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ORIGINAL ARTICLE

The role of community health workers in promoting oral health at school settings: A scoping review

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Abstract

Objectives: The scoping review aimed to examine the literature on the role of Community Health Workers (CHW) in oral health interventions within school settings. The objectives were to identify the characteristics of school oral health interventions where CHWs played a role; and to assess the outcomes derived from CHW participation in school oral health.

Methods: The scoping review was guided by the Levac et al (2010) framework. Articles selected for this review included all forms of study designs and gray literature. The search strategy included CHW and other non-dental personnel providing oral health activities within schools and the outcomes of these interventions from 1995. Databases included Pubmed, ProQuest, Scopus and EBSCO Host.

Results: There were eleven ($n = 11$) peer reviewed articles included. Only one study in this review related to CHW involvement in school oral health settings. The remaining involved teachers ($n = 4$), peer learners ($n = 3$) or a combination of both ($n = 3$). Characteristics of the interventions ranged from oral health screenings, education, supervised brushing, and community engagements. Three outcomes emerged; widening access to oral health services, acceptability of non-oral health personnel and learners in promoting oral health and improvement of oral health self-care.

Conclusions: The review brought to light the benefits of utilizing non-dental personnel such as teachers and peer learners in augmenting staff capacity for school oral health interventions. In addition, the findings highlighted the need to further research on the feasibility and acceptability of integrating CHW in school oral health settings.

KEYWORDS
community health workers, non-dental personnel, oral health programs, school settings

INTRODUCTION AND BACKGROUND

Oral diseases are largely preventable, yet they affect nearly 3.5 billion people globally across their life course (1). It is estimated that 520 million children experience dental caries in their primary teeth, which often creates long term problems since childhood oral disease is a predictor of oral disease later in life (2, 3). Poor oral health can also significantly affect child health and quality of life as it can cause pain, negatively affect speech, eating, sleep, growth, self-confidence, and school performance (4) (5). Thus, oral health promotion among children is critical to the establishment of healthy habits and the prevention of oral disease (6).

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Dentistry is often limited by its curative rather than preventive approach. Clinical interventions when used alone have been shown to be ineffective and unsustainable in preventing oral disease (7). Disease determinants arise from a range of biological, social, and physical environments as well as health behaviors and access to health care, hence broad multi-disciplinary approaches are necessary to address the burden of diseases (8). In addition, oral health system issues concerning limited accessibility, affordability of dental services and human resource constraints are other factors that contribute to poor oral health outcomes (8, 9).

Systemic changes are therefore needed to address the global burden of oral diseases among children. The literature therefore recommends a shift from solely clinical chairside interventions to an interdisciplinary oral health promotion approach integrated within general healthcare (7, 10). Such restructuring of health systems is advocated by the World Health Organization (WHO). For example, to allow for non-dental health professionals to educate, refer and provide basic oral healthcare for the promotion of oral health and broadening access to dental care (11). Furthermore, alternative community-based and cost-effective strategies, such as behavior change interventions, family support, health policies, supportive environments, as well as health promotion and universal health coverage, are needed to reach families and mitigate the oral disease burden among children (12).

Global estimates suggest that over 80%–90% of school aged children are enrolled in schools, where they spend a significant portion of their time (13). Therefore, schools have been acknowledged by the WHO and the International Alliance for a Cavity Free Future as efficient and effective settings in reaching billions of children, families, and communities worldwide for establishment of lifelong healthy habits (14). In addition, schools offer basic healthcare services, providing a critical vehicle for disease prevention and health promotion (15). These settings take on an approach aimed to improve health through organizational and structural changes in the physical and social environment of schools, and teaching curriculum (15).

Implementation of school-based oral health programs however, come with a variety of contextual challenges. These range from poor community engagement, co-operation across disciplines and participation (6, 16). In addition, human resource constraints affects oral health care delivery significantly in developing countries (17) (18–20). Non-dental health personnel, such as Community Health Workers (CHWs), have therefore been identified as well placed to contribute to preventive healthcare (21), including providing education and support to promote oral health in the school setting (22). A CHW is a lay individual with a deep understanding of community culture and language, and who has received training to provide culturally appropriate healthcare services to their local communities (23).

