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Authors

Ruark, Allison
Bidwell, Julie T
Butterfield, Rita
et al.

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"I too have a responsibility for my partner's life": Communal coping among Malawian couples living with HIV and cardiometabolic disorders

Allison Ruark[a,*], **Julie T. Bidwell**[b], **Rita Butterfield**[c], **Sheri D. Weiser**[d], **Torsten B. Neilands**[c], **Nancy Mulauzi**[e], **James Mkandawire**[e], **Amy A. Conroy**[c]

[a]Wheaton College, Biological and Health Sciences, Wheaton, IL, USA

[b]University of California Davis, Betty Irene Moore School of Nursing, Sacramento, CA, USA

[c]University of California San Francisco, Center for AIDS Prevention Studies, San Francisco, CA, USA

[d]University of California San Francisco, Division of HIV, Infectious Disease, and Global Medicine, San Francisco, CA, USA

[e]Invest in Knowledge, Zomba, Malawi

Abstract

Rationale: HIV and cardiometabolic disorders including hypertension and diabetes pose a serious double threat in Malawi. Supportive couple relationships may be an important resource for managing these conditions. According to the theory of communal coping, couples will more effectively manage illness if they view the illness as "our problem" (shared illness appraisal) and are united in shared behavioral efforts.

Methods: This study qualitatively investigated communal coping of 25 couples living with HIV and hypertension or diabetes in Zomba, Malawi. Partners were interviewed separately regarding relationship quality, shared illness appraisal, communal coping, and dyadic management of illness.

[*]Corresponding author. Department of Biological and Health Sciences, Wheaton College, 501 College Ave, Wheaton, IL, USA. allison.ruark@wheaton.edu (A. Ruark).

Ethical approval

This study was approved by the UCSF Human Research Protection Program (HRPP) and the National Health Sciences Research Committee (NHSRC) in Malawi. Informed Consent Informed consent was obtained from all individual participants included in the study.

Consent for publication

All authors approve the publication of this manuscript.

CRediT authorship contribution statement

Allison Ruark: Formal analysis, Investigation, Methodology, Writing - original draft, Writing - review & editing. **Julie T. Bidwell:** Conceptualization, Investigation, Methodology, Writing - review & editing. **Rita Butterfield:** Data curation, Formal analysis, Methodology, Project administration, Supervision, Writing - review & editing. **Sheri D. Weiser:** Conceptualization, Investigation, Methodology, Writing - review & editing. **Torsten B. Neilands:** Conceptualization, Investigation, Methodology, Writing - review & editing. **Nancy Mulauzi:** Project administration, Supervision, Writing - review & editing. **James Mkandawire:** Methodology, Supervision, Writing - review & editing. **Amy A. Conroy:** Conceptualization, Formal analysis, Funding acquisition, Investigation, Methodology, Supervision, Writing - review & editing.

Declaration of competing interest

There are no conflicts of interest for any of the study authors.

Results: Most participants (80%) were living with HIV, and more than half were also living with hypertension. Most participants expressed high levels of unity and the view that illness was "our problem." In some couples, partners expected but did not extend help and support and reported little collaboration. Communal coping and dyadic management were strongly gendered. Some women reported a one-sided support relationship in which they gave but did not receive support. Women were also more likely to initiate support interactions and offered more varied support than men. In couples with poor relationship quality and weak communal coping, dyadic management of illness was also weak. Partner support was particularly crucial for dietary changes, as women typically prepared meals for the entire family. Other lifestyle changes that could be supported or hindered by a partner included exercise, stress reduction, and medication adherence.

Conclusion: We conclude that gendered power imbalances may influence the extent to which couple-level ideals translate into actual communal coping and health behaviors. Given that spouses and families of patients are also at risk due to shared environments, we call for a shift from an illness management paradigm to a paradigm of optimizing health for spouses and families regardless of diabetes or hypertension diagnosis.

Keywords

HIV/AIDS; Diabetes; Hypertension; Chronic disease; Comorbidity; Adherence; Couple relationship quality; Communal coping; Trust; Intimacy; Sexual satisfaction; Sub-Saharan Africa

1. Introduction

Low and middle-income countries are increasingly facing dual burdens of infectious and chronic disease, posing a major challenge for under-resourced healthcare systems in these settings. In sub-Saharan Africa, disability from non-communicable disease has increased by two-thirds within the past generation (Gouda et al., 2019). As people living with HIV (PLWH) are living longer lives, other chronic diseases have become an increasing concern, with the potential to reverse significant progress made against HIV. PLWH are at greater risk for cardiometabolic disorders (CMD), including hypertension and diabetes (Woldu et al., 2020). Globally, HIV-associated cardiovascular disease has tripled over the past two decades (Shah et al., 2018).

In Malawi, 10% of women and 6% of men are living with HIV (Ministry of Health (MOH), 2022). A 2014 study of Malawians receiving treatment for HIV found that 24% had hypertension and 4% had diabetes, with half requiring medication for CMD (Divala et al., 2016). The prevalence of CMD is likely underestimated, particularly in urban and rural populations, with more than 40% of diabetes and over half of hypertension going undiagnosed (Price et al., 2018). Among those diagnosed, management of CMD conditions is suboptimal, particularly for men and rural residents (Price et al., 2018), and available medical care for CMD is often inadequate (Amberbir et al., 2019). PLWH face additional medical challenges when diagnosed with CMD, with data from U.S. and South African populations showing they are more likely to discontinue ART (Maiese et al., 2012), disengage from HIV care (Chang et al., 2019), and receive inadequate care for their non-HIV conditions (Burkholder et al., 2012).

