

Developing a National School Health Strategy: The role of School Children and Parents in Priority Setting, Sudan, 2016

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Received: 04 June 2021; **Accepted:** 30 June 2021

Citation: Al Fadil SM, Ibrahim HM, Elnile LH, et al. Developing a National School Health Strategy: The role of School Children and Parents in Priority Setting, Sudan, 2016. Int J Biomed Res Prac. 2021; 1(1); 1-9.

ABSTRACT

Background: School health policies and strategies, ensure a holistic healthy environment for children to harness an effective education. Beside provision of services, a health promoting school (HPS) includes an environment in which children and their parents are active participants and not only recipients.

Aim: The study aims at exploring the views of primary and secondary schools children aged 10-17 years, and their parents on future strategic priorities for HPS interventions for the years 2016-20.

Methods: The study was a descriptive cross-sectional school-based, conducted in 10 localities (districts) of five purposively selected States in Sudan. Qualitative data was collected by interviewing students and parents using guided focus group discussions and was analyzed using Conceptual Content Analysis Technique.

Results: Results were generated from FGDs with 271 students and 191 parents. Training of students, parents and teachers on health issues and first aid, improving health, nutrition and psychosocial services along with physical education were the top five priorities suggested by students and parents. Parents added establishing better coordination mechanisms between schools and families and charity funding for poor families as pressing priorities.

Conclusion: The outcomes of priority setting by children and parents through an extensive process of engagement and consultation help in fixing the top priorities in view of constrained resources, therefore attracts political support and facilitate acceptance and endorsement by different levels of decision making.

Keywords

Fresh, Health Promotion, Parents, School, Strategy, Sudan.

Introduction

Globally, the modern era of school health programs was figured in the United States in 1850 through a report by a school health pioneer teacher Lemuel Shattuck, who emphasized the concept of student's participation saying "*a student takes responsibility to preserve his own life and others' health and the lives*" [1].

In Sudan, school health programming goes back to 1912 as part of the Sudan Medical Department. With the Health Act of 1972, it was then organized within the ministries of health in Khartoum, Gezira and the Northern States. The package of services included: periodic medical screening, immunization, school-based nutrition and environmental sanitation [2].

Schools normally operate within community settings involving individuals, students, staff, parents, community leaders, health workers and other social organizations. All, make decisions that control the determinants affecting students' health, create social conditions for healthy living and improve students' understanding and application of health concepts, believing that healthy students learn better [3]. The health promoting school (HPS) is a whole-school approach that involves students, staff, and parents in consultation and implementation [4].

Article 12 of the Convention on the Rights of the Child 1990, stipulates that children are entitled to participate in the decisions that affect them: form views and express them freely in all matters that affect their lives. Views of children are considered in by age and maturity [5,6].

Young people are those aged 10 up to 24 years [7]. Resolution 2012/1 on adolescents and youth by the commission on population and development, recognizes the role of young people in addressing their wishes, challenges and fulfilling their potential influences including the full enjoyment of their human rights and appreciating their full participation [8]. Primary and secondary school children in Sudan aged 10-17 years fall within youth cohort.

National health policies, strategies and plans are instrumental to directing the health sector and other stakeholders towards better performance and implementation. Though this is usually accomplished by higher organizational levels, they must early involve those who will be working under these policies and plans -the beneficiaries' stakeholders [9].

The Focusing Resources for Effective School Health initiative 2000, advocates for school health policies and strategies that ensure a holistic healthy environment for children to harness an effective education. Besides the provision of school-based services, it includes creating an environment in which children are involved in health policy development and implementation activities; therefore, they are the children who learn about health by doing [10].

The Ministry of General Education (MOGE) and the Federal Ministry of Health (FMOH) in Sudan have established a coordination mechanism that governs HPS-the National Council for School Health-. Membership of this council includes other related sectors such as health, education, water, sanitation and hygiene (WASH). To align partners' efforts for improving the school health programming in the country, and with support of UNICEF, the MOGE and FMOH, adopted a robust consultative process with different actors including school children and parents in designing a National School Health Strategy (NSHS).

This paper aims at exploring the views of primary and secondary schools' children aged 10-17, and their parents on future strategic priorities for HPS interventions for the years 2016-20.

Methods

Study design and area

This was a descriptive cross-sectional school-based study that analyzed and summarized qualitative data generated from the students and parents. The study was conducted in five zonal States: Khartoum, Red Sea, Blue Nile, North Darfour and River Nile representing the main geographical regions of Sudan.