In 2018, the Astana Declaration aimed at re-affirming access to comprehensive Primary Health Care for all, drove the global commitment to strengthen community health systems, including a focus on the opportunity for CHW to address worldwide oral health inequalities (24). The important cultural role of CHWs provides an opportunity to develop innovative ways of collaborating with communities particularly in engaging difficult to reach population and strengthening school oral health activities (19, 25, 26). In Nepal, CHWs were found to be able to conduct periodontal examinations in clients' homes and were competent in screening for some oral diseases (27). Other studies in Brazil, India and Thailand suggest that training and regular supervision of CHWs could lead to improved oral health knowledge, oral hygiene behavior and oral healthcare seeking behavior of communities (28–30).

RATIONALE FOR THE STUDY

Knowledge gaps remain concerning the implementation of effective school-based interventions using CHWs to address oral health inequities among children (27). Two recent reviews explored the roles, training and outcomes achieved by CHWs participating in oral health programs. One study was undertaken from a global perspective and most studies were collected from the United States of America (USA). The other review focused on Sub-Saharan Africa; however, neither focused on children or school settings, but rather provided a broad overview of the impact of CHWs in oral health programs across wider communities and populations.

The current scoping review aimed to address this gap by scoping the literature on the role of CHWs in oral health interventions within school settings. The objectives were to (a) identify the characteristics of school oral health interventions where CHWs played a role and (b) assess the outcomes derived from CHW participation in school oral health interventions.

METHODS

Terminology

In this review, the term "Community Health Worker" refers to a frontline worker with minimal training for performing oral healthcare tasks (23). *Community Health Worker* encompasses or may be referred to in other terms such as *health promoter, health educator and lay health worker*. In addition, the term non-dental health personnel, refers to all community-based health professionals other than dental professionals.

Study design

The scoping review was guided by the Levac et al (2010) framework, which was built on the work of Arksey &

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O'Malley (2005) (31). Articles selected for this review included all forms of study designs and gray literature. The broad research strategy assisted in exploring the breadth and extent of available research investigating the characteristics of school oral health interventions involving CHW, the involvement and scope of practice of CHW's in these interventions and outcomes (32). A scoping review was deemed more appropriate than a systematic review as the intention was not to assess the effectiveness of interventions, but rather, scope the literature to obtain a deeper understanding of the participation of CHWs in oral health activities in school settings. In addition, it allowed the researcher to follow an iterative search approach enabling the focus areas to be redefined, which would increase the complexity of conducting a systematic review (32).

Eligibility criteria

The PCC (Population; Concept; Context) framework was used to guide the eligibility criteria for this review (33). The population of interest involved all CHWs involved in oral health promotion at schools globally. The concept of interest was school oral health interventions where CHWs were involved. The context included oral health programs or interventions at school settings. The outcomes assessed were either objective or subjective results from the interventions. Both peer reviewed journal articles and gray literature were considered from 1995 to 2022. Only papers sourced in English were included, as resources were not available to review papers written in other languages. Opinion pieces, editorials and reviews were also excluded.

Search strategy

The search strategy concentrated on CHW providing oral health activities within schools and the outcomes of these interventions from 1995. The year 1995 was specified as it was in the year that the World Health Organization (WHO), in partnership with the United Nations Educational, Scientific and Cultural Organization (UNESCO), launched the School Health Promotion initiative. This was in an effort to accelerate global participation of "Making every school a health promoting school" (34). Initial search results indicated that more expansive searching was required due to the limited number of studies identified and thus the focus was expanded to including other non-dental personnel in school oral health activities. Databases included Pubmed, ProQuest, Scopus, and EBSCO Host. The initial search included relevant Medical Subject Headings (MeSH), keywords, Boolean operators, and Boolean search modifiers in order to accommodate for variations in spelling and terminologies across different countries and databases. Search terms included "community health workers," "health promoters," "health educator," "lay health worker," "oral health," "dental health," "dental care," "oral health care," "oral health promotion," "school health services," "school health," and "school health education."

Selecting and extracting the results

All selected references from the databases were imported to the Collaboration and Evidence software (Covidence, 2023) and duplicates were removed. Three reviewers (MM, MT, YMK) conducted the title and abstract screening. Two reviewers (MM, YMK) then conducted the full text screenings and disagreements were resolved by consensus. Studies were included if they incorporated CHW or non-dental personnel involved in oral health promotion of children at schools. CHW or non-dental personnel in oral health promotion at healthcare facilities, community settings or involving adult populations were excluded. Full texts were extracted by four reviewers (MM, MT, YMK, AL) using a data extraction sheet adapted from JBI (32). The data extraction elements collected included the following; Author and year of study; Country; Aims; Study design and population; Role and contribution to intervention; Outcomes (see summary Table 1). Completing the extraction form was an iterative process among the four reviewers. Finally, relevant references identified within some of the full text articles were selected for inclusion. (Figure 1).

