



Perceived Barriers of Young Adults for Participation in Physical Activity

ANJALI* and MANISHA SABHARWAL

Department of Food & Nutrition, Lady Irwin College, Delhi University, New Delhi, India.

Abstract

This study aimed to explore the perceived barriers to physical activity among college students via qualitative research design. Eight focus group discussions on 67 college students aged 18-24 years (48 females, 19 males) was conducted on College premises. Data were analysed using inductive approach. Participants identified a number of obstacles to physical activity. Perceived barriers emerged from the analysis of the data addressed the different dimensions of the socio-ecological framework. The result indicated that the young adults perceived substantial amount of personal, social and environmental factors as barriers such as time constraint, tiredness, stress, family control, safety issues and much more. Understanding the barriers and overcoming the barriers at this stage will be valuable. Health professionals and researchers can use this information to design and implement interventions, strategies and policies to promote the participation in physical activity. This further can help the students to deal with those barriers and can help to instil the habit of regular physical activity in the later adult years.



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Keywords

Abbreviations used,
DS- Day Scholars,
Physical activity,
Perceived barriers,
PG-Paying guests,
Qualitative,
Socio-ecological
Young adults.

Introduction

The rising epidemic of non-communicable diseases (NCDs) is a major public health concern and is associated with unhealthy lifestyle including inappropriate nutrition, physical inactivity, smoking, and alcohol consumption. With the rise in obesity trends across the population, it is important to target different phases of life to tackle the obesity problem. After alarming rates of obesity seen among children and adolescents, college going students may also be

a vulnerable group prone to obesity. One major factor that contributes to this epidemic is physical inactivity among this age group. There is convincing evidence that regular physical activity is protective against unhealthy weight gain whereas sedentary lifestyles, particularly sedentary occupations and inactive recreation such as watching television, promote it. Despite the known physical activity benefits, there is a decline of regular exercise in college-aged students (El-Gilany *et al.*, 2011; Al-Eisa and Al-Sobayel 2012;

CONTACT Anjali  anjaliJuly7@gmail.com  Department of Food & Nutrition, Lady Irwin College, Delhi University, New Delhi, India.



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Poobalan *et al.*, 2012). This situation raises several questions; Why this drift?

Physical activity is an individual choice but the amount of physical activity a person does is also determined or influenced by different factors. While the individual influences are important, physical activity is also influenced by social and community or environmental factors (Pender *et al.*, 2006; Fitzgerald and Spaccarotella 2009) which have sometimes been overlooked. Ecological models may be particularly valuable to the study of barriers to physical activity because although they consider the individual, they emphasize the role of the environment and the interaction of these influences. With an ecological perspective, the factors influencing might be better identified and understood, interventions could be designed more effectively and these barriers can be overcome to increase the participation. Therefore, the aim of our study was to explore the perceived barriers to participation in physical activity among college students.

Methods

Participant and Recruitment

College students aged 18-24 years were recruited to take part in the focus group discussion exploring about physical activity barriers from various colleges of University of Delhi, New Delhi. Eligibility required that participants provide informed consent and self-identity as day scholars or hostellers/ PGs. All the participants were of Indian Nationality and were enrolled full time in several courses. Participants were invited/ asked through e- mails and messages and phone calls and those who attended it; were the part of the discussion. The focus group discussion was conducted within the college during college time. Sixty-seven (n =67) participants attended eight focus groups. The focus groups ranged in size from six to ten participants, with an average of 8-9 participants per session. The focus group discussion lasted approximately for 50-75 minutes.

Question Development

Conceptual domains included personal, social and environmental barriers to physical activity, the focus of this article. The potential questions were developed for the physical activity discussion guides. The questions were selected and placed in logical order, with follow-up probes (If required).

Focus group Facilitation

The focus group followed a set of semi-structured questions which were developed to stimulate open-ended discussion about participants' views of barriers to physical activity. The questions served as a guide only and were not asked in a specific order. Discussions were recorded by a volunteer who could not intervene in the discussion. By the end of the discussion, a written summary of important points and an integral audio version of the conversation were obtained. The recording was done only with the consent of participants and was finished by the end of discussion. Later, audio files were entirely transcribed and a code was assigned to each participant (P1, P2, P3, etc.), to assure confidentiality.