The Study population included girls and boy's students of primary and secondary schools, parents who were members of the School Parent's council and other few parents who were not.

Sample size and sampling techniques

The study followed a multistage sampling technique that used purposive selection at all levels. In the first stage of the sampling, five States were selected based on their geographical location to represent the main five regions of Sudan. These States also represented the States with overall better and worst national indicators related to mortalities, morbidities and access to basic services such as health, education, WASH etc... Two States were in protracted conflict. In the second stage of the sampling, a convenient sampling of an urban and rural localities was selected from each State based on geographical location and diversity in socioeconomic status of the population as was informed by key informants of State authorities making a total of 10 localities. In each locality a primary and a secondary school were identified, taking into account that one was of girls while the other was for boys, making a total of 20 schools. In each of the selected schools, students of grades 5, 6 and 7, from primary schools were included, whereas grades 8 and 3 of primary and secondary schools respectively were excluded to avoid disturbing the tight teaching schedule as they were preparing for sitting for the Sudanese certificate examinations.

Data collection

The Focus group discussions (FGD) technique was used to explore the views of participants on how do they perceive the current implementation of the "health-promoting school programming" and what the top priorities they believe are important to include in the coming five years NSHS.

Guides for FGD were designed to facilitate the discussion with each target population. The development of the guides was based on the school health index including the eight thematic areas of the coordinated school health program. The latter was recommended by the Center for Disease Control and Prevention (CDC) and WHO [11].

The study variables covered the core thematic areas included, common health and nutritional problems among students as perceived by respondents, health services, nutrition services, physical education, psychosocial problems and services which included sub-themes such as child protection, mental health and substance abuse. Other themes were: school environment, infrastructure, staff health promotion and partnership with the community.

In each school, the FGD was conducted with one group of 11-15 students and another group of 10-12 parents fulfilling the criteria mentioned before. Following discussions on the current situation, participants were asked to identify the top issues and proposed solutions for each thematic area under discussion. Lastly, at the end of the whole discussion, they were again asked to summarize what top priorities the group considers for the next five years strategy of school health in Sudan.

Data analysis

Data was revised, transcribed, ordered, coded, summarized, and analyzed using Conceptual Content Analysis Technique. Responses of participants were grouped into eight thematic areas related to the components of the HPS. Each thematic area included sub-areas.

Ethical consideration

Official clearances were obtained from Federal, State and local authorities. Two weeks before data collection, guidelines were shared with the school administrators to contact parents and students to obtain their consent. The FGD participants were informed of their rights that their participation in the study is completely voluntary and privacy and confidentially were strictly followed during FGD sessions.

Results

A total of 271 students, and 193 parents participated in this study through FGDs. At one school only two parents showed up, therefore an in-depth interview was carried with each one following the same thematic areas.

The respondents reflected their perceptions and views about the current situation in schools regarding the eight components of HPS (Tables 1 & 2). As the thematic areas were almost the same, the responses of both students and parents are presented together as follows:

Health Services

Students and parents agreed on the health problems that are common among students, with little variation on prioritization level. They

included: respiratory tract infections, gastrointestinal diseases (some express it as nausea others as pain others as diarrhea) which both refer to worms' infestation. As well, eye infections namely trachoma, malaria and skin diseases were identified among the most common health problems affecting students. Few mentioned depressions.

With regards to the health services, students and parents confirmed that students have no health records, as well there is neither medical periodic screening nor that health personnel is assigned to schools.

They confirmed that in case of emergency, sick students are referred to the nearest health facility. These facilities might be very far from the location of the school. The majority of schools call parents to accompany their children as the school does not have a budget to pay for the consultation and case management cost.

Students proposed that the school and health authorities arrange for performing the medical screening at the nearest facility, where parents pay a subsidized fee.

Parents thought that all students shall be covered by the health insurance (HI) to cover the cost of health care whenever is needed, regardless the family is under the umbrella of HI or not.

Health Education

The discussion with both groups revealed that health education activities were very deficient and are limited to the curriculum which is delivered for higher classes of primary schools. The curriculum of secondary school is even much deficient.

The majority agreed that neither the school organize health education activities through students in the community or the school, nor do parents have a role in the promotion of healthy practices of students through joint interventions with schools.

Few participants mentioned that health messages are disseminated through the morning pre-class assembly and some posters are displayed in school.

