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Engaging the vulnerable: Health literacy for children combating non communicable diseases in Sub Saharan Africa, A review

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Abstract

Background: Instilling health literacy in children could reduce the chances of poor health behaviours and non-communicable diseases (NCDs). Good childhood health literacy has been associated with routinely having a healthier diet, as well as a better understanding and use of nutritional information on foods and drinks. Building resilience in childhood through health literacy programmes can also have a positive impact on psychological health and well-being across the life course, and reducing the severity of depression experienced in adulthood among other diseases.

Objectives: The objectives of the study were to find out how health literacy is offered to children in sub-Saharan Africa (SSA), to explore benefits of health literacy to children, to establish how SSA sustain health literacy in children.

Methods: Literature review was used to gather data.

Results: Findings indicated that health literacy is offered to children using the school model in SAA. The benefits of health literacy in children could reduce the chances of poor health behaviour in adulthood. Health literacy could be sustained if embedded in the school curriculum.

Recommendations: The study recommended clear practical, proper guidelines of health literacy curriculum at school, the establishment of school libraries, involvement of the public libraries in instilling health literacy to children with the aim of reducing NCDs in children.

Conclusion: The study concludes that health literacy should be taught from infancy stage

Keywords: Health literacy, Children, Non communicable diseases, sub Saharan Africa

Introduction

Health literacy could be defined as the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (Ratzan & Parker, 2000). Lee et al. (2004) noted that moderators of health literacy include disease and self-care knowledge, health risk behaviour, preventive health, and physician visits, and compliance with medications. Social support could be another moderator for the relationship of health literacy with health status and health service use. Moreover, Ratzan (2001) conceptualizes health literacy as a framework for health promotion activities and a link between knowledge and practice. Good childhood health literacy according to Cha et al. (2014) has been associated with routinely having a healthier diet, as well as a better understanding and use of nutritional information on foods and drinks. These benefits reduce the chances of poor health behaviours in adulthood. For instance, Paakkari, Inchley, Schulz, Weber, and Okan (2019) found several studies in Europe reported a positive association between high levels of health literacy and better health outcomes in children. Furthermore, the WHO collaborative Health Behaviour in School-aged Children (HBSC) survey found that health literacy is one of the main factors contributing to health differences and is associated with educational outcomes such as academic achievement and post-school aspirations (Paakkari, Torppa, Paakkari, Välimaa, Ojala, Tynjälä (2019). According to Nutbeam, (2001) and Paakaari et al., (2019) health literacy is a useful phenomenon in the understanding and reduction of avoidable health disparities because it can be learned and developed especially from younger age. Moreover, children's health literacy should not merely be seen as a risk factor for poor health, but also as an asset that supports the development of autonomy, empowerment and participation in promoting good health throughout their life (Nutbeam, 2001). Some of the world's poorest countries with some of the world's highest illiteracy rates lie in sub Saharan Africa (SSA) (Hyde, 1993) Amegah, (2018); Yuyun, Sliwa, Kengne, Mocumbi, and Bukhman, (2020); Chikafu and Chimbari, (2019); Hamid, Groot, and Pavlova, (2019) observed that, the burden of non-communicable diseases (NCDs) including cardiovascular diseases among others is rising in SSA. Yuyun et al. (2020) also found the tendency of cardiovascular diseases occurring at younger ages in SSA populations, approximately two decades earlier compared to high income countries. Bigna, and Noubiap (2019) also observed that there has been a surge in the burden of NCDs in SSA over the past two decades, driven by increasing incidence of cardiovascular risk factors such as unhealthy diets, reduced physical activity, hypertension, obesity, diabetes, dyslipidaemia, and air pollution. SSA is experiencing a rapidly increasing epidemic of (NCDs), while it continues to face longstanding challenges from infectious diseases. This double burden of disease could have a devastating impact on a continent that already has significant resource constraints, emphasizing the urgent need for appropriate interventions from all stakeholders (Nyirenda, 2016).

