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Psychosocial interventions among patients with cancer and their family caregivers in the Sub-Saharan Region: A systematic review

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Systematic review of psychosocial interventions for adult cancer patients and their family caregivers in Sub-Saharan Africa

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ABSTRACT

Cancer is becoming a public health issue in the Sub-Saharan Africa (SSA). This systematic review aims to synthesise psychosocial interventions and their effects on the health outcomes of adult cancer patients and their family caregivers in SSA. We identified eligible publications in English language from PubMed, Cumulative Index of Nursing and Allied Health Literature Plus with Full Text, Embase, APA PsycInfo, Scopus, and African Index Medicus databases. We included psychosocial interventions targeted adult cancer patients/survivors or their family caregivers in SSA. This review identified five psychosocial interventions from six studies that support adult cancer patients and their family caregivers in SSA. The interventions focused on providing informational, psycho-cognitive, and social support. Three interventions significantly improved quality of life outcomes for cancer patients and their caregivers. Significant gaps exist between the rapidly increasing cancer burdens and the limited psychosocial educational interventions supporting adult cancer patients and their families in SSA. The reviewed studies provide preliminary evidence on development and testing interventions that aim to improve patients' and caregivers' quality of life.

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KEYWORDS

Psychosocial intervention; sub-saharan Africa; systematic review; cancer patients; family caregivers

Introduction

Although communicable diseases continue to dominate Sub-Saharan Africa (SSA), cancer is becoming a public health issue in this region as a result of aging and lifestyle changes (Gouda et al., 2019; International Agency for Research on Cancer, 2018). About 801,392 new cancer cases were diagnosed in 2020, and the number of new cases per year is projected to increase 70% by 2030 (Bray et al., 2022; International Agency for Research on Cancer, 2018). The cancer mortality rates in this region have also increased and about 520,158 deaths were estimated to have occurred in SSA in 2020 (Bray et al., 2022; Larkin, 2022). This reported cancer burden may

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have been underestimated due to poor access to health services and low quality of cancer data systems (Morhason-Bello et al., 2013). Because of the cost of oncological care, limitations in infrastructure, and insufficient numbers of healthcare providers, many countries in SSA face multiple challenges to meet the increasing demand for cancer services (Kingham et al., 2013).

Our recent systematic review suggested that cancer has a significant impact on all aspects of quality of life (QOL) for cancer patients and their family caregivers in SSA (Qanir et al., 2022). Similarly, other researchers have found that cancer patients in SSA often suffer from pain, lack of energy, sleeping difficulties, depression, and reduced social activities (Kugbey et al., 2019; Ndiok & Ncama, 2018). Additionally, families are intensely involved in the care of patients and take on enormous caregiving responsibilities due to limited cancer care resources (Kizza & Muliira, 2020). In addition to caregiving, family caregivers must continue to perform their other duties such as income earning and caring for other family members (Githaiga, 2015). These stressors lead to a wide range of negative effects on physical and mental health, including poor eating, lack of sleep, loss of hope, distress, and isolation (Muliira et al., 2019; Onyeneho & Ilesanmi, 2021). Although clinical practice guidelines have included recommendations for providing psychosocial supportive care for people with cancer (Jacobsen & Lee, 2015), the psychosocial needs of cancer patients and family caregivers are often undetected, and healthcare systems have failed to provide care and services to improve their QOL.

To meet the supportive care needs of cancer patients and family caregivers, research on psychosocial interventions has been conducted worldwide (Song et al., 2021). Psychosocial interventions, generally defined as nonpharmacological interventions including a variety of psychological and education components (National Cancer Institute, 2022), offered to cancer patients and family caregivers have been effective in increasing self-efficacy and ability to cope, enhancing meaning and purpose, and improving QOL (Gabriel et al., 2020; Northouse et al., 2010; Park et al., 2019). However, most psychosocial interventions have been conducted in developed countries, research in this area in SSA is limited (Gabriel et al., 2020; Onyeka et al., 2022). Additionally, how to adapt supportive care guidelines from resource-rich countries to countries with limited resources, fewer healthcare professionals and specialists, and different sociocultural context remains questionable. Therefore, this systematic review aims to synthesise the psychosocial interventions for adult cancer patients and/or their family caregivers in SSA and examine the effects of these interventions on the health outcomes of adult cancer patients and their family caregivers.