Both groups believe that if they would have been well health-oriented, they can have a great role in health promotion in schools and out of schools.

Nutrition services

With exception of schools in two States where one is a conflict-affected State and the other suffer high poverty, participants of the two groups agreed that no school feeding interventions are implemented. Breakfast meal is not subsidized and is sold either by food sellers around the schools or inside. In almost all schools the meal is of one type of beans, *"We are bored with one type of breakfast daily, but this what we can afford to pay"* said a student of primary school.

Table 1: Students' perception about the situation of school health.

Thematic area	Majority	Minority
Health Services	<p>Main health problems among students</p> <ul style="list-style-type: none"> - Respiratory tract infections and allergic conditions (asthma) - Gastrointestinal diseases - Eye infections and night blindness - Malaria - Skin diseases <ul style="list-style-type: none"> - Lack of health personnel within the school, student's medical record and periodic medical screening; however sick students are referred to the nearest health facilities. - These facilities are in some settings very far from the school. The school calls the family to seek care for the student. - Students recommended that in absence of medical teams that routinely perform the periodic medical screening, schools and ministry of health shall coordinate this activity to be accomplished before the start of the academic year in a cost sharing with families. 	<ul style="list-style-type: none"> - Periodic medical screening and medical records only in Khartoum State - There are disabilities of all types (motor, blindness, loss of hearing, etc..)
Health Education	<ul style="list-style-type: none"> - The curriculum of higher classes includes health messages - Extra curricula health education activities is not present in schools - Students do not disseminate messages to the family/community - Students recommend educating the community in environmental health, first aid, irrational use of medicines and control of malaria (listed in descending order) 	<ul style="list-style-type: none"> -posters, periodic wall magazines and health messages during the morning pre-class assembly - Advise younger siblings -Contribute to cleaning campaigns - advise family members on hypertension and diabetes
Nutrition services	<ul style="list-style-type: none"> - There are few nutritional problems - Absence of formally organized school canteen services. The sources are either of informal food sellers inside the school or around the school - There is no distribution of iron and folic acid - Students are not aware about iodine deficiency and promotion of iodized salt 	<ul style="list-style-type: none"> - They mentioned problems such as diabetes, anemia, fafism and dizziness and tiredness which for them is a sign of anemia or because of missing the breakfast meal -In two States affected by conflict and severe food insecurity, the world food program (WFP) provides breakfast meal for students or take home dry food ration for the poor families
Physical Education	<ul style="list-style-type: none"> - No formal practice of physical activities (PA) tools are made available for optional use during recess time - Usually practiced optionally in surrounding playing yards after school Students recommend recruitment of a specialized teacher, availing space and tools, competitions between neighboring schools. 	<ul style="list-style-type: none"> - PA is practiced in playing yards around the school supervised by a teacher PE activities weekly -Football, volley etc. -After school utilization of adults' clubs e.g for swimming through subsidized services to students to be arranged by the school administration and community.
Psychosocial support	<ul style="list-style-type: none"> - No serious cases, cases are dealt with by teachers - There is a need for a psychologist 	<ul style="list-style-type: none"> -depression, epilepsy, theft, tobacco and rug use as well as snuffing
School environment	<ul style="list-style-type: none"> - Water is available in enough quantities - Lack of enough latrines and when available is not hygienic, no source of water inside, no points for hand wash and no soap - Classes are spacious and in good condition - Interpersonal violence among students is not common and no violence between students and teachers. - Disciplinary punishment by teachers is common but students could not perceive it as violence - Accidents are in the form of falls, minor injuries as a result of crowding at the gates and during the recess for breakfast due to limited outlets. - Students' associations are common. Examples are: physical activity, health, school gardening, cultural, religious and arts. 	<ul style="list-style-type: none"> -Classes are not spacious, old infrastructure, poor lightning and ventilation -No seats where students sit on the ground -Classes are made of straw -Good performing students are provided small gifts or announced during the morning assembly -Accidents due to electric shocks or after school road traffic injuries.
Promoting teacher's health	<ul style="list-style-type: none"> - Including teachers in health insurance - Physical activity for teachers in school 	Non
Partnership between the school, family and community	<ul style="list-style-type: none"> - There is a council of parents and associations of mothers friends of schools at the school level - There is a school health coordinator who is responsible of overseeing all activities related to school health and is the focal person with families when issues arise. - School holds meetings with parents. 	<ul style="list-style-type: none"> -No clear role for students in promoting the health of the community

Table 2: Parents' perception about the situation of school health.