Supportive couple relationships may be an important resource for managing chronic disease in contexts of high poverty and inadequate healthcare, as shown in previous research with PLWH from Malawi and South Africa (Conroy et al., 2017, 2018, 2019). People living with HIV and CMD face lifelong challenges in managing medication regimens, dietary needs, and other lifestyle changes necessary to successfully live with multiple complex conditions. These challenges are magnified in low-resource settings in which high-quality healthcare, consistently available medication, and adequate food and water are not assured. Globally, relationship quality shows robust linkages to physical health, including cardiovascular health, and overall mortality (Robles et al., 2014), and stress in couple relationships increases morbidity, mortality, and the development of cardiovascular risk factors (Shrout, 2021). Research from Malawi and elsewhere has shown that communal coping and social support within couples can improve health outcomes for chronic illness (Martire et al., 2010), including hypertension and diabetes (Gilden et al., 1989; Magrin et al., 2014; Wing et al., 1991), and is associated with better engagement in HIV care (Conroy et al., 2022). Health interventions targeted at couples can be more effective than usual care or than individual-focused interventions (Arden-Close McGrath, 2017). Understanding how couple relationships could be better leveraged to manage multiple diseases is an urgent task in ensuring the health of people living with CMD and HIV.

1.1. Theory of communal coping

To frame our research inquiry, we drew upon the theory of communal coping as articulated by Helgeson et al. (2018). As shown in Fig. 1, communal coping is defined by a cognitive process of shared appraisal as well as by a behavioral dimension of shared action or collaboration (Helgeson et al., 2018). Shared appraisal consists of both partners perceive illness as “our problem” rather than the patient’s sole concern (Helgeson et al., 2018). Collaboration involves joint problem-solving and is distinct from support interactions, which may be initiated by one partner without the partners working together (Helgeson et al., 2018). Support interactions may or may not be perceived as collaborative (Helgeson et al., 2018) and can be characterized in two ways: by who initiates support (and the response of the other partner), and according to type of support offered (emotional, informational, or instrumental) (Heaney and Israel, 2008; Helgeson et al., 2018).

As hypothesized by Helgeson et al. (2018), successful communal coping should lead to better patient and partner adjustment, meaning improved psychological well-being for both, and better self-care behavior and physical health for the patient. As we are particularly interested in behaviors related to the management of CMD, we have added to our conceptual model the outcome of dyadic management of CMD (referring to diet, exercise, and medication adherence). We conceptualize communal coping as an intradyadic process that creates the basis on which a couple can successfully practice key behaviors needed for management of CMD and HIV.

Communal coping is known to be influenced by factors including culture, gender, and the specific chronic illness as well as its timelines, consequences, and controllability (Berg and Upchurch, 2007) (Fig. 1). The quality of a couple’s relationship, as well as their level of relationship satisfaction and specific relationship skills such as communication and problem

solving, both contribute to and are affected by communal coping (Berg and Upchurch, 2007; Helgeson et al., 2018). A recent study found that collaboration and not partner support was linked to higher relationship quality and lower blood sugar levels among adults living with type 2 diabetes (Helgeson et al., 2022a). Successful communal coping results in better patient adjustment to chronic illness, including better psychological well-being including stress reduction for both partners (Helgeson et al., 2018). A central focus of this research is the health behaviors performed at home as a couple to manage CMD and HIV, including diet, exercise, reduction in alcohol use, smoking cessation, and adherence to medication. We define these health behaviors as dyadic management of CMD and HIV, a distinct concept arising from more general communal coping interactions. Dyadic management is also distinct from the outcomes of patient and partner adjustment described in Helgeson et al.'s model (2018).

Despite evidence for the importance of communal coping and dyadic management of infectious and chronic diseases, little research has yet examined how couples in low-resource settings work together to manage multiple conditions, including when both partners are living with disease. In addition, research has not adequately addressed whether communal coping can be leveraged into an even more critical resource for couples managing multiple diseases in settings with poverty, insufficient healthcare, food insecurity, and other structural barriers. The current study examines the process of communal coping in Malawian couples living with HIV and CMD as well as how aspects of couple functioning such as shared illness appraisal, support, collaboration, and relationship quality are connected to dyadic management of the disease.

2. Methods

2.1. Study setting

The Healthy Hearts study is an ongoing mixed-methods observational study taking place in the Zomba district of southern Malawi, where prevalence of HIV is approximately 17% in women and 9% in men (MDHS, 2016). Malawi is one of the poorest countries in the world, and most residents of Zomba work in agriculture or unskilled manual labor (MDHS, 2016). According to the United Nations, Malawi ranks near the bottom of the global gender inequality index (169 out of 191) (UNDP, 2022). Southern Malawi is matrilineal-matrilocal, meaning that men relocate to the wife's home after marriage and women inherit land (Peters, 2010) although most households and villages are headed by men. The vast majority of women and men eventually marry (99% and 98% respectively), and more than 1 in 10 women in southern Malawi is in a polygamous marriage (MDHS, 2016).

2.2. Sample and recruitment

As part of this study, 25 couples were recruited from three HIV care clinics (urban, semi-urban, and rural) between October and December 2021. This study was approved by the Human Research Protection Program (HRPP) at the University of California, San Francisco and the National Health Sciences Research Committee (NHSRC) in Malawi.