Methods

We developed a comprehensive systematic review protocol based on the 2020 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Page et al., 2021). The review protocol was registered on PROSPERO (CRD42020152838).

Eligibility criteria

The inclusion criteria were detailed according to the Population, Interventions, Comparator, Outcomes and Study design(s) (PICOS) framework (Liberati et al., 2009). To meet the inclusion criteria, publications must have: (1) targeted adult (≥ 18 years old) cancer patients and/or their family caregivers in SSA; (2) included psychosocial interventions (i.e. nonpharmacological interventions including a variety of psychological and education components); (3) used randomised controlled trials (RCTs) or quasi-experimental designs; and (4) published as full-text articles in English. Studies were excluded if they focused on participants with diseases other than cancer.

Search methods

We developed the search terms in consultation with a university health sciences librarian. The key concepts that guided the search included 'psychosocial or supportive care', 'Sub-Saharan Africa',

‘cancer’, ‘family caregiver’, and ‘patient’. We searched the publications from the dates of inception through the final search date of October 21, 2021, in the following six databases: PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL Plus with Full Text), Embase, APA PsycInfo, Scopus, and African Index Medicus. The full electronic search strategy for all databases was the same as the team recent systematic review of studies on the prevalence and severity of overall and subdomains of QOL and their influencing factors (Qanir et al., 2022). We also searched the African Journals Online (AJOL) database, but this search returned no new relevant articles.

The search results were exported to Endnote X8 software and duplicates were removed. The remaining studies were uploaded into Covidence™ – a web-based tool that supports systematic reviews (Cochrane community, 2018). Two researchers independently screened the titles and abstracts and then the full text of all identified articles. We resolved any disagreements about an article’s eligibility through ongoing discussion between the two researchers. A third researcher was available to help resolve the disagreement when needed.

Assessment of risk of bias in the included studies

We used version 2018 of the Mixed Methods Appraisal Tool (MMAT) to assess the methodological quality of the studies that used qualitative, quantitative randomised controlled trials, quantitative non-randomised, quantitative descriptive, and mixed methods (Hong et al., 2018). We have used MMAT in a series of three systematic reviews that the team recently conducted to understand the state-of-art in cancer survivorship research and related care in SSA (Qanir et al., 2022). Five methodological quality criteria were used to assess each category of study design. Rating of each criterion includes responses of yes, no, or could not determine. The MMAT was not developed to create an overall score, we, thus, followed the developers’ advice to provide a detailed report of the ratings of each criterion to better inform the quality of the included studies. Two researchers independently assessed the risk of bias in each of the included studies. We resolved any assessment discrepancies through team discussion.

Data extraction and synthesis

Four researchers independently extracted the data from the studies that met the inclusion criteria using Excel. We extracted study characteristics (e.g. study aim, theoretical basis, design), participants characteristics (e.g. sample size, cancer type and stage, age, gender), intervention characteristic (e.g. component, mode, format, duration, dosage, interventionist) and intervention outcomes. We compared the extracted data, resolved discrepancies through ongoing team discussion, and merged the data. We conducted narrative analysis to synthesise the findings instead of a meta-analysis of the outcomes because of incomplete and heterogeneous information reported in these studies.

Results

The initial search of the electronic databases yielded a total number of 2,329 records (Figure 1). After removing duplicates and performing title and abstract review, we retained 124 papers for a full-text review, which yielded six articles that met the inclusion criteria for this review. Two articles reported the feasibility and effectiveness testing outcomes from the same intervention (Morse et al., 2021; Ngoma et al., 2021).