RESULTS

There were 11 peer reviewed studies included in the review; one of the studies was from a developed country, Canada, and the rest were from developing countries which included India, Pakistan, Iran, Mexico, Tanzania, Zimbabwe, and Uganda. Study designs were as follows; randomized controlled trials ($n = 4$); Cohort Study ($n = 2$); Descriptive, Cross-sectional ($n = 2$), and Qualitative design ($n = 1$) and the study designs for the remaining two studies were unclear. The type of personnel involved in school oral health promotion from the papers were largely teachers ($n = 5$); peer educators ($n = 3$); CHW ($n = 1$) and a combination of teachers and peer educators ($n = 2$).

Characteristics of interventions

Community health worker led approaches

A CHW-led intervention was reported in a study from Canada, these were referred to as "Oral Health Worker Aides" (Aides). The study evaluated the Aides

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TABLE 1 Summary table of the reviewed studies.

Author/year/country	Aims	Study design and population	Personnel	Role and contribution to intervention	Outcomes		
					Access	Acceptability	Improved Oral health
Akera et al, 2022. Uganda	Examine the contribution of primary school teachers to oral health promotion	Qualitative Teachers $N = 18$	Teachers	Oral health education, supervised toothbrushing, screening for poor oral hygiene, plaque and decay. Referrals to oral health services and community education.	Referrals widened access to health services. Local dentist visited the school when the need arose.	No information on acceptability	No oral health examinations were assessed.
Kapadia et al, 1999. India	Evaluate the effectiveness of the Bright Smiles, Bright future program	Randomized Controlled Trial. Learners $N = 566$; 7–9 years. Experiment group, $N = 309$. Control group, $N = 257$. (Limited details of methodology provided)	Teachers	Dental Hygienists provided screening while teachers implemented the educational program. Teachers incorporated oral health education into curriculum-based teaching. Also provided oral health aids, i.e. toothbrushes and toothpastes.	No outcomes of access were reported	Parents reported that children enjoyed the program and found it beneficial. Teachers were also positive and reported that the program was beneficial in improving brushing habits.	There was a reduction in plague scores among children involved in program. Average change in plague score after 8 weeks: Experimental group = (1.74) Control group = (0.49); $p = 0.001$.
Mwangosi et al, 2001. Tanzania	Assess the extent of teachers provision of general and oral health education to primary school children.	Cross-sectional Teachers $N = 232$	Teachers	Provided oral health education, dietary counseling and toothbrushing instructions.	No outcomes of access were reported	Teachers in lower grades were more active in oral health education. Teachers without secondary education or who had less than 15 years of experience were more active on oral health promotion.	Oral was not assessed as the outcome of interest was teacher participation.
Chandrashekar et al, 2022. India	Compare oral hygiene, plaque, gingivitis and dental caries of children receiving dental health education by	Randomized Controlled Trial Learners $N = 141$, 15-year-olds	Teachers and Dentists	Four intervention groups; Group 1; Control. Group 2; Education offered by dentist every 3 months. Group 3; Teachers provided	Oral health education delivered by teachers fortnightly along with screening activities improved access to oral health care.	Reported to have been well received by teachers and learners. Children had respect for the teachers and	The Oral Hygiene Simplex Index significantly decreased in group 4 that received oral hygiene aids.

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TABLE 1 (Continued)