Thematic area	Majority	Minority
Health Services	Common health problems Diarrheal diseases, malaria and other fevers, eye infections, skin infections, sore throat, Asthma, Bilharsiasis, dental caries,	- Few messages during the morning assembly focusing on personal hygiene, hand wash etc.
	- There is no periodic medical screening, no health records for students and health personnel in the school. - Students are referred to the nearest health facility which might be very far. - There is no collaboration between the parents and the school in provision of health services. - Parents recommend that the school must collaborate with health facilities and with parents' council. - Parents can initiate a fund for referring and treating urgent cases.	
Health Education	- School does not hold extra-curricular health education program, neither do students disseminate health messages to the family and community. - Parents proposed that schools should collaborate with parents' council to hold seminars, exhibitions and can share messages with families through students.	
Nutrition Services	- Anemia, underweight and fainting attacks as many students do afford to buy breakfast. - The schools do not provide any kind of meals or supplements.	- In two schools in two States, the WFP provide free of charge breakfast.
Physical Education	- No physical activities (PA) in schools; however students play football in the squares around the schools, as in most schools there is no space as well they complained of lack of tools. - Parents recommended: - PA to be included as a compulsory subject within the curriculum (now it is optional during the recess). - Recruitment of specialized teachers - Designing standardized places and tools. - They can mobilize community funds to support PA.	- Weekly physical exercises
Psychosocial support	- No mental health problems. - They recommended. o Assignment of psychologist or training teachers to counsel students. o More health and psychosocial education. o Physical and cultural activities within schools.	- Depression - Thefts which they relate to psychological and family problems due to increasing incidents of divorce
School environment	- Common minor injuries due to the rush of students. - Few cases of interpersonal violence among students which is not serious as perceived by parents. - No violence between students and teachers - Few major issues of disputes are sometimes communicated to parents. - Parents are not aware about a hotline - note: parents do not consider corporal beating as violence.	- No violence
Promoting teacher's health	- Recommended coverage with health insurance, periodic medical screening, first aid, provision of maternal care and vaccination for female teachers.	- Parents can create funds to support curative care for teachers and PA within school
Partnership between the school, family and community	- The parent council is the coordination body in all schools; however, its functionality varies a lot. - The schools do not have health education programs for families and the community. - They recommend. - Parents contribute to first aid fund and activities. - Support students' associations of health & environmental sanitation. - Contribute to health campaigns for schools. - Organization of seminars by specialized health personnel.	- Schools engage in cleaning campaigns in the community - Students disseminate health messages to the families.

Finally, all recommendations related to the different components of the HPS were summarized and listed in descending order for each of the students and parents' groups (Table 3).

Table 3: Priorities for the five years national school health strategy.

Target group	Priorities
Students	Training of students and teachers on first aid. Establishment of student's health record and conduction of periodic medical screening. Establishment of school-based feeding program. Promote PA: space, specialized personnel, avail tools. Assignment of a psychologist for each school. Conduct health education activities within school. Improve school infrastructure with emphasis on electricity.
Parents	Conduction of regular periodic medical screening. Establishment of school-based feeding program. Establishment of student's health record and include students in health insurance (where families are not eligible for health insurance). Assignment of a psychologist for each school. Establish funds to support poor students. Promote PA: space, specialized personnel, avail tools. Build capacities of parent's councils on school health. Establish health coordination council for schools including health professionals and members other than parents. Improve school infrastructure.

Neither the school administration, parent's council nor the health authorities have guidance or supervisory role in deciding on the dietary contents of the meal, nor on controlling the price. Participants thought that this is the cheapest available meal that the majority of students will afford to pay.

The Nutrition status of the students was not checked by any means, no supplementation of iron or folic acid or other minerals. Both groups were not aware of the salt iodization policy.

Food handlers were not regularly checked and few schools follow on checking the health cards of the food venders.

Most of the participants recommended introduction of free of charge or subsidized breakfast meal. Parents added that a fund can be created by parent's council to support poor students in general including offering meals.

Physical Education

The majority of the participants of the two groups mentioned that physical' activities (PA) although included in the curriculum but is not practiced and is left for student's choice during times of recess or in some cases, students use the playing yards in the school vicinity usually after classes. In few schools, that this activity is done under a teacher's supervision. Overall, the school environment in terms of space and tools necessary for different PA is not favorable.