Study characteristics

The interventions were conducted in Nigeria (Gabriel & Mayers, 2019; Onyechi et al., 2016; Onyedibe & Ifeagwazi, 2021), Tanzania (Morse et al., 2021), and Kenya (Weru et al., 2020). The studies

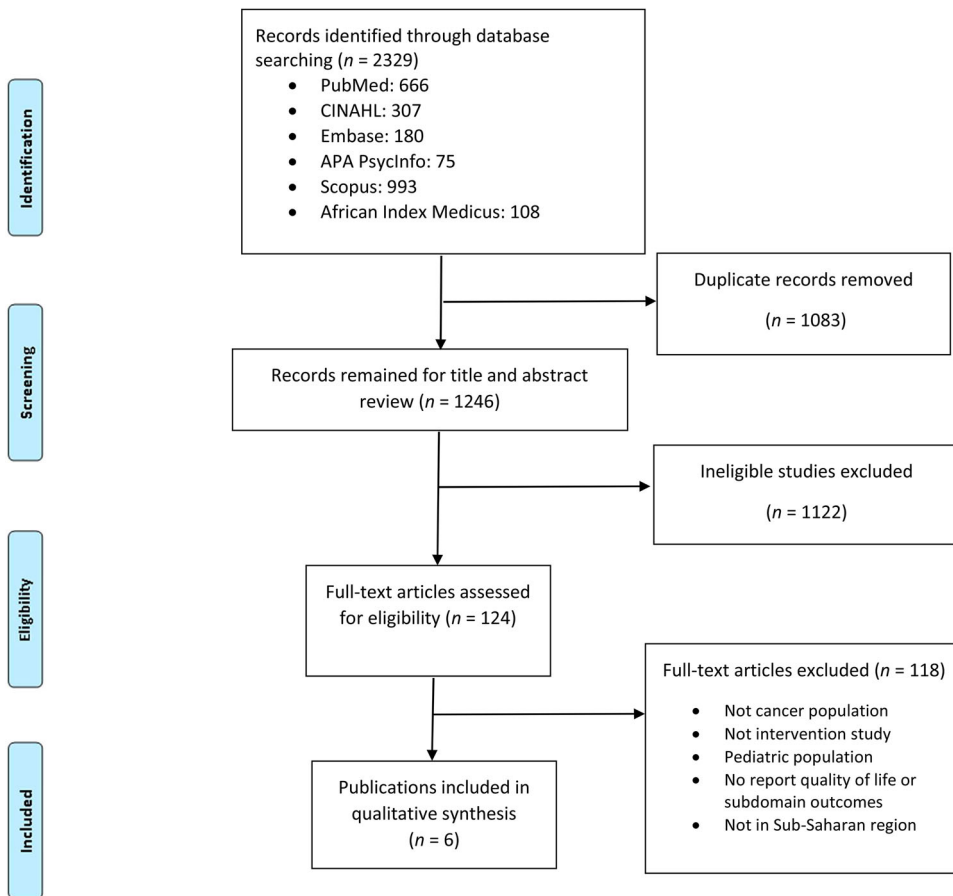


Figure 1. Preferred reporting items for systematic reviews and meta-analysis (PRISMA) flow chart of study identification and selection.

reported the intervention effectiveness in randomised controlled trials (RCTs) ($n = 3$) (Onyechi et al., 2016; Onyedibe & Ifeagwazi, 2021; Weru et al., 2020) and the intervention effects and feasibility in quasi-experimental studies ($n = 3$) (Gabriel & Mayers, 2019; Morse et al., 2021; Ngoma et al., 2021) (Table 1). All studies used control groups including ‘usual care’, ‘usual care with conventional counseling’, or ‘usual care with phone-contact’, or ‘usual care with psychoeducational material’. Two studies reported the theoretical bases that included Lazarus and Folkman’s transactional model of stress and coping (Gabriel & Mayers, 2019) and WHO palliative care pillars (e.g. policy, drug availability, and implementation) (Morse et al., 2021). Of six studies, three studies focused on patients only (Ngoma et al., 2021; Onyedibe & Ifeagwazi, 2021; Weru et al., 2020); one study focused on family caregivers only (Gabriel & Mayers, 2019); and two studies focused on both patients with cancer and family caregivers (Morse et al., 2021; Onyechi et al., 2016).