Problem statement

SSA is facing a double burden of disease with a rising prevalence of NCDs while the burden of communicable diseases (CDs) remains high (Iwelunmor, Blackstone, Veira, Nwaozuru, Airhihenbuwa, Munodawafa, Kalipeni, Jutal, Shelley and Ogedegbe (2015); Nyirenda (2016); Wekwete and Mangombe (2022). Limited health literacy

could be linked to a lack of health knowledge, poor disease management skills, medication treatment errors, inadequate health communication skills, difficulties in navigating the healthcare system, poor access to healthcare services, increased healthcare costs, and poorer health outcomes (Okan, Lopes, Bollweg, Bröder, Messer, Bruland, Bond, Carvalho, Sørensen, Saboga-Nunes and Levin-Zamir, 2018). Maina, Ouma, Macharia, Alegana, Mitto, Fall, Noor, Snow and Okiro (2019) observed that although health services are offered with increasing levels of medical sophistication, from community providers who handle basic care to hospitals which play a critical role in providing emergency care in SSA, these services are not accessible to everyone equally. For instance in Zimbabwe, Zim Health Annual Report (2019:6) reported that although Zimbabwe “has seen some improvements in health achieving a 23% reduction in the maternal mortality ratio from 570 to 458 per 100,000 live births between 2010 and 2017, mortality in children under 5 years had a 46% reduction from 86 to 46 deaths per 1,000 live births between 2010 and 2018 (UN Inter-agency Group for Child Mortality Estimation, 2019) while the number of new HIV infections and AIDS-related deaths declined by 38% and 60% respectively (UNAIDS AIDSInfo, 2019). The poor and marginalised children and their families remain worse as they cannot afford to access health services due lack of finances and remote geographical location”. In Ethiopia Sahiledengle, Petrucka, Kumie, Mwanri, Beressa, Atlaw, Tekalegn, Zenbaba, Desta and Agho, (2022) found undernutrition as a significant public health challenge as one of the leading causes of child mortality. Matshipi, Monyeki, Mafumo, Monyeki, Siweya, and Kemper (2019) found that the dominance of alcohol use in Ellisras rural adolescents and young adults begins between the ages of 14 and 16 years and increases with age. Mbogori, Kimmel, Zhang, Kandiah, and Wang, (2020) conducted a study of nutrition transition and double burden of malnutrition in Africa, collected data from Malawi, Ghana, Kenya and South Africa and found the increased prevalence in overweight and obesity in children among others. In Tanzania, Mshida, Kassim, Mpolya, and Kimanya (2018) found the commonness of undernutrition among under-five year’s old children as alarming and could be associated with poor Water Sanitation and Hygiene (WASH) practices. Bundhun, Rampadarath, Puchooa and Jeewon (2018) conducted a study of Dietary intake and lifestyle behaviours of children in Mauritius and found that children consumed less nutritious foods such as fruits, vegetables and whole grains and more of refined and calorie-laden foods, with no significant differences across genders. Their study recommended for intervention with aim of improving the dietary and life quality of children in Mauritius. This inability to live a healthy life style and to reach quality assured health services and able to provide life-saving interventions contributes to the sustained high burden of communicable and non-communicable disease morbidity and mortality in SSA relative to other regions of the world. Goon, Toriola, Shaw, Amusa, Monyeki, Akinyemi, and Alabi (2011) and Umeokonkwo, Ibekwe, Umeokonkwo, Okike, Ezeanosike, and Ibe, (2020) found severe malnutrition among the school children living in Makurdi and Ebonyi State Nigeria. Furthermore, Kambale, Ngaboyeka, Ntagazibwa, Bisimwa, Kasole, Habiyambere, Kubuya, Kasongo, André, and Van der Linden (2020) found severe acute malnutrition in children admitted in an Intensive Therapeutic and Feeding Centre of South Kivu, Eastern Democratic Republic of Congo and recommended that particular emphasis should be placed on partnering with communities to improve

information on malnutrition signs and on critical importance of early referral to the health system. Ntshebe, Channon, and Hosegood (2019) found higher stunting in children living with no parent, children living with unrelated household member than children living with parents. All the above studies indicates poor health among SSA children that could have been caused by lack of health literacy policies and interventions.

Objectives

The following objectives guided the study

1. To find out how health literacy is offered to children in SSA
2. To explore benefits of health literacy to children
3. To establish how SSA sustain health literacy in children

Literature review

The literature was reviewed from relevant sources and covered health literacy in children, benefits and sustainable methods for children health literacy.