As students are not instructed for the practice of PA they had the feeling that it is not part of the curriculum and therefore have recommended including it in the curriculum.

Some recommended that schools should seek partnering with adult clubs *"We do not have options of various PA especially for swimming, the school can coordinate with adults' clubs in town to provide us the opportunity of training and practice at a subsidized cost, after school day"* said one of the students.

Few mentioned that they have weekly classes for physical activities. Available tools are foot, volley and Ping-Pong balls.

Psycho-social support

When asked about common mental health problems the majority denied any problems except for a few who mentioned depression, loneliness, epilepsy and theft cases which they consider a result of psychological problems. Parents added risk factors which they relate to family issues and divorce.

Few of the students mentioned that some students practice substance abuse in the form of smoking, snuff and drugs and that few teachers smoke or use snuff in the presence of the students. They justify the behavior to the imitation of friends, family members and stress.

Students and parents recommended the assignment of a psychologist at the school, while parents when asked about their

role to solve problems, they mentioned closer follow up with children, sharing advice, building the confidence of children and they believed that health education by religious men is important. Parents recommended training of teachers on psycho-social support in the absence of psychologists, designating a special area for counselling and emphasizing in-school cultural and sports activities.

School Environment

Physical environment

The majority of students were satisfied with classes, whereas few complained of inadequate ventilation and lighting and that buildings need maintenance. In the visited humanitarian and fragile States, few classes are made of straw with no seating.

Few mentioned that there is a place for hand washing and all confirmed lack of soap to wash hands.

The majority agreed that there is no seating in open areas of the school.

The majority of students confirmed that drinking water is available however, it is not clean and is not safely stored. As well, they mentioned that latrines were not adequate in number, not clean and not supplied with water. Few mentioned that they use open defecation around the school.

Few mentioned that there is a place for hand washing and all confirmed lack of soap to wash hands.

Extra-Class activities

With few exceptions, all schools have established students' associations, performing among others, cultural, sports, arts, health, school gardening and religious activities. Usually from these associations, outstanding students are selected to compete for annual national school days.

Child Protection

As for violence among students, the majority said that there were few cases among students in the form of verbal violence, physical fights and rarely bullying. All parents and the majority of students denied any kind of violence of teachers towards students except for corporal punishment which they consider as a disciplinary act rather than violence, however, they have confirmed rare severe cases. In two school's students mentioned rare incidents of students' violence towards teachers. Very few participants were aware of the hotline for child protection and the majority mentioned that very few incidents are raised to the police.

Promoting teacher's health

All participants agreed that teachers shall receive periodic medical screening similar to students. Parents thought that teachers should be enrolled in HI and that parents can contribute financially or in-kind to avail facilities for physical activity for teachers.

Partnership between the school, family and community

In the majority of schools, a teacher is assigned as the coordinator for school health and he/she is the link with students/school and

family. As well, a parent's council that includes members other than parents who are interested to support school activities is established at all schools; however, the council focuses mainly on development of the infrastructure of the school.

Few students mentioned that they were engaged in community cleaning campaigns and they disseminate health messages to their families.

Some claimed that being young, families and the community will not respect their views and so are not encouraged to engage in community health education.

Top priority areas identified by students and parents

Table 3 shows the top priorities for the five years NSHS related to the eight components of a HPS model.

Discussion

WHO states that national health policies, strategies and plans are more likely to be implemented if they were made by the people who will implement them. They must be relevant to and based on the country context and constraints, in a comprehensive, balanced and coherent fashion, taking into account the positions of stakeholders [9]. Inadequate implementation of school health policies is related to inadequate extensive planning that helps to establish a clear long-term vision and ownership. A comprehensive school health approach takes account of all hierarchical administrative level from the national level to the schools [12]. Health-promoting schools should be anchored on sustainable policies and strategies to ensure that positive changes are maintained and therefore is the platform for the fundamentals of health in schools [13].

Parent engagement in schools can promote positive health behaviors among children and adolescents. When parents are aware of their children's problems or success and support them, students will be more satisfied, less distressed and will mostly adopt healthy practices leading to better school retention. Schools' administrators and staff have different models for engaging parents. However, this is mostly in academic performance, behavioral and other issues at the school level [14].