Eligible couples were age 18 or older (both partners), married or cohabiting for at least 6 months, and had at least one partner diagnosed with HIV and either hypertension or diabetes (index patient). The index patient was recruited while attending an appointment at an HIV clinic. Sampling was purposive, with the goal of recruiting equal numbers of index patients by gender, CMD type (hypertension or diabetes), and recruitment site, and equal numbers of couples who were discordant and concordant for both HIV and CMD. Index patients were required to have disclosed their HIV and CMD status to their partners for inclusion in the study and informed consent of both partners was required. In some cases, partners were given information about the study as they picked up the index patient's medications and patients then contacted the study team if interested.

2.3. Data collection

Trained qualitative interviewers, gender-matched to participants, conducted in-depth qualitative interviews in Chichewa. Partners were interviewed separately, but simultaneously, in private areas of the HIV clinic to avoid bias, maintain confidentiality, and to elicit independent perspectives. The index patient and partner were both asked questions that explored relationship quality, communal coping (including shared illness appraisal), and dyadic management of HIV and CMD, although some questions differed based on participant's disease status. For couples in which both partners were living with HIV and/or CMD, partners were asked questions from both the patient and partner point of view to elicit how the shared experience of living with a chronic disease impacted communal coping. Interviews lasted approximately 90 min.

To assess relationship quality, participants were asked to describe their relationship according to five constructs: unity, intimacy and love, sexual satisfaction, trust (including issues of sexual infidelity and lack of trust, if present), and power dynamics. They were then asked how HIV and CMD impacted that aspect of the relationship. Unity was assessed with the Inclusion-of-Other-in-Self (IOS) measure (Aron et al., 1992), in which participants were asked to describe which set of circles best described their relationship, ranging from non-overlapping circles (numbered 1, representing two partners conceiving of themselves as fully separate) to almost fully overlapping circles (numbered 7, corresponding to partners being "almost like one person"). Although both unity and shared appraisal (as an integral component of communal coping) consist in a couple's degree of "we-ness", unity describes a couple's perceived closeness and mutuality in the relationship as a whole, whereas shared appraisal applies specifically to a couple's understanding of "we-ness" regarding a specific illness. For example, shared appraisal was assessed through questions such as, "When you think about problems related to your hypertension (or diabetes), to what extent do you view this as "our problem" [shared by you and your partner equally] or mainly your own problem?" Finally, the interviewer asked the participant about conflict, violence, and abuse, and if such issues were caused by health issues related to HIV or CMD.

2.4. Data analysis

Interviews were audio-recorded, transcribed, and translated from Chichewa to English. We analyzed data at the individual and dyadic levels using framework analysis, which uses data matrices to organize data by themes and cases (Ritchie and Spencer, 2002). In this

case, we read through each pair of couple interviews and abstracted the data into matrices organized both by couple and by themes derived from the interview guides and the interview data. We also compared within-couple accounts between partners, made notes about areas of agreement and disagreement, and wrote a memo for each couple summarizing key details of their accounts and how they represented themselves. The research team held regular meetings to present findings to the group, refine the list of codes, and discuss emerging themes.

After all data had been abstracted into matrices, we used NVivo 11 (QSR International, 2017) to further analyze the data using codes derived from the interview guide and literature on communal coping, including shared illness appraisal, types of support interactions, and constructs of relationship quality. We also coded by gender and type of disease to examine whether shared illness appraisal and type and amount of support offered varied by disease and gender. Finally, we quantified types of health behaviors and support interactions to explore patterns in the data, such as frequency by gender.

Several measures were taken to ensure rigor of the research and credibility of the analysis, and following techniques such as peer debriefing, negative case analysis, prolonged engagement, and thick description (Lincoln and Guba, 1985). Transcripts were regularly spot-checked for correctness and completeness by the research manager in Malawi. We used a team-based approach to code and interpret the findings, which were discussed during regular team meetings with the opportunity for other team members to react and present alternative views. During the analysis process, the team compared couple narratives to demographic survey data and looked for disconfirming or negative cases that would refute the working thesis. Debriefing meetings with the data collection team were held to discuss emerging findings and obtain confirmation and input from the team who collected the data and directly interacted with participants.

3. Results

Twenty-five couples (50 individuals) were included in the research. Most participants were in middle to late adulthood, with a mean age of 51 years, and mean relationship length of 21 years (Table 1). Forty of 50 participants were living with HIV, and all were on HIV treatment. Ten couples were sero-discordant. In addition, 17 women and 10 men were living with hypertension, and 1 woman and 6 men were living with diabetes. Of those living with hypertension or diabetes, all women but only two-thirds of men (11 of 16) were receiving medication. Of those on medication for HIV, hypertension, or diabetes, only a few reported that they were not adherent (2, 4, and 0 individuals, respectively).

3.1. Relationship quality

Participants were asked to describe their relationships in terms of unity, intimacy, sexual satisfaction, trust and infidelity, and power dynamics. These constructs often converged in participants' accounts, such as unity being associated with intimacy and trust. Low unity, was believed to result in conflict and poor communication and problem solving. Sexual fidelity was closely linked to trust and sexual satisfaction, and sexual satisfaction was widely perceived as an indicator of overall relationship satisfaction.

3.1.1. Unity—In nearly half of couples (12), both partners assessed their relationship as having a unity score of 7, representing the highest degree of unity. These couples spoke of mutual love and support, trust in each other not to have outside sexual partners, cooperation in family decisions and household tasks, working together to earn income and provide for their families, and caring for each other when sick. These couples often described their relationships with phrases such as “we do everything as a couple.” Some participants specifically spoke of unity extending to health issues, such as the woman who commented about the fact that both she and her husband were living with HIV, “Every problem that comes up in our family is for us both and not for an individual.”