Health literacy offered to children in SSA

Nash, Patterson, Flittner, Elmer and Osborne (2021); Okan, Lopes, Bollweg, Bröder, Messer, Bruland, Bond, Carvalho, Sørensen, Saboga-Nunes, Land Levin-Zamir (2018) and Mcluckie, Kutcher, Wei and Weaver (2014) observed that, school-based health literacy programs are of interest internationally. Paakkari and Okan (2019) opined that health literacy is a competence that contributes to health skill development and can be facilitated through educational practices. Health literacy could be strongly bound up with the field of education and could form a perfect bridge between the health and education fields if properly planned. Some countries have included health literacy as a theoretical framework within their school health curriculum. However, few countries offer teacher training in relation to health literacy. This lack of training puts pupils as well as teachers in an unfavourable position because teachers are not equipped with health literacy teaching methods so pupils cannot be adequately supplied with health literacy skills (Paakkari and Okan, 2019). In South Africa health literacy is included in the South African Curriculum and Assessment Policy Statement (CAPS) written by the Department of Basic Education (2011a; 2011b; 2011c). In Foundation Phase (Grade 1 to 3) and Intermediate Phase (4 to 6) it is part of Life Skills, while in Senior Phase (Grade 7 to 9) it is part of Life Orientation (LO). Life Skills/Orientation aims to have an impact on the growth process of children in many aspects. Okeyo, Seekoe, de Villiers, Faber, Nel, and Steyn (2020) found that the subjects are taught by general teachers. Okeyo et al. (2020) carried out a study of The Food and Nutrition Environment at Secondary Schools in the Eastern Cape, South Africa and found that, the learners had poor nutrition knowledge, and many LO teachers who were responsible for teaching nutrition had no formal nutrition education training and there were indications that the LO teachers did not know the Food-Based Dietary Guidelines (FBDGs) and what they represent. In Botswana Barchi, Ntshebe, Apps, and Ramaphane (2022) carried out a study of Contraceptive literacy among school-going adolescents in Botswana and found that almost half of all respondents identified teachers as the most important source of sexual and reproductive health

(SRH) information. When they had an SRH question, more than half of all girls spoke with a teacher. However mediums such as radio, television and peers have been identified in numerous studies as primary sources of SRH information for adolescents in SSA (Smith, 2020). Kyere, Veerman, Lee, and Stewart (2020) conducted a review of systematic reviews on the effectiveness of school based nutrition intervention in South Africa, Botswana, Burkina Faso, Kenya, Nigeria, and Tanzania then concluded that child malnutrition, evidence from Randomised Controlled Trials (RCT) and controlled before-and-after studies of school nutrition interventions in SSA generally confirms the view that the school setting is a very important place to start from. Moreover, they found a strong evidence that supports the positive impact that School Based Nutrition Intervention (SBNI) can have on cognitive abilities, nutrition knowledge and improved micronutrient status of schoolchildren. McDaid (2017) opined that improved health and educational outcomes in school increase the potential for greater economic benefits for children when they reach adulthood as a result of enhanced career opportunities as well as better physical and emotional health, and these effects can be passed down to future generations.

Benefits of health literacy to children

Cha et al., (2014) perceived that good childhood health literacy has been associated with routinely having a healthier diet, as well as a better understanding and use of nutritional information on foods and drinks. These benefits reduce the chances of poor health behaviours in adulthood. Health literacy programmes may encourage greater levels of physical activity; again, there is good evidence that individuals who participate more in sports in their teenage years are more likely to be physically active in adulthood (Tammelin et al., 2003). Building resilience in childhood through health literacy programmes can also have a positive impact on psychological health and well-being across the life course, as well as reducing the severity of depression experienced in adulthood (Roberts & Veil 2016). The importance of influencing long-term health lifestyle choices, as a result of improving cognitive and emotional skills through educational interventions, has been recognized by the Organization for Economic Cooperation and Development (OECD). McDaid (2016) further opined that children who already have poor physical or mental health, or poor health behaviours, are likely to be at greater risk of poor academic performance. Another benefit of health literacy as indicated McDaid (2016) is to facilitate self-efficacy, where by children are equipped with knowledge and confidence to influence their health in their own ability. Building resilience in children and young people to enable them to weather adverse events and, for instance, deal with harmful peer pressure at school to engage in unhealthy behaviours such as smoking, wrong eating habits or avoid dangerous situations on the internet. Efforts to enhance a child's health literacy, especially functional health literacy such as sufficient basic skills in reading and writing to function effectively in everyday health situations are significantly associated with improvements in basic literacy and numeracy skills. (Levin-Zamir, Leung, Dodson, and Rowlands (2017) further observed that, health literacy initiatives such as programmes, policies and action plans could address enduring social determinants of health (SDH); and enable children, teens, and future adults to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society

Levin-Zamir et al. (2017). The government and other stakeholders should properly plan the health literacy programs to benefit all children bearing in mind that by skilling the children they will be skilling the nation. Okan, Paakkari, and Dadaczynski (2020:1) further emphasised that health literate children will be able “to access and navigate health information environments, understand health messages, think critically about health claims and make informed decisions about health, acquire health knowledge and use it in new situations, communicate about health topics and concerns, use health information to promote their own health, that of others, and environmental health, develop healthy behaviours and attitudes, engage in healthy activities and avoid unnecessary health risks, become aware of their own thinking and behaving, identify and assess bodily signals such as feelings, symptoms of illness, act ethically and socially responsible, be a self-directed and life-long learner, develop a sense of citizenship and be capable of pursuing equity goals, address social, commercial, cultural, and political determinants of health”.