Participant characteristics

The study sample sizes ranged from 17 to 144. Most studies included patients with different types of cancer but primarily breast cancer. Three studies reported cancer stage: two focused on patients with advanced cancer (Morse et al., 2021; Weru et al., 2020); one focused on patients from stage I to III (Onyedibe & Ifeagwazi, 2021). The ages of samples were inconsistently reported using

Table 1. Characteristics of study and participants (n = 6).

First author, year, and country research conducted	Study aim	Theoretical basis	Design	Sample size	Cancer type and stage	Mean age (years)	Gender
Gabriel 2019 Nigeria	Evaluate the effectiveness of a psychosocial intervention programme on the QOL and caregiver burden of the primary caregivers of women with breast cancer	Lazarus and Folkman's transactional model of stress and coping	Quasi-experimental	108 CG (I = 54; C = 54)	Breast cancer	63.0% being below 40 years	CG: 55.6% Female
Morse 2021 Tanzania	Design and develop a web and mobile app to support outpatient symptom assessment and care coordination and control, with a focus on pain	WHO palliative care pillars (policy, education, drug availability, and implementation)	Quasi-experimental pilot study	Usability testing: 7 PT and CG; Pilot test: 10 PT	Mixed cancer, Advanced stage	Usability testing PT: range 34–64 years	Usability testing PT: 86% Female
Ngoma 2021 Tanzania	Assess the effectiveness of a smartphone- or Web-based app, mPalliative Care Link, to extend specialist access via shared data and communication with local health workers	WHO palliative care pillars (policy, education, drug availability, and implementation)	Quasi-experimental	98 PT	Mixed cancer, stage II-IV	36–65 years: 78%	72% Female
Onyechi 2016 Nigeria	Examine the effects of rational emotive hospice care therapy on problematic assumptions, death anxiety, and psychological distress in cancer patients and their caregivers.	N/A	RCT	32 PT 52 CG	Breast, cervical, and prostate cancer	PT: 48 CG: 55	PT: 88% Female CG: 85% Female
Onyedibe 2021 Nigeria	Investigate the effect of eight weeks of a group psychoeducation intervention on cognitive emotion regulation	N/A	RCT	28 PT	Breast cancer, stages I to III, and had completed chemotherapy	I: 45.5 C: 49.5	100% Female
Weru 2020 Kenya	Assess the effect of dignity therapy on QOL	N/A	RCT	144 PT (I = 72; C = 72)	Mixed cancer, advanced stage	I: 50.5 C: 52.5	PT: 70% Female

Note. PT = Patient; CG = Caregiver; RCT = Randomised controlled trial; QOL = Quality of life; I = Intervention group; C: Control group; N/A = Not available.



range, mean, and percentages. Most participants were female patients and caregivers younger than 55 years of age.

Psychosocial intervention characteristics

The interventions included rational-emotive hospice care therapy (Onyechi et al., 2016), dignity therapy (Weru et al., 2020), psychoeducation (Gabriel & Mayers, 2019; Onyedibe & Ifeagwazi, 2021), and symptom management and communication (Morse et al., 2021; Ngoma et al., 2021). The intervention components can be categorised as providing informational, psycho-cognitive, and social support. Information support included information about cancer and treatment, psychosocial factors in cancer, self-care, nutrition, and practical tips and information (Gabriel & Mayers, 2019; Onyedibe & Ifeagwazi, 2021). Psycho-cognitive components involved psychological wellbeing, cognitive functioning, motivation to change dysfunctional emotions and thoughts, decision-making process, cognitive restructuring, confrontation, acceptance and coping strategies (Onyechi et al., 2016). Social support included communication strategies, therapeutic alliance, and multigenerational family therapy (Morse et al., 2021; Ngoma et al., 2021; Onyechi et al., 2016). These interventions were delivered by nurses ($n = 2$) (Gabriel & Mayers, 2019; Onyechi et al., 2016), a trained counsellor ($n = 1$) (Weru et al., 2020), clinical psychologists and a doctor ($n = 1$) (Onyedibe & Ifeagwazi, 2021), and a multidisciplinary team of palliative care specialists, health services researchers, engineers, and designers ($n = 2$) (Morse et al., 2021; Ngoma et al., 2021). The modes of delivery included in-person ($n = 4$) (Gabriel & Mayers, 2019; Onyechi et al., 2016; Onyedibe & Ifeagwazi, 2021; Weru et al., 2020) and mobile/ computer app ($n = 2$) (Morse et al., 2021; Ngoma et al., 2021). The intervention duration and session varied significantly across studies, ranging from 1 d/1 session (Weru et al., 2020), 6 weeks/6 sessions (Gabriel & Mayers, 2019), 8 weeks/8 sessions (Onyedibe & Ifeagwazi, 2021), 14 weeks/14 sessions (Onyechi et al., 2016), to four months by app (Morse et al., 2021; Ngoma et al., 2021). The length of each session ranged from 30 (Weru et al., 2020) to 90 min (Gabriel & Mayers, 2019; Onyedibe & Ifeagwazi, 2021) Table 2.