An additional 8 couples rated their unity highly, with both partners choosing a score of 5 or higher. These couples described conflict and areas of unity and disunity, such as activities or decision-making that were not shared. The remaining 5 couples rated their unity as low, or the husband chose a high score whereas the woman chose a low score. These couples with low or divergent unity scores reported arguing and a lack of cooperation on issues, including health and sharing decisions. For example, one woman who gave her relationship a unity score of 1 said “we don’t cooperate,” and reported that her husband shouted at her and refused when she suggested he get tested for HIV. He gave quite a different account, choosing a unity score of 7 and saying “[we] do everything together, there is nothing we do separately.” In another couple in which the husband chose a score of 7 and the wife chose a score of 1, she said that although sometimes they worked together, he said about his money, “that’s mine, there is nothing yours.”

3.1.2. Sex, trust, and infidelity—In approximately half of couples, one or both partners disclosed a history of the husband having extramarital partners, and one wife claimed both she and her husband had had extramarital partners, although most extramarital partnerships were described as being in the past. One woman whose husband continued to have extramarital partners explained that she “lacked peace of mind” and that “things like those make our relationship not to be trustworthy.” Couples who reported mutual trust often cited sexual exclusivity as leading to trust, and the risk of HIV transmission as motivating men to not have extramarital partners.

Participants’ accounts communicated a strong connection between sexual satisfaction and overall relationship quality and satisfaction. Some participants described less frequent sexual activity as they aged, but these were also couples who reported high levels of conflict, including conflict over husbands’ refusal to use condoms. Most participants reported being satisfied with sex in their marriages, although some couples gave divergent accounts of sexual satisfaction or even whether they were still sexually active.

Some couples attributed to CMD problems such as getting more “tired” during sex, erectile dysfunction, and loss of sexual desire (for women). One woman living with hypertension and HIV commented, “from the time I got ill, the sexual lusts and desires went away,” and her husband reported that she sometimes refused sex. However, couples with supportive and cohesive relationships generally reported that they were still satisfied with their sexual relationships. Even if they experienced sexual issues arising from living with CMD or HIV, these issues did not seem to place strain on their relationships, and some indicated that CMD

or HIV had not affected their sex lives. One HIV-negative man with an HIV-positive wife described that he had accepted condom use “for the love of my wife” and told himself to “be satisfied.” In another case, a wife in a peaceful and supportive relationship seemed to accept that her husband’s diabetes meant he could no longer bring her sexual satisfaction. One man said that diabetes had initially affected his sexual desire, but “now that I am doing physical exercises, the situation has improved.” His wife concurred that neither his HIV nor diabetes negatively impacted their sex life, saying that “we do sex properly,” and “when there is love, the body becomes healthy.”

3.2. Shared illness appraisal

In most couples, both partners expressed that managing illness was a mutual responsibility, conceiving of it as “our problem” rather than one partner’s burden (shared illness appraisal). This was consistent whether it was the man or the woman living with HIV or CMD, or both partners. In the words of one man,

> She has the responsibility of taking care of my life and I too have a responsibility for her life. So, it shouldn’t be one person only taking care of the other but as a couple we should be supporting and taking care of each other. (husband of wife living with hypertension and HIV)

The wife of another man remarked,

> Helping one another is needed. My partner should help me because for me to look healthy it’s my partner’s responsibility … Without my partner I can’t manage on my own. (wife living with HIV and hypertension)

Some participants expressed the idea that the partners were “one blood” or “one body,” or explicitly referenced Christian teaching that marriage makes two people one.

Two women expressed a view that an individual alone bore the onus for his or her illness, and both were in a marriage in which both partners were living with CMD (as well as one partner with HIV). In both couples, wives’ and husbands’ statements about mutual responsibility for illness and mutual support during illness diverged, and both couples also reported a history of sexual infidelity and conflict. In one couple, the husband ranked their unity as high, while his wife ranked their unity as low and reported that he did not provide support.

> Even if I get sick, you can’t hear him say, “Give me your [health] passport, I should collect medicine for you.” No, he doesn’t do that, that means we are not together. (wife, both partners living with hypertension)

The second woman indicated that she had tried to be involved in her husband’s medical care but met resistance, and also said about herself, “My health issues are my own problems … I am the one who has the disease, so I am supposed to look after myself.” Both couples seemed to be facing additional relationship challenges besides the burden of multiple chronic illnesses and illustrate that lower relationship quality can lead to decreased communal coping.

In two other couples, both partners expressed that their partner should offer help and support yet did not say that they owed the same to their partner. One's own illness was "our problem," yet the spouse's illness was not described this way. One wife spoke at length about how her husband failed to support her when she was ill, and also reported that he failed to share information about his health with her, indicating a general lack of shared illness appraisal in their marriage. Not surprisingly, this couple reported few support interactions and no collaboration when it came to managing their respective illnesses. The wife explained her lack of support by saying it was difficult for her as a woman to get work to earn money to care for her husband.

> My health problems are supposed to be supported by him. For example, if am sick he needs to support me. If he is sick, I should support him. But what happens in our home is that when he is sick then he needs my whole attention that I should take care of him. But when I am sick … I thirst for water that is just some meters away from me to drink but am failing to reach to the cup while he leaves me and goes out to his work. (wife of husband living with hypertension and HIV)

He had a quite different account, saying,

> My wife has to assist me … because we live together as a family. So when I am struggling she is equally struggling, and when I have good health it means she equally has good health. Any problem I'm to experience is also her problem and also any problem which she faces is also mine. (husband living with hypertension and HIV)

However, other couples in this study demonstrated the many ways that care and support could be expressed in ways that did not cost money. For example, another couple, who was living with multiple chronic illnesses affecting both partners as well as poverty and food insecurity, described a rich variety of ways that they supported and collaborated with each other. Their interactions were characterized by love and affection, such as the wife who gladly cooked her husband separate meals but expressed concern that her husband not feel this was a burden to her.

