Mwanza, Tanzania. More specifically, we explored the nature of mental health problems, the stressors that contribute to poor mental health, and the coping strategies used by fathers when faced with such psychosocial challenges. We found that most men described feelings of parenting stress with roughly half of fathers also reporting symptoms of depression and anxiety. The main sources of poor paternal mental health were lack of financial security and in turn the inability to provide for the family, marital conflict, and issues affecting children's health and development. Fathers described a range of coping strategies when faced with stress,

which commonly included alcohol use, seeking social support from family and friends, and spiritual practices.

Of all the identified sources of paternal mental health problems, poverty and financial insecurity were consistently underscored as the most central concerns. Nearly all fathers defined their primary responsibility as breadwinners of the household, but the lack of employment opportunities and low wages limited fathers' ability to realize these roles and consequently contributed to economic strain and stress. Prior qualitative and quantitative studies across Tanzania and other similar settings in East Africa have underscored poverty and financial hardship as major contributors to poor mental health [32, 33], including among male caregivers of young children [29]. Also interconnected in this link between poverty and poor mental health, fathers discussed how restrictive gender norms further exacerbated these challenges with many fathers equating breadwinning as an indicator of their masculinity. A few studies primarily from western, high-income country contexts have discussed how gender role strain theory – the notion that failure to adhere to gender norms and meet expectations of hegemonic masculinity (i.e., men's caregiving roles as providers of the family) – can directly contribute to men's depression and mental health problems [26, 34, 35]. Our study extends support for this phenomenon in the Tanzanian cultural context and highlights the need for gender-based perspectives in the literature on fathers' mental health, especially in LMICs where patriarchal norms are prevalent.

In addition to poverty, parenting concerns and marital conflict were also frequently mentioned sources of paternal mental health problems. Beyond the worries of financially providing for the child, many fathers reported stress about how to provide optimal care when their child became ill, or they suspected potential developmental delays. Poor spousal relationship quality – such as conflict, lack of parenting alliance, and even jealousy and suspected infidelity – was another stressor among fathers. Child-related and partner-related sources of parental stress and depression have been well-documented among mothers [4, 36]. A relatively smaller but emerging literature, again from the U.S. and other high-income countries, has uncovered similar risks pertaining to parenting and partner relationship quality on fathers' depressive symptoms [37-39]. However, literature on the factors contributing to poor mental health among fathers in LMICs is more nascent and based largely on quantitative studies to date [22, 40]. Through our qualitative investigation, we extend support for poor caregiving dynamics involving the child and partner as psychosocial concerns affecting fathers as similarly shown among mothers. Our results highlight the importance of family-based interventions that counsel fathers on appropriate ways for supporting their child's health and development and address fathers' partner relationships dynamics (e.g., co-parenting, improved couples communication, conflict resolution skills) as an approach to reducing paternal stress [41]

When faced with mental health problems, fathers more commonly turned to maladaptive coping behaviors than positive coping behaviors. Overall, alcohol use was the most frequently reported coping behavior of fathers. A substantial body of evidence has documented a relatively high global prevalence of men's heavy drinking and shown links with a wide range of negative consequences, including poorer physical health, increased mental disorders [42], and increased perpetration of intimate partner violence [43]. Increasingly, studies have highlighted links between heavy drinking among fathers and poorer family caregiving relationships [44], such as increased child maltreatment and marital conflict , as well as negative child developmental outcomes in LMICs [45]. Our results contribute to this broader body of evidence by revealing the salience of alcohol use among fathers with poor mental health [46] and how these challenges

should be jointly addressed as part of psychosocial prevention strategies for fathers with young children.

Nevertheless, some fathers used positive coping strategies to manage mental health problems, such as seeking social support from trusted individuals, prayer, and exercise. These findings uncover different strengths-based approaches that are being employed by fathers in the local Tanzanian context. Explicitly promoting such positive coping strategies in lieu of negative behaviors (e.g., alcohol use, partner aggression) is likely to provide fathers with new skills and healthier approaches for managing their psychological distress. A few noteworthy couples-based preventive interventions in the United States have demonstrated the efficacy of integrating psychosocial support within parenting and couples interventions on fathers' coping, parental engagement with their children, couples relationship quality, and reductions in paternal stress [47, 48]. While relatively few programs have attempted to support the psychosocial wellbeing of fathers of young children in the general population in LMICs, our findings regarding the considerable burden of poor paternal mental health, associations with family caregiving relationships, and manifestation of negative coping strategies highlight how a similar multicomponent approach jointly addressing these various components and also tackling ideologies of restrictive masculinity may be effective for improving fathers' mental health in the Tanzanian context.