Data Analysis

Qualitative content analysis was done by the inductive approach. The steps used during the qualitative data analysis are given in Fig 1. The focus group conversations were audiotaped and transcribed verbatim in MS Excel. The data was imported into the qualitative analysis software package Atlas ti 7. Then multiple codes were generated from the transcripts and were grouped into three predominant themes. Quotes were also identified to illustrate and validate each of the key themes.

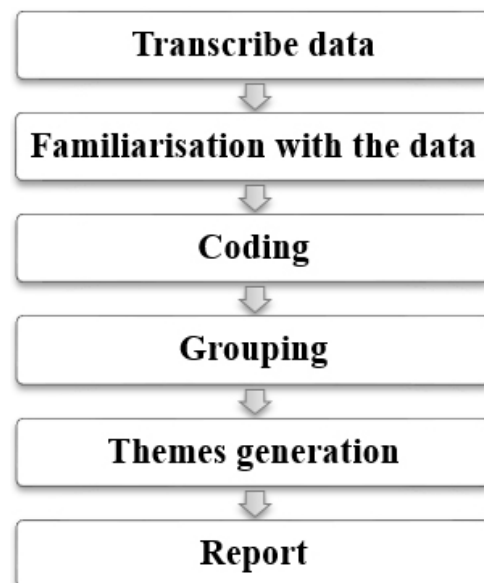


Fig.1: Data analysis chart

Institutional Review Board

An informed written and signed consent was obtained from each subject after the explanation of the objectives and data collection parameters for the study. The study obtained approval from the colleges and was started after getting ethical clearance from Institutional Review Board (IRB).

Delhi University campuses. It will provide the grounds for key findings as well as support consideration for future research and practice.

Descriptive Information on the Subjects

The detailed information regarding characteristics of subjects (n=67) is mentioned in Table 1.

Results

Eight focus group discussions were conducted to collect information in an in-depth manner on physical activity barriers faced by college students. The results will provide a comprehensive understanding of college student's physical activity in

For focus group, the median age of the subjects was 19 years, with the mean age of 19.4±1.25 years. The majority of the subjects were females (71.6%). The majority of the subjects was undergraduate (91.0%). All participants were Indian.

Table 1: Demographics of respondents participating in the Focus Groups, (n = 67)

Variables		n	%
Gender	Male	19	28.4
	Female	48	71.6
Living arrangement	Day Scholar	49	73.1
	Hosteller/P.G/Living alone	18	26.9
Age	≤20 years	59	88.1
	≥21 years	8	11.9
Marital status	Single	67	100
Educational level	Undergraduate	61	91.0
	Post graduate	6	8.90
BMI (Mean±SD)	Male	21.29±3.83	
	Female	20.94 ±3.30	

Several similarities were noted across the groups. For example, participants across all groups reported facing the same barriers. All groups were similar in their skills, knowledge, and behaviors regarding physical activity. The results are presented by examining the themes that emerged in each of the focus group sessions.

socio-ecological framework. This framework includes multiple levels, including

- Personal
- Social
- Environmental

Barriers to Physical Activity

The section included the responses of the subjects to questions related to physical activity barriers. Three key themes with several subthemes emerged from the qualitative data on the barriers to physical activity, all of which addressed the different dimensions of

In all focus groups, it was revealed that they were aware that they should exercise but they did not do it because of a variety of barriers to physical activity. Personal barriers and environmental barriers were stated more frequently as compared to the social barriers (Fig 2).

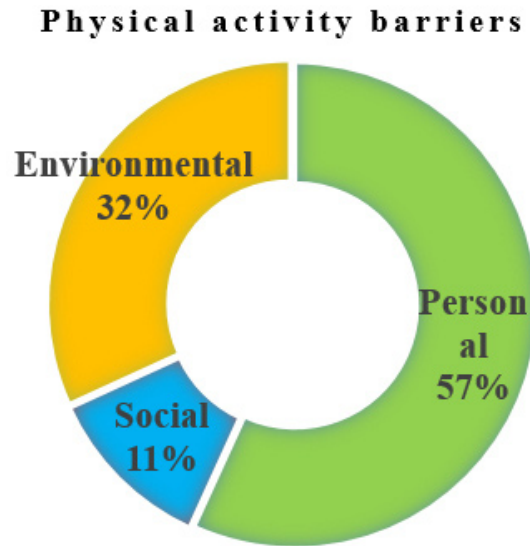


Fig.2: Distribution of subjects based on physical activity barriers

Personal Barriers

Health Related

Lack of Energy/ Sleep

Many of the participants knew what to do to become more physically active, but they were just "tired." These responses were mentioned by respondents across the focus groups. They indicated that there is no energy left for physical activity after a long working day and traveling time. One participant reported:

"Travelling daily takes a lot of time and consumes a lot of my energy..."