In other cases, one partner (always the woman) provided care and support that was not reciprocated, leading to a one-sided care relationship and often resentment. For example, in a couple in which both were living with CMD or HIV, the wife picked up medication for her husband so consistently that the nurses told her to tell her husband to come himself. However, she reported that he never picked up her medications, had not once accompanied her to the clinic, and never reminded her to take her medication. He did not dispute her account of events, saying that she reminded him of clinic visits and to take his medication, and that this demonstrated her "leadership." She, on the other hand, assessed him as being "lazy."

With the exception of these couples, most couples in which both partners were living with CMD or HIV expressed that their illnesses were a shared problem.

> Since we both are sick, there is no reason of running away from him when he gets sick, and there is no reason for him to run away from me because I am sick. We

> are supposed to do things together, to support each other. (wife, both partners living with HIV)

3.3. Support interactions

Shared illness appraisal leads to support interactions, which are characterized by who initiates support, the response of the other partner, and the type of support offered. Couples in this study reported offering emotional, informational, and instrumental support. Although couples were asked whether they received support in managing illness from anyone other than their partners, such non-spousal support was rarely mentioned. Thus, we address only intra-dyadic support, which was the focus of the study. Emotional support or encouragement was mentioned least often in this study, although was reported by some couples.

> We were encouraging each other saying for the time we have been taking the medication seriously, there is no problem to show we have HIV. (wife, both partners living with HIV)

In another couple, a husband spoke of the need to treat his wife gently, saying,

> A man with a wife with hypertension should not shout at her or be cruel with her … because this tends to raise their blood pressure. So in short you have to treat them like an egg. In all your day you have to treat them as water which mustn't spill. (husband of wife living with hypertension and HIV)

Analysis of the frequency of various types of support interactions revealed that informational support or advice was described approximately twice as often as emotional support, and most often by couples in which the man but not the woman was living with CMD. Informational support often consisted of advice in how to manage CMD or HIV (such as proper diet) and reminders to take medications and follow advice given by health care workers. Some women who were supporting husbands with CMD or HIV mentioned the importance of their husbands sharing information given by health care workers, so that the wives could in turn offer reminders and informational support.

> I only tell him that he should follow the instruction of the care provider who has given him the instructions on drug dosage … the good thing is that when he has been told something new, he tells me. (wife of husband living with hypertension and HIV)

Instrumental support was the most common type of support discussed and was referenced approximately twice as often as informational support. Instrumental support included providing money for food or medicine, taking an ill spouse to a health center, or providing transportation to medical appointments. Sometimes participants spoke of taking on the work needed to provide for their spouse's needs, or working together, such as the woman who spoke of "working together, we go to the field together." Another woman described how her husband took over household work such as farming and did not expect her to do it due to her hypertension. She described symptoms such as a racing heart that impaired her ability to work and negatively affected her health overall.

A woman who was living with hypertension and HIV reported that although her husband didn't typically accompany her to medical appointments, he was strongly supportive in making sure she attended,

> He really helps me in terms of money for transport because when it is my care appointment date, he gives me a bicycle to use. Even if he also had a journey, he cancels his journey and gives me the bicycle so that I can come, or sometimes he gives me money to use for transport to come here and receive medical care. (wife living with HIV and hypertension)

In other cases, women and men communicated gendered expectations of care and support. Men described women's responsibility to prepare food. Some women said that only the man could earn sufficient income to buy food and other necessities or that there were other things only a man could do.

> I don't have a money source, he is the one who has sources of money … for example if you want to come to the hospital, it requires transport, so for me as a woman to find transport I depend on the husband. (wife, both partners living with hypertension and HIV)

One woman mentioned taking on work for pay (such as brickmaking or farm work) when her husband was unable to work, yet her account also clearly referenced expectations that men should be the ones to provide for the family and that men might be threatened by more egalitarian gender roles.

Despite many descriptions of support, both women and men admitted real barriers and constraints to support, caused by poverty or other hardship.

> As the man I'm supposed to help her by running around (searching for money) and getting food … because of being poor what happens is you don't attain this. (husband of wife living with hypertension and HIV)

> Sometimes it happens that both of us have fallen sick, so she lacks care. So, we may end up accusing each other saying "Ah, you don't care," and yet I am also sick … The moment I am thinking of caring and supporting her, I may also become sick so, she will not be helped, because I had not yet empowered her. So, I gave her power in advance, to be able to tell the children what to do. (husband of wife living with hypertension and HIV)

Analysis of support interactions revealed clear trends by gender and type of support. We coded support interactions based on number (including multiple interactions per couple) regardless of which partner described the support. Women and men were equally likely to offer emotional support, the least common type of support. Men were more likely to buy food, medication, or pay for transport to medical appointments; such support interactions initiated by men were mentioned several times as often as financial support offered by women. In contrast, all other support interactions were described as being more often initiated by women. Women were more likely to offer reminders about taking medications and attending medical appointments and to offer other kinds of informational support (such as advice). Women also offered non-financial forms of instrumental support (such as picking

up medications and preparing special meals for spouses living with CMD) several times as often as men.

These findings are particularly striking given that more women than men were living with both HIV and CMD (see Table 1). In other words, wives described offering more support interactions to husbands than vice-versa, despite the fact that in this study wives were more likely to be living with CMD or HIV and in need of support. In addition, instrumental support interactions were referenced more than twice as often for couples in which the man was living with CMD, compared to couples in which the man was living with HIV only.