Effects of psychosocial interventions

Five studies reported the intervention effects on the QOL outcomes of patients and their caregivers. In a RCT that targeted both cancer patients and their caregivers, Onyechi et al. (2016) reported significant improvement in psychological status (i.e. less problematic assumptions, low anxiety, and low psychological distress) among participants in the intervention group compared to those in the control group over time. In their RCT that focused on patients, Weru et al. (2020) reported no significant group difference in QOL. In their quasi-experimental study focused on family caregivers, Gabriel and Mayers (2019) reported a greater improvement in the overall QOL in the intervention group as compared to the control group. Onyedibe and Ifeagwazi (2021) reported in their RCT that patients in the intervention group reported significant decrease in maladaptive cognitive regulation (i.e. self-blame, rumination and catastrophizing) over time. In the two studies that used quasi-experimental design to examine the usability and effectiveness of an eHealth intervention, the respondents reported that the app was easy to use and the acceptability would improve with increased experience using the app (Morse et al., 2021); however, no significant differences in symptom severity between groups in the follow-up pilot study testing the intervention effectiveness (Ngoma et al., 2021).

Risk of bias assessment

Table 3 summarises the quality assessment of the publications. The three RCTs fulfilled the criteria of baseline balance and completed outcome data, but only two RCTs performed randomisation

Table 2. Interventions characteristics and effect ($n = 6$).

Study	Intervention details		Control group	QOL outcome measurement	Findings	
	Component	Mode, format, duration, dosage				Interventionist
Gabriel 2019 Nigeria	A psychosocial intervention: Providing information about breast cancer, dealing with emotional aspects of caring, adjustment to caregiving, communication strategies, self-care, practical care information	In-person 6 weeks 6 sessions (90 min)	Nurses	Usual care	Caregiver Quality of Life Index Cancer (CQOLC)	Greater improvement in overall QOL ($p = 0.020$) in the intervention group as compared to the control group.
Morse 2021 Tanzania	Symptom management and communication: Facilitating real-time symptom reporting for direct communication between patients or caregivers and their clinical care team members, and specialist care coordination to support prompt and effective community-based symptom control	App (Computer or mobile) 4 months	Multidisciplinary study team Palliative care specialists, health services researchers, software engineers and designers, and a user experience specialist	Usual care and phone-contact to collect palliative care outcome	Perception of usability for task: ranged from a low degree of ease and acceptability (3 out of 4) to a very high degree of ease and acceptability (1 out of 4)	Usability: Respondents found it easy to use, with an average usability score of 2 and below for any given task. Several respondents remarked that their ease of use and acceptability would improve with increased experience using the app.
Ngoma 2021 Tanzania	Symptom management and communication: Facilitating real-time symptom reporting for direct communication between patients or caregivers and their clinical care team members, and specialist care coordination to support prompt and effective community-based symptom control	App (Computer or mobile) 4 months	Multidisciplinary study team Palliative care specialists, health services researchers, software engineers and designers, and a user experience specialist	Usual care and phone-contact to collect palliative care outcome	The African Palliative Outcome Scale	Symptom severity was significantly lower in the phone-contact group ($p < 0.0001$), and symptom severity decreased over time in both groups ($p = 0.0001$); however, between-group change in overall symptoms over time did not vary significantly ($p = 0.34$).
Onyechi 2016 Nigeria	Rational emotive hospice care therapy: Using a family-centered approach to disputing problematic assumptions, motivation, decision-making, cognitive restructuring, confrontation, therapeutic alliance, acceptance, socratic dialogue, reframing, metaphors, therapeutic approaches (e.g.	In-person 14 weeks 10 sessions (45 min) and 4 follow-up sessions	Oncology nurses	Usual care and conventional counselling	Problematic assumptions Questionnaire; Death Anxiety Questionnaire; Kessler Psychological Distress Scale	Less problematic assumptions ($p = .000$), lower death anxiety ($p = .000$), and lower psychological distress ($p = .000$) in the intervention group over time as compared to the control group