Author/year/country	Aims	Study design and population	Personnel	Role and contribution to intervention	Outcomes		
					Access	**Acceptability**	**Improved Oral health**
	dentists and school teachers			oral health education and screening for plaque and calculus fortnightly. Group 4; In addition to what was done in group 3, teachers provided toothbrushes and toothpastes every 3 months.		paid more attention to their guidance. The supply of oral hygiene aids made the children more enthusiastic about maintaining oral hygiene.	Plague scores decreased in groups 3 and 4.
Frencken et al, 2001. Zimbabwe	Assess the effectiveness of an oral health education program administered by teachers	Longitudinal study design; 3.5 years. Learners $N = 965$; 8–10 year olds.	Teachers	Teachers were given one training workshop and were sent out to the schools to implement what they were taught. They were expected to do mouth inspections during the morning school parades. In addition, oral health education was integrated into one of the school subjects.	No outcomes of access were reported	Poor acceptability. No specific oral health educational strategy had been carried out. Teachers could not be supported by local dental therapists due to the heavy patient loads in clinics and lack of transportation.	No statistical significant difference in plague Accumulation and caries increment among Learners exposed to the program and not exposed.
Kavita et al, 2016. Canada	Evaluate the Children's Oral Health Initiative (COHI) intervention and implementation	Cross-sectional, observational $N = 23.085$ children receiving the intervention in 2012	Community Oral Health Worker Aide's	Dental Therapist and Hygiene were used to screen children, educate parents and provide clinical preventative interventions at schools, communities and homes. The CHW Aides worked alongside the dental therapist and hygienists in	Intervention improved access to oral health care for individual children. 2006: 13045–2012: 21088 children that had screening, fluoride, fissure sealants and ART.	Program was well accepted, community enrolment increased from 41 communities in 2004–320 communities in 2014.	No oral health examinations were assessed.

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TABLE 1 (Continued)

Author/year/ country	Aims	Study design and population	Personnel	Role and contribution to intervention	Outcomes		
					Access	Acceptability	Improved Oral health
				order to link them into communities. CHW Aides visited children's homes to explain and promote the initiative and also to obtain informed consent from caregivers. Some provided fluoride varnish applications to extend the reach of the program's clinical prevention efforts.			
Karimy et al, 2020. Iran	Assess the impact of an oral health educational intervention using a peer-led educational approach	Methodology unclear: article says descriptive; before and after. However, design had an experimental element. $N = 356$; $N = 159$ experiment and $N = 159$ control group.	Learner Peers, Grade 6; Age 11–13 years	Learners that were going to lead the oral health intervention were interviewed and selected before being trained. 19 were chosen and were given 10 peers to teach. The peer leaders were asked to run similar training that they had to their peer. This involved, oral hygiene education, a short film and role playing. Activities were supervised by the research team.	No outcomes of access were reported	Learners were comfortable with learning from their peers. Positive attitude towards brushing and flossing was demonstrated.	The program improved oral self care behaviors such as brushing and flossing. Before intervention; 6.7% never brushed their teeth, after 2 months, those that never brushed decreased to 2.8% ($p = 0.001$). In flossing, before intervention only 38.3% used A floss. After intervention, 74.4% begun using a floss ($p = 0.013$).
Lopez-Nunez et al, 2019. Mexico	Test the efficacy and acceptance of school-based dental education for improving self-care among elementary	Cohort Study N = 408 Learners Group 1–control Group 2–lecture based strategy	Leaner Peers; age not specified.	Peer leaders were selected based on academic achievements and ability to socialize	No outcomes of access were reported	There was wide acceptance. The peer learners, teachers and parents were	The peer led strategy was more effective than the lecture based dental education approach in improving oral

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TABLE 1 (Continued)

Author/year/ country	Aims	Study design and population	Personnel	Role and contribution to intervention	Outcomes		
					Access	**Acceptability**	**Improved Oral health**
	school-aged children	Group 3–peer led strategy		before they were trained. Peer led groups had about 6–7 learners. The leaders had to train their peers on diet, oral hygiene and encourage toothbrushing after lunch for a month. This was compared to the conventional lecture based approach.		satisfied with the intervention.	self care practices among the learners.
Vangipuram et al, 2016. India	Compare the effectiveness of peer led and dentist led oral health education on oral health knowledge, practices and status	Randomized Controlled Trial $N = 450$. 140 Peer group; 150 Dentist group; 150 Control group	Learner Peers 12–15 year olds. Dentists	Five peer leaders were trained by a dentist before they could train their peers. The article does not provide details on how the learners taught others.	No outcomes of access were reported	Learners attitudes towards oral health habits improved in both dentist and peer led groups.	Although gingival and plague index reduced at the dentist and peer led groups; Adolescents in peer led groups showed statistically better oral health behavior than the dentist and control groups ($p = 0.001$).
Haleem et al, 2012 Pakistan	Compare the effectiveness of dentist led, teacher-led, self-led and peer-led oral health education strategies	Cluster Randomized Controlled Trial Learners $N = 1517$; 10 to 11 year olds.	Dentist/ Teacher/ Peers	There were five intervention groups. One was control, one self-learning, and the other three were dentist, teacher and peer led. The activities involved oral health education, brushing demonstrations and group discussions. The self-learning group only received a booklet and the control group received nothing.	No outcomes of access were reported	No information on acceptability	Although the three strategies were equally effective in improving oral health knowledge and hygiene, the peer led group had a significant higher oral health behavior score than the teacher led strategy ($p < 0.05$).