(Participant 5, Female, DS, 21 years)

Moreover, the students revealed that due to work assignments they had to stay up late night because of which they could not rise early to get some exercise.

Stress

The academic responsibilities, social pressure, relationships usually generated stress and anxiety in students which impacted their physical activity behavior.

Physical Ailments/Discomfort

Problem of body ache and muscle pain was also mentioned by respondents after they exercised. A participant was also advised not to do much exercise because of health issues.

Not Health Related

Time Constraints

Participants found it difficult to do physical activity because of a busy schedule, and other commitments and interests. In today's scenario, there is increased competition at all levels which did not allow them to pursue physical activity. One participant stated:

"I don't get much time for it because I make myself busy in other tasks like taking tuitions after college hours."

(Participant 34, Male, DS, 21 years)

Lack of time emerged as a major consistent barrier to physical activity participation along with technology-related activities; the influence of peers, parents, and teachers; safety concern; inaccessibility and cost of facilities; competition; and body-centered issues (Dwyer *et al.*, 2006). However, there was an acknowledgment that time management was also an issue. For example;

"I have time. But I am not good at managing time well"

(Participant 64, Female, DS, 20 years)

Lack of Knowledge/Skills

Virtually no participants mentioned needing functional knowledge and skills about physical activity. Only

very few respondents reported the requirement of having various quick physical activities that they can practice to be active as they have time constraints. It did not come out as a potential barrier as it was reported by only a few respondents.

Inertia

It is interesting to note that inertia was considered a noteworthy barrier to physical activity among subjects. 'Inertia' which is usually characterized by passivity, procrastination, boredom, and indolence were also the frequently mentioned barriers among subjects.

Boredom

Participants cited that they did not exercise because they find exercising quite boring. But they reported the willingness to do it if it could be made interesting. For example,

"... That fact is, I don't want to exercise because it is so boring."

(Participant 64, Female, DS, 20 years)

Procrastination/ Lack of Self-Discipline

Charles Dickens' once said: "Procrastination is the thief of time. My advice is, never do tomorrow what you can do today." The mentioned comments reflect that being undisciplined is also one of the barriers faced by the university students.

"My irregularity restricts me from doing physical activity. I am not sincere and regular in doing physical activity."

(Participant 38, Male, PG, 19 years)

Lack of Self-Efficacy

Exercise self-efficacy is defined as the conviction that one can successfully engage in physical activity and adhere to an exercise regimen (Stretcher and Rosenstock 1997). It suggests that psychological and behavioral change comes as a result of the alteration of one's self-efficacy".

"Most often it is a lack of time but sometimes it's my will."

(Participant 3, Female, DS, 23 years)

Indolence

Several respondents showed laziness when it came to physical activity and also indicated they were simply too lazy to pursue physical activity. For example;

"There is no hindrance. It's just that I can't wake up early in the morning as I am too lazy:"

(Participant 7, Female, DS, 18 years)

Therefore, to increase participation in physical activity, policymakers should consider increasing awareness, knowledge, skills and motivation related to physical activity in the intervention programs. Moreover, it is also important to develop various strategies to improve time management among college students.

Social Barriers

Another barrier mentioned was a lack of social support. This social support came from family and friends. According to previous studies families and friends who were not interested in being actively represented a barrier to physical activity (Motl *et al.*, 2007; Gómez-López *et al.*, 2010). In the focus group discussion also participants mentioned the lack of support from friends and family as a barrier to physical activity.

Family Control/ Discouragement

When families were uninterested in being active, participants often neglected physical activity as well. One of the common reasons for the lack of parental support that subjects reported was that parents prioritize academic success over exercise. One participant reported that when she wanted to get up early for physical activity but her parents' response was;

"You don't need to wake up early and if you want to, then you better study in that time."