In some cases, a partner's efforts to encourage healthier behavior were viewed as frustrating and even coercive, rather than supportive. For example, one man living with CMD and HIV recounted that his wife did "not allow" him to smoke or drink, and that he "hated" her for it. He further said she might deny him sex or divorce him if he went out drinking, and it was not clear whether he was speaking in jest. This relationship was marked by tension in other ways, with the wife claiming that the husband cheated on her and did not support her. In contrast, a man in a loving and supportive relationship expressed appreciation for his wife's help when he decided to stop drinking alcohol after his diagnosis of hypertension.

3.4. Collaboration

Shared illness appraisal and effective support interactions can both contribute to couple collaboration to manage the illness, although some couples who expressed that illness was "our problem" did not report effectively working together to manage the illness. This was particularly true when the woman was living with HIV and/or CMD. For example, in one couple in which the woman was living with hypertension and HIV, and the husband was living with diabetes, the husband expressed that he was "supposed to help her," whereas the wife stated that "my husband should be helping." Notably, both spouses first spoke of the husband's responsibility to buy her food; the husband blamed poverty for the fact that he was not fully able to meet this obligation. However, the wife later discussed her disappointment that he didn't support her in ways other than financial support, such as accompanying her to appointments, assisting her with household chores, and giving her advice on healthy living. She believed she had requested support which had not been provided, and expressed the view that he was "lazy." In contrast, the husband represented himself as very involved in her medical care, and as an ideal husband who worked to reduce her stress and assisted her with housework when she was physically fatigued.

3.5. Dyadic management of CMD and HIV and patient and partner adjustment

Participants in high-quality marriages were more likely to report following medical guidance for successful management of CMD and HIV, including a healthy diet, physical activity, reducing stress, taking medications as prescribed, and avoiding smoking and alcohol use. For some of these behaviors, partner support was crucial, such as for men who depended on their wives to cook meals suited to their medical conditions. In other cases, patients made their own decisions, but a partner's support could help or hinder those decisions.

The most common dietary changes reported were avoiding salt and oil, decreasing intake of sugars and starches such as white flour and potatoes, and increasing consumption of

vegetables, fruit, lean proteins and legumes, and whole grains such as *nsima* (porridge) made from unrefined maize. Some men also reported giving up smoking and alcohol (no women reported smoking or drinking), often with encouragement or cajoling from their wives. Some participants reported encouragement from spouses to exercise through walking or jogging and a few men also bicycled or played sports such as soccer. Participants with CMD also reported consciously working to reduce their stress levels, which they believed were linked to their CMD, either with the help of their partners or in the company of friends besides their spouse. For example, one man noted,

> I am supposed to reduce stress, I shouldn't think a lot … That's when I see that my diabetes levels are good. But when I am on a noisy space or getting stressed, my sugar levels heighten greatly, so I see that I am not helping myself.

Of all lifestyle changes, changes in diet arguably had the biggest impact on the family of all lifestyle changes and required the most cooperation between partners. Couples with high relationship quality did not generally report stress or conflict due to these dietary changes. For example, several couples reported that since the wife had received a hypertension diagnosis, she either removed her portion of food before adding salt to the common pot or cooked the family meal with minimal salt and let other family members add salt to taste at the table. One man said that eating from a common pot, despite the dietary changes required by his diabetes, was a sign of his family's "unity." His wife noted that when they first made the decision that the whole family would eat what he ate, "we were somewhat reluctant with it but we came to accept it." Another man recounted that his children sometimes complained about the lack of salt in the food, but he explained to them this was necessary to manage the hypertension of both their parents.

In contrast, couples with lower relationship quality described lack of cooperation in making dietary changes. In fact, all four couples who admitted that they had not made changes to their diet were couples in which at least one spouse described conflict and lack of unity in other areas of their marriage. In other cases, the spouse with CMD or HIV had made dietary changes, but without collaboration within the couple. Some wives cooked separate meals rather than the family all eating from one pot. Other wives took charge of changing their husband's diet after he was diagnosed with hypertension or diabetes, but without his cooperation or even knowledge. In one such couple the wife described that she restricted her husband's intake of sugar and salt, but the husband said that he didn't prepare food and so did not know if his diet had changed. In another couple in which both spouses were living with hypertension, the husband claimed no change to his diet whereas his wife reported using less salt and oil in her cooking, and also that her husband continued to add large amounts of sugar to his tea despite her admonitions. Both spouses ranked their relationship unity as low.

In other couples, the wife was living with CMD but received no support from her husband in making dietary changes. One woman recounted that upon first being diagnosed with hypertension several years before, she was told to cook without salt. She cooked one meal this way, did not like the taste of the food, and resumed cooking with salt as before. Her husband does not seem to have been aware of her hypertension diagnosis at the time. She had recently come to accept that she needed to cook without oil and salt, and so had begun

cooking meals in two pots, one for her and one for the rest of the family. Her husband had diabetes but reported that he had not made any changes to his diet as a result. In another couple in which the wife but not the husband was living with hypertension, the wife claimed to be eating a low-salt diet, but the husband expressed the view that people should eat what they want, arguing that his grandparents didn't limit their salt and never had hypertension. In another case, the husband reported that he told his wife that she should not be consuming salt due to her hypertension and took note when she didn't follow this instruction. Yet by her report she had to cook separate meals for herself and the rest of the family and her husband does not seem to have provided any real support for her to adopt a low-salt diet.

