

Barriers and Facilitators of Physical Activity among Adolescents of Debre Berhan City Administration; Qualitative Study.

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Abstract

Background: Most adolescents are insufficiently physically active and it contributes to 3.2 million deaths each year. Environmental and systemic factors influence the level of physical activity. Sedentary work and living environments, socioeconomic status and limited access to facilities are barriers of physical activity.

Objectives: The main objective of this study was to explore barriers and facilitators of physical activity among adolescents of Debre Berhan City Administration.

Methodology: School based qualitative study was conducted among 64 adolescents in Debre Berhan City Administration from June 1-20 2019. Data was collected using eight focus group discussions with a focus group guide. Inductive analysis was done using ATLA.ti version 7.

Result: A total of eight focus group discussion were conducted from June 1-20/2019. Three out of the sixty-four participants reported that they do physical activity on a regular basis. Social and personal factors (lack of role model, absence of family or friend influence, bad example, shortage of time, lack of interest and financial constraints) and environmental(Lack of access to play ground, lack of access to gymnasium, lack of conducive environment, poor school environment, harsh (polluted) environment, not friendly (girls) environment, poor urban planning and developmental activities) factors were reported to be barriers of physical activity while being member of a club, improving self-image and maintaining fitness are facilitators of physical activity.

Conclusion and Recommendation: Lack of social support, lack of access to play ground and poor construction and developmental activities are the main barriers of physical activity. Therefore, Debre Berhan City Administration should work towards improving urban planning and avail girls' friendly playground and gymnasium for every resident. Key Words Physical activity, Qualitative Study, Barriers, Facilitators

1. Introduction

Physical activity is defined as bodily movement caused by contractions of skeletal muscles. It includes exercise, sport, active play and walking (1–3).

A minimum of 60 minutes moderate to vigorous-intensity daily physical activity is recommended for a healthy life (4). Physical activity has a protective effect against non-communicable diseases like cardiovascular diseases, stroke, type 2 diabetes, and colon and breast cancers (5). However, 81% of adolescents are insufficiently physically active which contributes to 3.2 million deaths each year (6).

The impact of non-communicable diseases globally in general and in Ethiopia specifically increasing from time to time. In the year 2012 and 2015 it claimed the life of 2.7 million people, 3.1 million deaths

respectively (7, 8). The Impact in Ethiopia is not any exception and it causes 34% and 405 of all deaths in the year 2008 and 2014 (9, 10).

Quantitative studies identified factors like age, sex, education and family monthly income to be associated with physical activity status (11–17). Environmental and systemic factors influence the level of physical activity. Sedentary work and living environments, socioeconomic status and limited access to facilities are among the tips of the iceberg blocking physical activity (18).

Qualitative studies also identified individual factors like interest or motivation, body image, time and convenience, lack of awareness; family upbringing, lack of modeling, poor social support, gender and culture; physical environment like availability and accessibility of facilities and opportunities as barriers of physical activity (19–24). Improving fitness or competence, Physical appearance or attractiveness, making friends, physical and mental health, supportive social environment, Interest, positive parent or peer modeling and access to safe play area are considered to be motivators of physical activity (21–24). While the impact of physical inactivity and non-communicable diseases is increasing from time to time the attempt to explore the stumbling block for active life style are not well studied in Ethiopia generally and in the study area specifically. Therefore, this study is aimed to explore the barriers and facilitators of physical activities among adolescents of Debre Berhan City Administration.

2. Methods

Study design

School based qualitative study using focus group discussions (FGD) was conducted to assess barriers and facilitators of physical activity among adolescents of Debre Berhan City Administration from June 1-20/2019.

Participants and setting

A total of 64 (31 female and 33 male) eligible students age between 18 and 19 were purposively selected from two public and one private schools. For each FGD one class is selected randomly and from each class participants who were 18 and 19 years were selected from the name list until we get eight participants. Written consent was obtained after the objective of the study was explained for all participants. The college of health sciences review board in Debre Berhan University approved the research.