(Participant 55, Female, DS, 20 years)

Another respondent recalled an incident where she wanted to go for a walk but her parents' response was;

"First study and then do household chores."
(Participant 49, Female, DS, 19 years)

Lack of parent modeling: Students also identified that lack of parent modeling as an obstacle for being physically inactive. For example;

"They can inspire us by doing yoga and make us get up early as well as they can perform exercises so that we can go along with them for exercise, but they don't"

(Participant 45, Female, DS, 19 years)

Gender Typing

In addition to the above factors parents' perceptions of their child's physical appearance also influence the child's physical activity. Parental perception of gender often leads to them encouraging boys to engage in physical activity more than girls (Beets *et al.*, 2010), this is commonly referred to as gender typing. In general, it is the acquisition of a traditional masculine or feminine role. According to Hetherington & Parke (Hetherington and Parke 2003), gender typing is "the process by which children acquire the values, motives, and behaviors viewed as appropriate for males and females within a culture". Each culture has set standards of desirable behaviors that each gender is expected to display. Likewise in Indian scenario females are expected to do household chores. Female participant shared a similar experience,

"In case I get time; parents tell me to do household work like mopping, dishwashing etc."
(Participant 47, Female, DS, 19 years)

There was not a single incident that males from any focus groups could recall with respect to gender typing as parents never restricted them to move out.

Peer Pressure /Discouragement

Support from family members and spouses, friend support seems to play a significant role in physical activity participation (O'Dea 2003; Hohepa *et al.*, 2007; Kiernan *et al.*, 2009; Cerin and Leslie 2010). In this study participants cited the discouragement they faced from their peer group. For example,

"They said that its not important to exercise, just take rest, cool"
(Participant 44, Female, DS, 19 years)

Verbal Bullying/Intimidation

A couple of participants expressed embarrassment and instances of being picked for bullying. Discussing a similar experience, a respondent noted feelings of embarrassment when she went for a walk in the park or even in her own neighborhood:

"I don't prefer to play in parks because there are so many boys and they eve tease and moreover, the older women in the society/ residential complex also don't like girls to play".
(Participant 56, Female, PG, 21 years)

Another male respondent (overweight) cited the similar experience of being bullied. He reported that whenever he went out for exercise the onlookers would give strange expression and stared as if he was an alien.

Environmental Barriers

Participants also cited aspects of the environment and neighborhood as barriers to exercise in the discussions along with personal and social barriers. The majority of the environmental barriers were safety, lack of appropriate settings/programs, access-related issues and cost and much more. They talked about safety issues, dogs, disrespectful comments, traffic, and excessive use of technology like the internet, mobile phones, lack of access to facilities and much more as barriers. Most participants expressed concerns over the surrounding environment for not facilitating physical activity.

Built/Physical Environment

Safety issues: Most of the female participants expressed their apprehensions and their parent's concern regarding safety and potential risk of being harmed if they ventured out to exercise. These encompassed various realms of safety like crime, traffic safety, and stray dogs. Most of the young women in the focus groups mentioned safety issues in their surroundings e.g., being afraid to go out in morning and after dark as a detriment to exercising or being more physically active outdoors.

"... if you go out [for walk], boys comment. So parents don't allow us [for a walk]."
(Participant 50, Female, DS, 19 years)

"I cannot go for morning walk because of the safety issues and presence of unattended dogs."
(Participant 17, Female, DS, 23 years)

Lack of Resources/Opportunities

Generally, parks are perceived to be environments where people are physically active. When asked if they go to parks or spend any time in parks. Overwhelming responses indicated that there were no parks available in the areas.

"Locality constraints. Like we don't have a park in our area. So we can't be strolling in front of our neighbor's house."
(Participant 49, Female, DS, 19 years)

Weather – A Natural Barrier

Bad weather conditions also appeared to be one of the barriers to physical activity. Most of the subjects thought that unsuitable weather hindered them from doing physical activity especially during winter. Some subjects commented that in winter season they did not feel like doing any activity outside as it was cold as compared to summer season when they can freely participate in physical activity. In summer season they can go outside instead of sitting indoors which they prefer doing in winter. Very few male subjects cited that they usually play outdoors during rainy season as they enjoy it.