Sustaining health literacy in children

According to Mcluckie et al. (2014) health literacy such as mental health could be sustained if embedded in the school curriculum. Schools are an ideal venue in which to embed mental health literacy at both the individual and population levels because schools are where most young people can be reached and classroom-based educational activities are familiar to students and educators as well. Embedding mental health literacy into existing school curriculum can potentially reach all students, normalizes mental health as part of everyday activities and engages teachers to become literate in youth mental health as part of their professional activities. For instance in Canada mental health experts, educators and the Canadian Mental Health Association (CMHA) and a national mental health non-governmental organization developed mental literacy guide that was endorsed by the Canadian Association for School Health, certified by Curriculum Services Canada and was embedded grade nine school curriculum. Mcluckie et al., (2014) is of the view that promoting health literacy in early life is regarded as an important means of sustaining health literacy and health over the life course. WHO (2020) states that health literacy must be an integral part of the skills and competencies developed over a lifetime, first and foremost through the school curriculum. Moreover, Pierce and Foster (2020) opined that formal schooling achieved in primary school, secondary school, and beyond, are significantly correlated with higher health literacy and thus, better health outcomes not only for the individual that received the education, but for members of the household as well. Completion of primary school significantly increases health outcomes for women and children in almost every aspect (Pierce and Foster, 2020). Otten, Kemp, Spencer and Nash (2022) suggested that childhood is an optimal time to promote health literacy therefore primary schools are ideal settings in which to support health literacy development, however stakeholders should consider collaboration with (librarians, health care professionals, politicians and policy developers) contextualisation, accessibility, autonomy, reflectiveness, and continuity to develop strong future health literacy interventions and sustainability.

Methodology

This study exploited existing literature with the aim of understanding health literacy to children in SSA. The literature searching was conducted after three major steps; (i) Search formulation where the topic was analyzed to give key concepts (Children health literacy, health literacy, communicable diseases, sub Saharan Africa, (ii) Choosing the appropriate information sources, and (iii) Use the identified keywords in step (i) to conduct search in the Google Scholar, SABINET, Science direct, Access medicine, ClinicalKey and ovid. Only search results which were found relevant to the topic were selected and used. The choices of the databases were influenced by their relevant content, subject matter and accessibility to the researcher. The findings were critically analysed and presented to meet the objectives of the study.

Concluding remarks

Reducing the major risk factors for NCDs such as tobacco use, physical inactivity, unhealthy diet and the harmful use or abuse of alcohol is the focus of WHO's work to prevent deaths from NCDs. NCDs, primarily heart and lung diseases, cancers and diabetes are the world's largest killers, with an estimated 38 million deaths annually. Of these deaths, 16 million are premature. Working together in reducing the global impact of risk factors can go a long way to reducing the number of deaths worldwide (WHO 2017, 2020). Poverty is closely linked with NCDs. The rapid rise in NCDs is predicted to impede poverty reduction initiatives in low-income countries because health care services will use lot of government funds in providing health care services to patients. Household costs associated with health care will be increased. Vulnerable and socially disadvantaged people get sicker and die sooner than people of higher social positions, especially because they are at greater risk of being exposed to harmful products, such as tobacco, or unhealthy dietary practices, and have limited access to health services. NCDs threaten progress towards the 2030 Agenda for Sustainable Development, which includes a target of reducing the probability of death from any of the four main NCDs between ages 30 and 70 years by one third by 2030. To lessen the impact of NCDs on individuals and society, a comprehensive approach is needed requiring all sectors, including health, finance, sports, culture, transport, education, agriculture, planning and others, to collaborate to reduce the risks associated with NCDs, and to promote interventions such as proper planned health literacy programs to prevent and control them. Tackling the risk factors such as providing health literacy to children from a very tender age would therefore not only save lives, it will also provide a huge boost for the economic development of countries.