4. Discussion

In this research, we investigated communal coping in couples living with multiple chronic diseases, namely HIV and the cardiometabolic disorders of hypertension and diabetes. Consistent with theory of communal coping, couples who reported low levels of relationship quality also reported challenges in making lifestyle changes necessary to managing HIV and CMD. Whereas many couples reported committed and respectful relationships allowing for effective collaboration, couples who did not achieve successful dyadic management often had underlying relationship issues and conflict. Nearly all couples expressed a perspective that disease was "our problem," which, according to the theory of communal coping, should lead to effective communal coping. In contrast to the theory, shared illness appraisal did not always translate to actual support and collaboration, particularly when the woman was living with HIV and/or CMD. Gendered power imbalances may influence the extent to which couple-level ideals around health as a "couple-level issue" translate into actual communal coping and health behaviors.

Support interactions were strongly gendered, with women initiating more support interactions and offering more varied forms of support in comparison to men's focus on financial support. Couples with higher relationship quality exhibited more effective communal coping and dyadic management, although women were disproportionately responsible for the everyday management of chronic disease in the family, particularly through meal preparation. For several couples, women's support, such as modifying the family diet, was not perceived by husbands living with illness as part of a mutual process of working together. As has been found in previous research, such support could be perceived as unwelcome control (August and Sorkin, 2010; Helgeson et al., 2018). Other research has provided empirical support that moderate levels of communal coping are associated with worse relationship satisfaction and self-care (compared to high or low levels of communal coping), perhaps reflecting conflicting desires for support as well as independence (Basinger et al., 2018).

These findings correspond to research from the U.S., which has similarly noted a strongly gendered dimension to how partners offer and receive support during chronic illness. Berg and Upchurch (Berg and Upchurch, 2007) conclude that women "typically carry a larger burden of the chronic illness of their spouse" than do men, and multiple studies have shown greater collaboration in couples in which the patient is the man than when the patient is the woman (Berg and Upchurch, 2007; Helgeson et al., 2022b). Women often perform more

household chores than men when a couple is living with chronic disease (Helgeson, 1993; Revenson et al., 2005, 2016). In the U.S., as in Malawi, wives of men living with diabetes are typically responsible for food-related decisions and cooking, whereas female patients can experience lack of support from husbands in making dietary changes (Beverly et al., 2008).

Despite some previous research, Helgeson and colleagues (Helgeson et al., 2022b) recently concluded that research of couples' coping with chronic disease has insufficiently considered gender, as well as how communal coping is enacted in daily life. The gendered aspect of support around chronic disease is even more evident in settings like Malawi with clear gender inequality and prescribed gender roles regarding household labor, sex, and caregiving (Conroy et al., 2020). Thus, theoretical frameworks developed in settings with less rigid gender norms may need to more strongly integrate gender and power before being applied to couples in settings with more rigid gender norms. Gender and power imbalances may also explain why participants nearly universally held ideals around shared illness, but these ideals did not always translate into actual coping behaviors in couples. Furthermore, successful communal coping is not always possible, such as in situations of low resources and severe ongoing stressors (Afifi et al., 2020). Individuals in highly interdependent cultures may be motivated to engage in communal coping out of concern for the welfare of the group, or conversely to avoid communal coping out of a desire to protect and not burden other members of the group (Afifi et al., 2020). We posit that the roles adopted by patients and caregivers will be strongly influenced by gender norms, which will affect whether women and men engage in or avoid communal coping.

Existing research and models of communal coping also have not adequately address the reality of couples in which both are living with one or more chronic diseases. Conceptual models typically distinguish between patient and partner rather than acknowledging that partners may also be patients (Badr and Acitelli, 2017; Helgeson et al., 2018), and research has similarly focused on couples in which there is only one patient rather than couples in which both partners are living with CMD (Helgeson et al., 2022b; Khan et al., 2013). One study that enrolled couples in which one partner was living with a severe health issue determined that in a majority of couples both partners in fact were living with health issues (Basinger et al., 2021). Despite similar levels of communal coping, these couples reported lower perceived health and resilience compared to single-diagnosis couples (Basinger et al., 2021).

Our research highlights the complexity of living with multiple diseases, including for couples who have long been living with HIV but were more recently diagnosed with CMD. Whereas both HIV and CMD require regular medical care, Malawi's healthcare system is currently less equipped to offer effective treatment for chronic conditions like hypertension (Pfaff et al., 2017). Furthermore, management of CMD requires lifestyle changes, including diet modification and physical activity, in addition to good medication adherence. Whereas antiretroviral therapy results in viral suppression of HIV in the majority of patients (Ng'ambi et al., 2022), both pharmacological and nonpharmacological interventions (e.g. lifestyle changes) are needed to achieve optimal clinical outcomes for persons living with hypertension and/or diabetes (El Sayed et al., 2023).

Much research supports the fact that shared behaviors and lifestyle factors lead to "health concordance" in couples (Meyler et al., 2007). For couples living with HIV, successful treatment of HIV benefits not only the patient but also protects the uninfected spouse. Although CMD is not communicable, partners of patients with CMD are also at increased risk of developing the same condition due to their shared environment (Kiecolt-Glaser and Wilson, 2017; Leong et al., 2014). Thus, both partners would benefit from adopting healthy lifestyle behaviors which equally promote prevention as well as management of CMD. Other members of the household such as older children or extended family members may also provide important support for healthy lifestyle behaviors (Martire and Helgeson, 2017) or may themselves be in need of lifestyle change to prevent or manage CMD. Future research might examine the involvement of children and other family members in health promotion and lifestyle changes, as well as consider a whole-family approach to optimizing health, building on lessons learned in family systems approaches to diabetes management. Differentiated care models may be necessary to target different types of couples based on their unique health needs and relationships. Couples with high relationship quality may not need to build intimacy, trust, and unity, but may need access to broader health information on CMD and lifestyle changes. Couples with more traditional gender norms may benefit more from interventions focused on equitable caregiving within the relationship so that both partners feel valued and supported in their relationships.