Data collection

A total of eight FGD were conducted. Each FGD contained eight participants and lasted from 30 up to 40 minutes. Data collection was conducted in two phases. In the first phase five focus group discussions in the public and two in the private schools were conducted. Transcription and coding of the data was conducted after every FGD to assess information saturation. Information saturation was reached after

the seventh FGD but one more FGD was conducted in the second phase to ensure true information saturation.

The data was collected using a focus group guide. The guide contains open ended question focusing on current physical activity engagement, barriers, facilitators and their recommendation. Two facilitators lead the FDG, one mainly interviewing and the other making records and taking notes.

Data Analysis

Descriptive summary was presented by summarizing the age, sex and grade level of participants (Table: 1). Qualitative data was transcribed verbatim and exported to ATLAS.ti Version 7. The coding was conducted in two phases. During the first phase the data was coded under 4 themes: engagement, facilitators, barriers and recommendation according to the study question. Furthermore, a second phase coding generated different subthemes under the main thematic areas.

3. Result

Physical activity Engagement

All participants reflected good knowledge on the benefit and need of regular physical activity. It is said, physical activity helps to be healthy, control body weight, improve fitness, make brain active and improve academic achievement. However, only three students; two male and one female reported to have regular physical activity routine.

A 12th grade female student said "It is very important for health. Physical activity makes us active and inactivity will cause us get weight and even affect our brain functioning."

A grade 12th male student said "Physical activity makes us active while inactivity reduce our capacity."

Facilitators of Physical activity.

Facilitators of Physical activity are personal reasons like need to improve self-image, to be fit and healthy, and to improve performance in the club. Social reasons like friend modeling and family support are raised as facilitators of physical activity.

A 11th grade female student said "I do exercise for one hour every day and my reason is to be fit and healthy."

A grade 12th male student said "I do exercise because I'm member of the Woreda basketball team. It helped me to stay in shape and keep my fitness. Being member of the team helped me to exercise regularly, I worked out every day."

Barriers of physical activity

Different reasons are mentioned for not being physically active or play games. Social and personal factors (lack of role model, absence of family or friend influence, bad example, shortage of time, lack of interest and financial constraints)

A 12 grade male student said “No member of my family exercise and they did not ever tell me to go to gymnasium. I cannot go by myself because the payment is too much for my pocket money”

A 11 grade female student said “Most member of the gymnasium around our residence are not good examples and my family discourage it.”

Environmental (Lack of access to play ground, lack of access to gymnasium, lack of conducive environment, poor school environment, harsh (polluted) environment, not friendly (girls) environment, poor urban planning and developmental activities) are the main reasons.

An 11th grade male student said “In our village we do not have free play ground and we are forced to use the high school playground after 11 local time.”

A 12th grade male student said “I Never done regular exercise due to lack of conducive environment.”

A 12th grade male student said “People do not do exercise due to lack of interest and time shortage. Furthermore, Lack of facility and partner and trainer.”

A 11th grade female student said “I sometimes exercise. My reason for not doing regularly is lack of time. The weather condition is also tough (it is cold at the morning).”

12th grade female student said “the play area around our residence are occupied by the industries. The remaining few are polluted by the industry and household wastes. Let alone playing passing by is difficult.”

A 12th grade female student said “The playgrounds are far from our residence and are not friendly for girls; the play grounds are overcrowded by boys and it is not safe to go there.”

A 11th grade male student said “Playgrounds are not sufficient and most of them are converted to construction and industry site; There was a playground around our village but now it is fenced for construction.”

They are not doing physical exercise but also are engaged in risky behaviors due to lack of proper playground and gymnasium. Adolescents are playing in a less safe place, many become addicted for chat because they have nowhere to go.

A 11th grade male student said “Our youths are now addicted; many students now chew and smoke. If there was conducive environment no one would want to go to the unsafe environment.”