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TABLE 1 (Continued)

Author/year/country	Aims	Study design and population	Personnel	Role and contribution to intervention	Outcomes		
					Access	Acceptability	Improved Oral health
Haleem et al, 2016 Pakistan	Assess effectiveness of repeated, reinforcement oral health education vs one time education conducted by a Dentist/Teacher /Peer.	Cluster Randomized Controlled Trial Learners $N = 935$; 10 to 11 year olds.	Dentist/ Teacher/ Peers	Oral health education was given by the three groups after baseline data was collected. In January 2004 messages were reinforced. Reinforced and evaluated 4 times. That is, immediately, 6 months, 6 months and 12 months.	No outcomes of access were reported	Attitude of the learners towards maintenance of oral hygiene from baseline had not changed as they already had a positive attitude.	Oral health knowledge and behavior increased significantly in the 6 months after repetitive and reinforced oral health education ($p < 0.001$), irrespective of whether it was dentist led, teacher led or peer led.

involvement in the children's oral health initiative between 2006 and 2013 (35). The Aides worked alongside the Oral Hygienists and Dental Therapists who were providing screening, fluoride varnishes, fissure sealants and Atraumatic Restorative Treatment (ART) to 5–7-year-old children. Activities of the program were carried out at schools, communities, and children's homes. The role of the Aides was to conduct home visits to explain to children and families about the oral health program and obtain informed consent for oral health care. In addition, some Aides provided fluoride varnish treatments.

Teacher led approaches

Teacher-led interventions were reported in five studies which were from Pakistan, Uganda, India, Tanzania, and Zimbabwe (36–41). These interventions were largely geared towards primary school learners and included oral health education, supervised brushing and screening for poor oral hygiene, gum diseases, decay, and referrals. Studies from India and Zimbabwe reported to have integrated the oral health education into the teaching curriculum (38, 41). In some studies teachers provided toothbrushes and toothpaste regularly to the school learners in addition to the oral health education. Frequencies of performing the activities varied and was not clearly documented (37).

Peer-led approaches

Peers are fellow learners who provide health education advice and model healthy behavior to their schoolmates (42). Peer-led interventions were found to generally focus on adolescent children ranging 11–13 years (39, 43–45). In Iran, peer leaders were given intense training using slides, photographs, role play and short films in order to encourage discussion on good oral health practices. The leaders were then expected to run similar programs with their peers in groups of 10 (46). In Mexico, the training also involved the peer leaders encouraging brushing of the teeth after lunch and peer groups consisted of 6–7 learners (45). A study in India assessing the same type of approach focused on how the peer leaders were trained by a dentist and did not outline how the peer leaders carried out their activities (44).

Outcomes

Access to oral health services

Of the 11 studies, three, from Canada, India and Uganda, report on access outcomes (See Table 1). In Canada involvement of CHW "Aides" in preventative oral health services for children improved oral health