(Continued)

Table 2. Continued.

Study	Intervention details		Control group	QOL outcome measurement	Findings	
	Component	Mode, format, duration, dosage				Interventionist
Onyedibe 2021 Nigeria	relaxation techniques), multigenerational family therapy, solution-focused brief therapy, imagery work, and Gestalt therapy Group psychoeducation: Providing information about cancer and treatment; psychosocial factors in cancer; coping strategies; and nutrition	In-person 8 weeks 8 session (90 min)	Clinical psychologists and a doctor	Usual care and psychoeducational material	Cognitive Emotion Regulatory Questionnaires	Significant decrease in maladaptive cognitive regulation (self-blame, rumination and catastrophizing) in the intervention group over time
Weru 2020 Kenya	Dignity therapy: Using 10 core questions to address the most important accomplishments, lessons in life, hopes and dreams for loved ones, and etc	In-person One session (30-60 min)	Counselors	Usual care	Edmonton symptom scale (ESAS).	No group difference in quality of life.

Note. N/A = Not available

Table 3. Quality of articles summary utilising the mixed methods appraisal tool (MMAT) version 2018.

Category of study designs	Number of articles	Methodological quality criteria	Responses		
			Yes	No	Could not determine
Randomised controlled trials	3	Is randomisation appropriately performed?	2	0	1
		Are the groups comparable at baseline?	3	0	0
		Are there complete outcome data?	3	0	0
		Are outcome assessors blinded to the intervention provided?	1	1	1
Quasi-experimental	3	Did the participants adhere to the assigned intervention?	0	0	3
		Are the participants representative of the target population?	3	0	0
		Are measurements appropriate regarding both the outcome and intervention (or exposure)?	2	1	0
		Are there complete outcome data?	2	1	0
		Are the confounders accounted for in the design and analysis?	1	2	0
		During the study period, was the intervention administered (or did exposure occur) as intended?	0	0	3

appropriately. Two RCTs failed to report how research blinding was conducted. Of the three quasi-experimental studies, one didn't use appropriate measurements or provide complete outcomes data, the other two studies didn't account for the effects of confounders in the design and analysis. None of these six studies reported whether the intervention was administered as intended.

Discussion

As the number of cancer patients is drastically increasing in SSA, cancer burden has become a major public health problem. This review revealed the scarcity of psychosocial interventions to meet the rapidly increasing needs of cancer patients and family caregivers in SSA. From six major databases, we only identified five psychosocial interventions from six studies to support adult cancer patients and their family caregivers in SSA. This review identified multiple potentially effective psychosocial intervention components including informational, psycho-cognitive, and social support. Three studies reported significant positive intervention effects on QOL outcomes among patients and their caregivers.

The low number of psychosocial interventions may suggest that psychosocial supportive care continues to be of low priority in SSA despite the accelerating cancer burden in SSA (Bray et al., 2022). This may be due to the competing priorities of infectious diseases (e.g. HIV/AIDS), and a lack of investment in the oncologic care infrastructures by governments, including funding for system support and healthcare providers. The discrepancy between the rapid increasing cancer burden and the lack of survivorship support programmes may suggest that there is an urgent need to develop culturally appropriate psychosocial interventions and conduct appropriately designed clinical trials to generate evidence for supportive care for cancer patients and their family caregivers in SSA.