"In winter and in the rainy season it's difficult for us to go out as it's too cold and parks are full of water so we just enjoy T.V. at that time."
(Participant 18, Female, DS, 20 years)

Financial Cost

Another environmental barrier that was apparent in the groups was a cost associated with exercise programs. This issue was mentioned in all of the focus groups. The cost issues focused on commercial gyms and fitness centers and the high costs of memberships and classes. Moreover, even when programs were available in the college, there was additional cost linked to it.

"Gym is there [in college] but for membership, we have to pay 500 Rs extra [apart from college fee]."
(Participant 45, Female, DS, 19 years)

It is important to be aware of the value that it is related to the parent's support who provide monetary backing to the youth as they are dependent on their parents (Siddiqi *et al.*, 2011).

Policy and Legislation

Internet & Technology

Excessive use of technology was an important environmental barrier seen among this age group. Television watching, the internet and mobile phone use is one of the most common leisure time activity found particularly in the younger generation. Most of the students in this study also claimed that they were more into T.V. watching or be on phone or computer on a daily basis leading to limited physical activity.

"Time is there but we are more interested in social media like WhatsApp, Facebook, and T.V."
(Participant 51, Female, DS, 18 years)

Watching T.V. or use of computer or phone was often a default choice as they found these to be more interesting. Subjects indicated that apart from using the internet for educational purposes like email, assignments; they spend a substantial amount of time in online gaming, watching videos online, downloading music, and on the social networking site like Facebook, Instagram.

Regulatory Environment

Within the regulatory environment of the college, lack of availability/accessibility of facilities acted as barriers to engagement in physical activity.

Lack of Availability/Accessibility of Facilities

While the number of sports facilities at each of the colleges varied widely. Many participants preferred to stay in the classroom during recess because of the perceived lack of play facilities. The students also cited that there were no physical education (PE)/ yoga classes that were there in college premises. For example,

“Earlier in school, we used to have group yoga classes now it’s not there in college.”
(Participant 54, Female, DS, 19 years)

The participants also seemed to have little knowledge of the free facilities or initiatives available on their premises. Moreover, almost every subject mentioned facilities they did not have, or had but which did not live up to their expectations. For example,

“It is actually compulsory for us to choose either NCC or sports like aerobics or Zumba. But slowly it fades away as the session moves on.”
(Participant 44, Female, DS, 19 years)

Some of the participants in the study felt that though the college environment supports physical activity the facilities are not accessible to them due to many reasons. This point was directly related to cost as the college charged extra for the gym membership, lack of awareness and indirectly towards inconvenient time. Few participants also quoted that although the equipments for physical activity are available in the campuses but there is no mentor to help with the equipments.

“Gym equipment are there but there is no gym instructor.”
(Participant 58, Female, DS, 19 years)

Therefore efforts need to be done to increase awareness of physical activity facilities available.

Discussion

In the current study number of perceived barriers were identified as potential barriers. The barriers fall under three main themes personal, social and environmental. Previous studies (Gyurcsik *et al.*, 2006; Kimm *et al.*, 2006; Nguyen-Michel *et al.*, 2006; Reichert *et al.*, 2007; Sajwani *et al.*, 2009; Gómez-López *et al.*, 2010; Fox *et al.*, 2012; Cruz *et al.*, 2013) supported the current research findings. Fox *et al.*, (Fox *et al.*, 2012) surveyed 300 adults (18 and above years) in New York and found that 45% of the subjects perceived a lack of energy as the potential barriers followed by physical discomfort (34.5%), lack of time (30%) and boredom (30%). Health concerns were mentioned as a barrier to physical activity Similar to the prior research (Gyurcsik *et al.*, 2006; Kimm *et al.*, 2006;