In line with this study, the Scottish government commissioned six case studies to explore the role of children and young people in overall policymaking including police, child rights, domestic violence, children's hearings, sex education, and human rights. The study revealed that children and young people have influenced policy across the country, especially in creating new health posts and that they have used different methods to express their needs such as drama etc. [15].

Parents' engagement through this consultative process is supported by research showing that their engagement in schools is closely linked to better student behavior's higher academic achievement. It proves that through parents' engagement, focused strategies and actions would be revealed and will be appreciated by schools to promote health [16].

A quality school ensures the participation of parents which is very important for solving problems that include besides learning, other services at the school [17-19]. Consequently, this study targeted students and parents as major stakeholders in setting a strategy for HPS.

Marjorita Sormunen et al, found that the responsibility of health educating children is shared between home and school. The results of a population-based survey on adolescents in Khartoum State 2014, reflected a marked gaps in the knowledge of both genders about changes at adolescence other than physical changes commonly associated with adolescence [20]. This is in line with the desire of parents and students in this study to be educated as a priority for resuming a better role in improving health [21].

A study about substance abuse in Ramotswa, Botswana, 2017, concluded that capacity building on risks factors of substance abuse and strengthening coping mechanisms to stress is important. This supports the recommendations of students and parents to assign a psychologist at each school or train a teacher for the same purpose in the study under discussion [22].

In this study, participants prioritized the provision of health services, PA, psychosocial support and health education. This is supported by the fact that the core elements of a "healthy school" are: access to health care, safe food, clear air, health education and WASH services [13].

The WHO series on school health support, that policies should be adapted to address national and local needs regarding health concerns, food preferences and dietary practices of a diversity of cultural groups represented at school. It also commends the results of our study that parents shall be educated about the value of healthy meals and food safety practices for better eating and learning [23].

Promoting PA was perceived as inadequate by school children. Parents and students recommend it as one of the priorities. PA is recommended by WHO in the Fifty-seventh World Health Assembly, emphasized that nutrition and PA education, shall start in primary school, to promote healthier diets, and to overcome misleading dietary advice. This fact supports the priorities set by students and parents in this study [24].

A study among school children in Sudan revealed that dietary diversity is associated with affordability and availability and preference of food offered [25]. The results support students' views in our study.

The discussion and endorsement of the study revealed priorities by the FMOH and MOGE confirms that parents and children can take a meaningful role in decision-making as indicated by Lundy who developed a model that articulated four factors to be considered by duty bearers responsible for operationalizing the CRC agenda Article 12. These are Space, Voice, Audience, and Influence. The first two are concerned with supporting children to freely express

views in a safe environment and the last two are concerned with facilitating the implementation of these views [26]. Our case is in line with this model.

In particular, the first three pillars were adhered to, where the strategy was later endorsed at the highest level of the two partner ministries of general education and health after discussion of the priorities in series of workshops. The workshops were conducted at the federal level and were attended by seventeen of the eighteen States' participants from education, health and other related sectors. Administrators of schools that were engaged in the process attended the workshops to verify the results of the situation analysis and build the consensus on outlining the strategy. Also, the strategy draft contains the result of this study was presented to and agreed upon by decision-makers of both leading sectors at a national school health annual forum which was held at White Nile State.

The summary of the workshop's outcomes was further presented to the Council of the Minister of General Education, Council of the Undersecretary FMOH and was finally endorsed by the National School Health Joint Council.

Conclusions and Recommendations

The study proved that engaging students and parents in setting priorities is valuable, where the product was used as a backbone for the development of the NSHS. At the same time the process was an operationalization of Article 12 of the CRC.

The outcomes of priority setting by school children and parents through an extensive process of engagement and consultation help in fixing the top priorities given constrained resources, therefore attract political support and facilitate acceptance and endorsement by different hierarchical levels of decision making.

Engaging students and parents in setting priorities is essential to make sure that as key actors, they will own it and will more likely play a leading role in implementation, hence the process should be adopted in similar settings and issues

Acknowledgements

The authors acknowledged the feedback and contributions made by different partners; the technical staff of MOGE, FMOH, and UNICEF at all levels. In particular, the authors acknowledge the commendable efforts of Dr Egbal A. B Abukaraig for reviewing and editing this manuscript. Lastly but not the least, authors acknowledge the contributions of students and parents and their time allocated to provide information.

Funding

This study was funded by UNICEF/Sudan as part of the process of developing the NSHS; conceptualization of the process, development of the study proposal and implementation was carried out by authors.

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