Recommendations

Based on the literature and conclusion thereof, the paper recommends the following:

Health literacy for children caregivers

Health literacy should not start at school. Health care facilities in SSA should plan health literacy programmes for mothers, pregnant women, fathers, guardians and infants. Child caregivers should be encouraged to practice health care measures and lead by example at home such as refraining from smoking and drinking alcohol in the presence of children, because children learn by observing and imitating the adults.

Public drinking and smoking should also be prohibited by the relevant authorities in SSA. All these programmes should be regularly evaluated.

Health literacy at school

Health literacy at school should be properly planned and included in the curriculum. The departments of basic education should partner with health professionals and libraries to establish programs, policies and guidelines pertaining health literacy at school. Nash (2021:632) opined that “health literacy impacts children's health and educational attainment”. Therefore, determining the most appropriate pedagogical design is critical.” McDaid (2016) further opined that implementation of health literacy programmes may not be successful unless there is a supportive atmosphere within schools for health literacy as well as wider health promoting activities. According to McDaid (2016) several studies identified a number of important enablers that assist the implementation of health promoting activities in schools. These include making use of frameworks/guidelines for implementation; for instance, when it comes to emotional and mental health, research has indicated that while teachers see the importance of mental health to educational achievement, they often do not have the confidence to deliver mental health literacy interventions. Therefore health professionals should partner with schools to offer support and more resources to deliver health literacy. Again health professionals, medical schools and institutions of higher learning could design health literacy courses for teachers. That will skill them on how to design and offer health literacy programmes to children according to their age groups and classes. Furthermore, de Buhr, Ewers, and Tannen (2020) found the concept of school nursing in public schools in Germany evolving. Where by a nurse is appointed at the school to take care of health issues of children. To German schools promoting health literacy has become a “nursing imperative” for all age groups but especially early in the lifespan and for students attending public schools. The activities of school nurses were not only aimed at improving school attendance by providing acute and clinical care but also at supporting the development of knowledge, motivation and competences to access, understand, appraise, and apply health information in order to make judgments and take decisions in everyday life concerning healthcare, disease prevention and health promotion. SSA could also adopt the school nursing model from kindergarten to secondary schools. Moreover, Okan, Paakkari, and Dadaczynski (2020) highlighted that teacher`s health literacy must be seen as the counterpart to pupils` health literacy because children learn by observing and imitating. Health literacy within schools according to Okan, Paakkari, and Dadaczynski (2021) requires allocated teaching time, the development of learning materials, instructional methods, and didactics as well as digital technology and virtual learning environments. These resources will ensure teachers and educational professionals better engage with health literacy, including digital literacy, information literacy and media literacy.

School library

The schools should establish school libraries and appoint qualified librarians to gather, organise, retrieve and disseminate information including health information to the school community. The librarians will provide the teachers and learners with accurate and genuine information from reliable and authentic sources. Chipungahelo et al.

(2015) argue that libraries are able to collect vital health information, including information resources on how to avoid the circumstances that cause health problems, and on providing preventative health programs and treatment programs. School librarians could also create social media platforms to provide health literacy to the school community. They could also organise programmes such as plays and dramas at school to teach children through play. School librarians should also create e-repositories of systematic documentation of health information resources that could be accessed remotely through the WEBPAC.

Public libraries

Public libraries should offer health literacy to children through games and toy library services. There should be slots in the children section of the libraries where the librarian with the help of the health professional should teach health literacy. They should also use the television and radio programmes for children to provide health literacy to children through comics. Children's literature should also include health stories. Health literacy programmes should also be tailored to meet the needs of specific children. In Tanzania, Chipungahelo et al. (2015) found that, the Association for Health Information and Libraries in Africa (AHILA) Tanzania Chapter supported health literacy promotions in which among other things, it promoted relationship and network among health librarians and information professionals within the libraries and information centres in health settings, and carried out a number of activities such as preparing brochure with health information, recruiting members, trainings, developing social groups for easy communication and resource sharing among members and urged libraries to continue these initiatives started by AHILA Tanzania Chapter by promoting health literacy for combating non communicable diseases.

Future research directions

The findings from this study has the potential to be used as an allusion to empirical studies on children health literacy in SSA. Studies on the perceptions of children, teachers, librarians, health professionals, guardians and parents on children health literacy in SSA should be carried out. The data could be used to formulate policies and guidelines on effective children health literacy programs.

Conflict of interest

The authors declare that there is no conflict of interest that could be perceived as prejudicing the impartiality of the research reported

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