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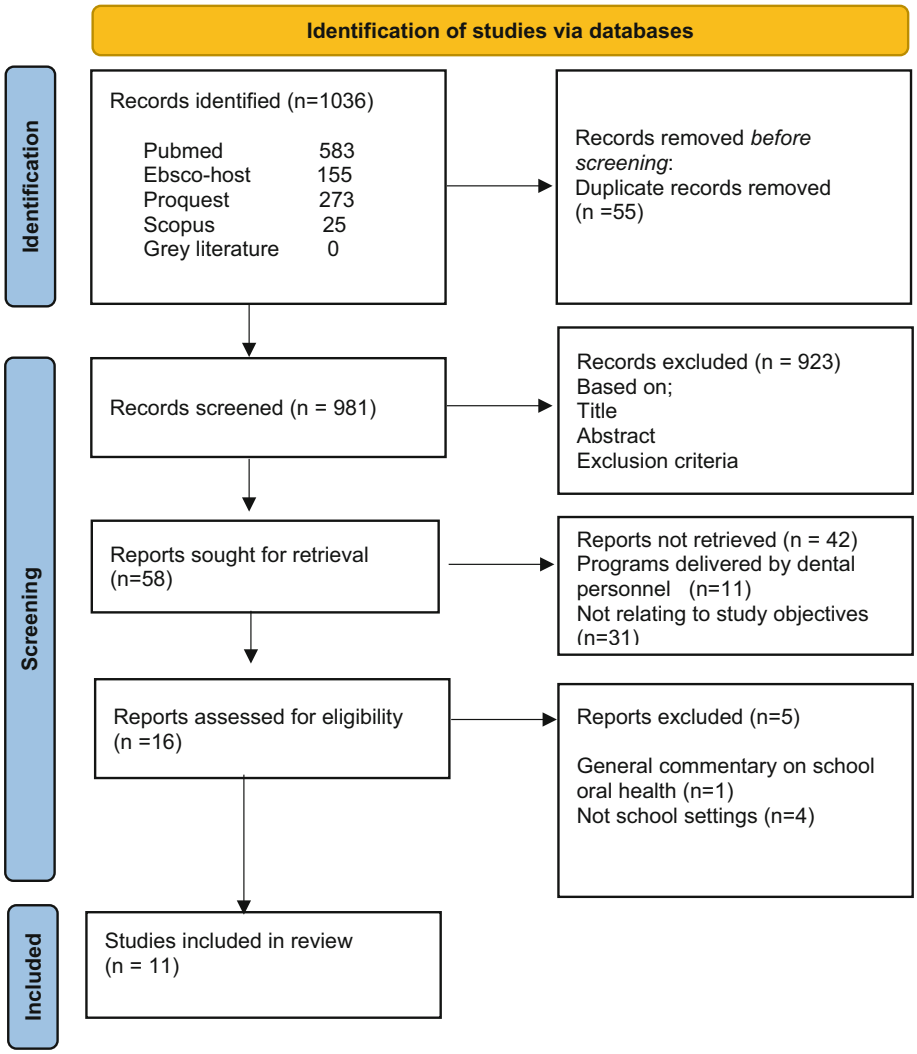

FIGURE 1 PRISMA flow chart illustrating the search strategy. [Color figure can be viewed at wileyonlinelibrary.com]

access by increasing the exposure to the program between 2006 and 2012. By 2012, 23,085 children had received preventative oral health services from 13,045 in 2006 (35). In Uganda and India, teacher's mouth inspections and referrals increased access to dental care (37, 40).

Acceptability of the interventions for the personnel and learners involved

Nine studies reported on the acceptability (See Table 1). The Children's Oral Health Initiative that involved CHW Aides in Canada was well accepted by communities. Enrollment increased from 41 communities in 2004 to 320 in 2014. Teachers providing oral health promotion in India and Tanzania were positive, active in their participation and reported that children responded well to their guidance particularly in terms of improving brushing habits. However, the teacher program in Zimbabwe had poor acceptability as they only had a single training workshop and could not get necessary support from local Dental Therapists. In terms of peer led strategies, of the two that reported on acceptability, the learners were generally satisfied with the approach and were comfortable with learning from their peers (45, 46). In one study conducted in Pakistan (39) where children's attitudes were assessed, there was no significant difference in the attitude change between peer, teacher, and dentists' approaches.

Improved oral health outcomes

Eight studies reported on oral health outcomes (35, 36, 40), (See Table 1). In two interventions where teachers led the programs, there was a general reduction of plaque scores and improved oral hygiene (37, 41). However, in a study conducted in Zimbabwe where teachers had the single training and no support, no oral health improvement was experienced (38). Where peer

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learners led programs, oral self-care practices generally improved as gingival and plaque index improved.

Two studies from Pakistan compared oral health promotion interventions offered by dentists, teachers, and peers. In the first study, Haleem et al compared the effects of oral health education and brushing instructions offered by the three personnel on the learners (43). There was no significant difference among the three types of interventions ($p < 0.05$), thus the dentist, teacher and peer-led activities were equally effective in improving oral health knowledge, practice, and status. The second study by Haleem et al compared the effects of repetitive reinforcement of oral health education to one time exposure of education offered by dentists, teachers, and peers (39). Oral health knowledge, practice and status increased significantly 6 months after repeated re-enforcement by the three personnel ($p < 0.001$).