This review has identified multiple psychosocial intervention components that focused on providing informational, psycho-cognitive, and social support. There are considerable variations in the combinations of different intervention components in these studies, which may reflect researchers' efforts to meet various supportive care needs for cancer patients and caregivers in SSA. Different from varied intervention components, the modes of intervention delivery have been in-person except one intervention that used a mobile app format to provide end-of-life support for cancer patients (Morse et al., 2021; Ngoma et al., 2021). Even though no significant differences in symptom severity were found between the patients in the intervention group and those in the control group in the mobile app pilot study using a quasi-experimental design (Ngoma et al., 2021), it is noteworthy

that patients reported high satisfaction with the care that the intervention provided (e.g. availability of treatment, access to health providers and emotional support). The demonstrated acceptability and usability of the mobile app intervention among patients and caregivers may suggest the potential to improve health outcomes for cancer patients and their caregivers in the resource-limited SSA region through remote access to psychosocial supportive care as the adoption of mobile technology increases (Morse et al., 2021). Future studies with sufficient powers are needed to investigate the effectiveness of mHealth psychosocial interventions on improving the health outcomes of cancer patients in the SSA region.

Out of the five interventions, three demonstrated statistically significant effects on the health outcomes of cancer patients and their family members. Outcome measures varied between these studies as did their results in several areas including improvement in overall QOL, improvement in psychological status (i.e. less problematic assumptions, low anxiety, and low psychological distress), and increased adaptive cognitive regulation (i.e. self-blame, rumination, and catastrophizing). However, some studies used measurement tools that have not been validated in the SSA population to evaluate the intervention effects (Weru et al., 2020), suggesting that additional research is needed to culturally validate the instruments in the SSA population to improve research rigour.

This review also revealed the challenges in conducting psychosocial intervention research in SSA. For example, recruitment of participants can be challenging because some cancer patients declined participation due to stigma and inadequate knowledge about the interventions (Weru et al., 2020). Additionally, culture, personality, and some sociodemographic factors (e.g. income) may also not have been fully explored and incorporated into these intervention programmes (Gabriel & Mayers, 2019). Moreover, Gabriel and Mayers (2019) noted that the lack of significant improvement in caregiver's financial concerns between the groups might be due to the limited basic financial resources because most participants were already unemployed and remained so throughout the intervention. These findings suggest that future research needs to better understand the cultural context and to evaluate the cultural adaptations of interventions. Mounting evidence has supported the effectiveness of psychosocial interventions on improving the health outcomes of cancer survivors and their family caregivers in the non-SSA countries. To better meet the supportive care needs of Sub-Saharan Africans with cancer and their families, future research may culturally adapt existing interventions using the WHO Step-by Step approach (language, culture, content, and context) in such a way that the intervention is compatible with an individual's cultural beliefs, meaning, and values; the adapted intervention should be rigorously evaluated for their cultural relevancy and effects in the context of limited resources and the SSA cultural environment (Carswell et al., 2018; Marsiglia & Booth, 2015).

The review has the following limitations. First, the heterogeneity in the research designs and measurements of the small number of reviewed studies has made it impossible to determine which intervention component works the best to improve outcomes. Second, this review only included only six studies that were published in peer-reviewed literature in English. Due to personnel constraints, non-English, grey literature, and unpublished literature were excluded, which might have resulted in potential publication bias. Articles published in other languages could have provided additional relevant information. Finally, SSA is a large, culturally diverse region, and the results of the reviewed studies may have limited generalizability.

Recommendations for future action on psychosocial interventions for cancer patients and family caregivers in the SSA:

- (1) Recognise the importance of and integrate psychosocial care into mainstream oncologic services.
- (2) Reduce cancer-related stigma through public education.
- (3) Consider the social and culture context of patients and caregivers when design and evaluate psychosocial behavioural interventions.

- (4) Support SSA researchers and clinicians to develop psychosocial interventions through international collaborative research, education, and training.
- (5) Promote evidence-based cancer service policy making to meet the needs of cancer survivors and their families in SSA.

As the cancer burden continues to grow in SSA, the need for a rapid increase in psychosocial interventions becomes more urgent. The six studies in this review have provided preliminary evidence and lessons learned for researchers and clinicians to design and develop psychosocial interventions that aim to improve patients' and caregivers' QOL in SSA.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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