Regarding future directions, further research is needed to confirm these findings and quantitatively explore factors posited by Helgeson et al. (2018) to be moderators or mediators of the effect of communal coping on patient outcomes. Finally, we note the need for research to explore the potential of couples' interventions to increase communal coping, dyadic management of CMD and HIV, and positive health outcomes among couples in African settings. Promising models for such couples' interventions do exist (Conroy et al., 2023) and have demonstrated impact on other health issues in African populations (Darbes et al., 2019).

4.1. Limitations

This dyadic qualitative study yielded rich data which allowed for in-depth exploration of couples' experiences, but we also note the following limitations and opportunities for future research and intervention. Men and particularly women living with diabetes were under-represented in the sample, and we may not have reached saturation regarding the particular challenges of living with diabetes. Participants may have represented their marriages and behaviors in socially desirable ways, although comparison of couples' accounts provided some indication of the veracity of their descriptions (when couples' accounts converged) or the presence of social desirability bias (when couples' accounts diverged).

5. Conclusions

For couples living with one or more chronic diseases, achieving health means not only managing existing disease, but preventing onset of new disease. HIV prevention for couples has been refined over decades and addresses a relatively narrow set of sexual behaviors. In contrast, prevention for CMD is still in its infancy in sub-Saharan Africa and requires

addressing social and structural health disparities as well as supporting multiple lifestyle behaviors, including diet and physical activity, across the lifespan. We call for a commitment to CMD prevention as well as treatment in resource-limited settings based in a paradigm of optimizing health for spouses and families regardless of CMD diagnosis. We also urge expansion of existing models of communal coping to explicitly include couples in which both are living with chronic disease. Given that environmental and lifestyle factors such as diet affect both partners, it is essential for couples to effectively collaborate on health-promoting behaviors at the couple level to better manage and prevent CMD for themselves and other family members.

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Data availability

The data that has been used is confidential.

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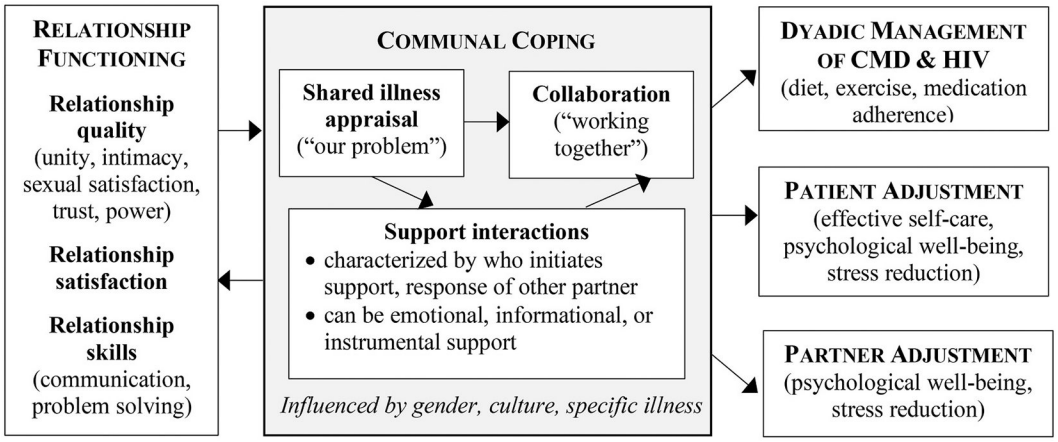

Fig. 1.

Conceptual model of communal coping in couples with chronic disease. *Note:* Fig. 1 is based on the theory of communal coping and adjustment to chronic illness presented in Helgeson et al. (2018).

Table 1

Demographics and disease status of participants.

	Women (N = 25)		Men (N = 25)		Total (N = 50)	
	% (N)	mean (SD)	% (N)	mean (SD)	% (N)	mean (SD)
Age in years		47.6 (5.8)		55.0 (7.0)		51.3 (5.8)
Relationship duration (years)						20.8 (12.7)
Primary school education or less Religion	84% (21)		52% (13)		68% (34)	
Christian	88% (22)		88% (22)		88% (44)	
Muslim	12% (3)		12% (3)		12% (6)	
Recruitment site for index patient						
Urban district hospital					56% (28)	
Rural community hospital					36% (18)	
Peri-urban health center					8% (4)	
Living with HIV	80% (20)		80% (20)		80% (40)	
Time since diagnosis (years)		10.5 (5.4)		10.2 (5.1)		10.3 (5.1)
Currently taking medication	100% (20)		100% (20)		100% (40)	
Never/rarely missed pills, past week	90% (18)		100% (20)		95% (38)	
Living with HTN	78% (17)		40% (10)		54% (27)	
Time since diagnosis[a] (years)		7.8 (6.3)		5.4 (4.4)		6.9 (5.7)
Currently taking medication	100% (17)		60% (6)		85% (23)	
Never/rarely missed pills, past week	82% (14)		83% (5)		83% (19)	
Living with DM	4% (1)		24% (6)		14% (7)	
Time since diagnosis[a] (years)		13.0 (-)		3.6 (4.5)		4.9 (5.4)
Currently taking medication	100% (1)		83% (5)		86% (6)	
Never/rarely missed pills, past week	100% (1)		100% (5)		100% (6)	

[a]Based on clinical records. All other data were self-reported.