DISCUSSION

Our global scoping review identified a significant gap in the literature exploring the role of CHW in oral health interventions within school settings. Only one study specifically investigated the role of CHW involvement in school oral health settings, while the remaining studies related to the roles of teachers ($n = 4$), peer learners ($n = 3$) or a combination of both ($n = 3$). Consistent with the findings of Garcia et al. 2021, the current review demonstrates that CHW involvement at school settings is either minimal or under-reported, with the majority of the literature reporting on child oral health studies in home settings or at primary health care facilities (47). Characteristics of the interventions were varied across the 11 studies from oral health screenings, education, supervised brushing, community engagements and referrals to local dental facilities. Common outcomes offered by CHW across the studies included: widening access to oral health services, acceptability of non-oral health personnel and learners in promoting oral health and improvement of oral health practices.

The Canadian cohort study reporting on community health workers evaluated a Children's Oral Health Initiative (COHI) that had been offered to Indigenous Inuit communities between 2004 and 2014. The CHW at schools brought about wider collective community engagement, a sustainable protective healthy school environment and stronger school staff commitment. This bolstered access and acceptability as more children and communities were reached by 2014, highlighting the value and benefits of community participation as suggested by literature (48, 49). Also demonstrating that utilization of CHW at school setting could be beneficial in broadening community linkages to health care systems (50).

Teacher led oral health interventions were reported to have become more acceptable at primary school levels (36). The reason being that the oral health content disseminated at that level is integrated into the general health and hygiene curricula such as healthy eating and body hygiene. Similar sentiments are echoed by Jourdan et al (2011) as they examined factors determining primary school teachers commitment to health programs. The authors found that program alignment to the educational curriculum was a strong determinant for teacher commitment as it was linked to the teachers core roles (51). Furthermore, comprehensive approaches used by teachers which included the provision of oral health aids such as toothbrushes and pastes were found to bring about positive behavioral change among the children. A systematic review on effectiveness of behavior change interventions delivered by non-dental health workers showed that comprehensive approaches resulted in significantly more caries reduction (SMD; CI −0.47 [−0.84, −0.10]) than oral health education in isolation (SMD; CI −0.11[−0.21, −0.00]). Thus, implying that using a variety of comprehensive approaches was more effective than single approach intervention, (50, 52).

Peer led interventions were reported to have been commonly implemented at secondary schools where learners were in their adolescent years and behavioral norms were developed through interactions with peers of similar ages, educational level, and background (53). The characteristics of these programs were centered around interactive discussions and modeling of health behavior activities; hence the peer interactions were found to have been enjoyable and the benefits were extended to not only learners but the teachers as well (53, 54).

The significance of this scoping review highlighted the information gap concerning the of utilization of CHW at school settings in the promotion of oral health. What has been brought to light are the various non-dental personnel such as teachers and peer learners involved in augmenting staff capacity in school oral health interventions. Utilization of such personnel has been reported to being beneficial in increasing oral health access to surrounding local communities and demonstrating the importance of cultural determinants in improving the uptake of services (35, 37, 55). Furthermore, acceptability and adoption of oral health activities at school settings was enhanced by the use of the non-dental personnel, particularly when training and support was made available (56).

LIMITATIONS

There were a limited number of studies exploring the role of Community Health Workers within school oral health settings and hence our scoping review had to expand the search to include non-dental personnel involved in school oral health programs. Some of the experimental studies had unclear study designs and methodological rigor was not implicit, thus a quality appraisal could not be

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conducted for the review. In addition, the frequencies of the intervention activities of some studies were not well reported in the papers and hence the review could not account for the importance of time frequency in conducting such interventions.

Future considerations

More research needs to be undertaken in order to explore the acceptability and feasibility of integrating CHW in localities where CHW are available to assist. Furthermore, appropriate school oral health interventions need to be developed using participatory based research in order to promote multi-disciplinary engagement for understanding of local factors and achieving integrated model of care for learners. Finally rigorous effectiveness studies on the outcomes of school oral health interventions are necessary for gathering concrete evidence for decision making.

CONCLUSION

The literature explored presented with a limited number of studies reporting specifically on CHW involvement in school oral health programs. However, most studies reported on how non-dental personnel played a role in augmenting staff capacity in school oral health programs. Task shifting to these personnel was reported to improve community participation and oral health services uptake. In addition, in instances whereby teachers or peer learners lead the intervention, program activities need to be integrated into the curriculum and the personnel well trained and supported.

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