Recommendation

Different recommendations are given by the adolescents to improve the physical activity status. These includes, building girls friendly gymnasium and youth centers, make accessible play grounds and proper urban planning.

A grade 10th Male student said “Our government should work towards developing enough playgrounds and gymnasium and officials should be careful during planning for developmental activities and investments.”

A 9th grade female student said “All facilities should be girls friendly, we do not go out to play anything do to the less favorability of the environment. There should be a dedicated area for girls.”

A 12th grade male student said “Facilities for the youth to be engaged in regular physical activity and reduce sitting time should be opened at every Kebele.”

A 11th grade female student said “As much attention as the investment should be given to the health of the people and our government should work towards developing enough playgrounds and gymnasium in every Kebele.”

4. Discussion

This explorative study tried to identify facilitators and barriers of physical activity among adolescents of Debre Berhan City Administration. Adolescent physical activity level is very minimal; three out of the sixty-four participants regularly exercise. Personal factors like health, body image and fitness are facilitators of physical activity. This is consistent with study in Australia and Canada which reported physical appearance and fitness as facilitators of physical activity (21, 22). In the contrary, Social and personal factors (lack of role model, absence of family or friend influence, bad example, shortage of time, lack of interest and financial constraints) and environmental (Lack of access to play ground, lack of access to gymnasium, lack of conducive environment, poor school environment, harsh (polluted) environment, not friendly (girls) environment, poor urban planning and developmental activities) were identified to be facilitators while being member of a club and improving fitness and self-image facilitate physical activity. The findings of this study are consistent with study in Belgium and Morocco which stated that personal, social and environmental factors like lack of motivation, lack of social support, lack of facilities and opportunities to be main barriers of physical activity. This might indicate the global nature of the problem and similar adolescent reaction to the aforementioned factors (19, 20).

5. Conclusion

Physical activity is very minimal among study participants and self-image, health and fitness are among facilitators of physical activity. In the contrary, social (lack of role model, absence of family or friend influence, bad example, shortage of time, lack of interest and financial constraints) and environmental factors (access to facilities, poor urban planning and harsh environments) are barriers of physical activity.

6. Recommendation

Debre Berhan City Administration, Schools and other stake holders should work towards availing friendly facilities and developing friendly resident and industrial sites. Schools should start club events to encourage student's engagement towards physical activity.

7. Limitation

This study used only one data collection method which might make it difficult to triangulate the conclusion. Study participants are only from high schools and only adolescents and this may affect the finding to explain the whole situation of the study area.

8. Declaration

Ethics approval and consent to participate

This research was approved by the review committee of Debre Berhan University, College of Health Sciences. Permission to conduct the study was obtained from each school administrators. All study participants were older than 18 year and gave written consent. Anonymity and confidentiality of the data were maintained throughout the data collection process. All participants were informed that they have the right to refuse participating in the study at any time.

Consent to publish

Not Applicable

Availability of data and Materials

The data set used in this study is available from corresponding author on reasonable request.

Competing Interests

The authors declared that they have no competing interests.

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Authors' contributions

The first author [OY] is the principal investigator and involved in the designing, data collection, analysis and preparing the manuscript. The second author [ET] involved in the design, analysis and manuscript preparation. The third author [AM] involved in the analysis and writing the manuscript. All the authors had read and approved the final manuscript.

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Tables

Table 1
 Characteristics of participants of the focus
 group discussion participants in Debre Berhan
 City Administration.

Grade	Sex	Frequency	Percentage
11	Female	16	25.00
	Male	16	25.00
12	Female	15	23.44
	Male	17	26.56
Total		64	100

Table 2
 Focus group discussion guide among adolescents of Debre Berhan City
 Administration

No	Guide question
1	Introduce yourself (name, age, sex, grade)
2	How far you are up to regarding physical activity (do you regularly exercise?)
3	What do you think encourage people to do regular exercise?
4	What do you think discourage people not to do physical activity?
5	What do you think should be done to increase physical activity level?