This is the first known study to uncover the mental health problems and coping strategies used by fathers of young children in an African context. It has many strengths, including using a qualitative methodology to examine fathers' experience of mental health problems, their stressors, and coping strategies in fathers' own words. Nevertheless, there are certain limitations that should be considered when interpreting the results. Firstly, our findings are specific to communities in and around Mwanza, Tanzania and may therefore not be generalizable to other settings in Tanzania or other countries in the region. Additionally, given that we specifically sampled fathers who co-resided with their partners and children, our findings may not be generalizable to other types of fathers (e.g., non-residential fathers, single fathers). Specifically, it is possible that the stressors and coping strategies of fathers with different familial living arrangements and lifestyles may differ from those of the fathers in our sample. Secondly, although questions about fathers' mental health experiences in the community were included in all FGDs, questions pertaining to fathers' direct experiences were only included in father IDIs. Therefore, although some mothers did discuss fathers' mental health in IDIs, we did not have enough data to triangulate mothers' versus fathers' perspectives on paternal mental health. Finally, the topic guides for IDIs and FGDs were part of a larger investigation covering various other topics, which may have limited in-depth analyses of specific themes pertaining to paternal mental health. Additional research is needed to further understand the potential influence and interactions among socioeconomic (e.g., paternal employment), demographic (e.g., family size, paternal age), and cultural factors (e.g., gender norms) on fathers' mental health.

CONCLUSION

Over the past decade, there has been an increase in research on paternal mental health and its impact on children's health and development. However, the vast majority of this research has focused on fathers in high-income countries. Our study contributes to the nascent literature on paternal mental health in LMICs and highlights the importance of acknowledging gender-

specific and culture-specific experiences of paternal mental health problems, sources of stress, and coping strategies. The results suggest that programs to improve fathers' mental health and overall family wellbeing must address the underlying and multifaceted stressors, as well as the interactions between paternal mental health and family dynamics. Further research is needed to expand understanding of paternal mental health problems in LMIC-contexts and how they impact fathers' parenting, relationships with their partners, and children's health and developmental outcomes. Overall, such research can help contribute to the design of programs and policies to promote positive caregiver mental health and wellbeing globally.

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Standards for Reporting Qualitative Research (SRQR)*

http://www.equator-network.org/reporting-guidelines/srqr/

	Page no(s).
Title and abstract	
Title - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended	Pg. 1
Abstract - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions	Pg. 2
Introduction	
Problem formulation - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement	Pg. 3, paragraphs 1-3
Purpose or research question - Purpose of the study and specific objectives or questions	Pg. 4, paragraph 2
Methods	
Qualitative approach and research paradigm - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**	Pg. 5, paragraphs 1-2
Researcher characteristics and reflexivity - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability	Pg. 5, Paragraph 2
Context - Setting/site and salient contextual factors; rationale**	Pg. 4, Paragraph 4
Sampling strategy - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**	Pg. 4, Paragraph 4
Ethical issues pertaining to human subjects - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	Pg. 6, paragraph 1
Data collection methods - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**	Pg. 5, paragraphs 1-2

Data collection instruments and technologies - Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	Pg. 5, paragraph 1
Units of study - Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	Pg. 6, paragraph 3
Data processing - Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/de-identification of excerpts	Pg. 5, paragraph 3
Data analysis - Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale**	Pg. 5, paragraph 3
Techniques to enhance trustworthiness - Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale**	Pg. 5, paragraph 3

Results/findings

Synthesis and interpretation - Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	Pgs. 6-12
Links to empirical data - Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	Pgs. 6-12

Discussion

Integration with prior work, implications, transferability, and contribution(s) to the field - Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	Pgs. 12-14
Limitations - Trustworthiness and limitations of findings	Pg. 14, Paragraph 2

Other

Conflicts of interest - Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	Pg. 16
Funding - Sources of funding and other support; role of funders in data collection, interpretation, and reporting	Pg. 16

Reference:
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