Dambros *et al.*, 2011). These researches studied students in cities of Canada, Mexico and Brazil, respectively and found that university students perceived their physical condition as a barrier to their physical activity. Lack of time was the most frequently reported barrier to physical activity across gender, age, living arrangement and socioeconomic status in myriad researches (Andajani-Sutjahjo *et al.*, 2004; Daskapan *et al.*, 2006; Dwyer *et al.*, 2006; Gyurcsik *et al.*, 2006; Kimm *et al.*, 2006; Wolin *et al.*, 2008; Sajwani *et al.*, 2009; Gómez-López *et al.*, 2010; El-Gilany *et al.*, 2011; LaCaille *et al.*, 2011; Fox *et al.*, 2012; Al-Otaibi 2013; Youssef *et al.*, 2013). Self-undisciplined is also one of the barriers faced by the university students similar to previously reported researches (Ibrahim *et al.*, 2013; Strang 2015). In our data, it also emerged as one of the substantial barriers in their everyday lives of both genders. Lack of knowledge was also found as a barrier among the university students similar to research findings (Dambros *et al.*, 2011; Siddiqi *et al.*, 2011; Doldren and Webb 2013). The present study’s findings were consistent with other studies (Robbins *et al.*, 2003; De Bourdeaudhuij *et al.*, 2005; Dyrlund and Wininger 2006; Motl *et al.*, 2007; Amiri *et al.*, 2010; Mamatha 2012; Peterson *et al.*, 2013) which reported a linear relationship between self-efficacy and physical activity. Lack of self-motivation and laziness was cited as a major hindrance to any form of physical activity among college students (Siddiqi *et al.*, 2011; Doldren and Webb 2013; Hey *et al.*, 2015).

Lack of social support also came out as significant barriers among this age group. Family control, peer discouragement, verbal bullying were some of the reasons cited by the participants. These research outcomes were supported by previous research findings (Leslie *et al.*, 2001; Huang *et al.*, 2003; Cerin and Leslie 2010), male college students participated in more vigorous activities than do their female counterparts as males are expected to be independent, and competitive, while females are expected to be passive, and sensitive. These societal standards often cause boys and girls to develop very different attitudes towards physical activity. Parental gender-typing, in particular, plays a major role in the ways that boys and girls perceive physical activity with girls seeking parental support for physical activity (Andajani-Sutjahjo *et al.*, 2004; Peterson

et al., 2013). These findings also reported intimidating social environment as one of the barriers to physical activity among students (Gyurcsik *et al.*, 2006).

Bolívar *et al.*, (2010) conducted a cross-sectional study among the adult population in Andalusia, Spain and analyzed the effect of environmental factors on physical activity. It was reported that if there is a lack of green spaces in the neighborhood it is less likely that the population will take exercise. Safety concerns have been studied extensively (Mullan 2003; Garcia Bengoechea *et al.*, 2005; Kimm *et al.*, 2006; Moore *et al.*, 2010; Oyeyemi *et al.*, 2012; Jongeneel-Grimen *et al.*, 2013) in relation to different realms of physical activity. This is also consistent with present findings and also from another study where women perceived neighborhood unsafe as compared to males and they were less likely to perceive easy access and availability to places for physical activity (Garcia *et al.*, 2010). These findings were in contrast with a cross-sectional study done in South Carolina on 1,655 older adolescent girls which reported no effect of perceived neighborhood safety on self-reported physical activity (Motl *et al.*, 2007). Several studies have also shown that seasons and weather act as the barrier to physical activity (Gyurcsik *et al.*, 2006; Tucker and Gilliland 2007). The present study showed similar results which suggested that use of internet (Fontaine *et al.*, 2011; Moreno *et al.*, 2013) and T.V. watching (Pérez *et al.*, 2011; Tucker and Tucker 2011; Babey *et al.*, 2013; Dutra *et al.*, 2015) are linked with low physical activity. Lack of awareness regarding physical activity facilities on campus was also found as a barrier. This pattern was similar to discrepant findings in the previous literature (Giles-Corti and Donovan 2002; Kimm *et al.*, 2006; Reed 2007; Craike *et al.*, 2009; Dias *et al.*, 2015) in general.

There were several limitations to the study. This study was carried out in 8 colleges with a total

of 67 participants' in colleges of Delhi University. The overall sample size was small. This study did not explore the different perspectives of teachers, parents regarding physical activity. Other limitations were overcome by framing questions and probes using health behavior theory. Appropriate coding methods was done to interpret data into relevant themes.

Implications for Research and Practice

This qualitative study analysis produced many interesting results. It highlighted many issues identified by college students with socio-ecological components that influence their physical activity participation. This research adds to the limited body of evidence regarding barriers to physical activity. Multifaceted interventions involving barriers at different socio-ecological levels of influence are needed to improve physical activity participation among youth. Interventions need to focus both on behavior change and environmental change. We recommend that physical activity should be promoted through a combination of actions that address barriers at various socioecological levels. It includes sensitizing youth, improving information strategies regarding on-campus sports activities, providing cheaper and/or more flexible facilities, and including physical activity into the curriculum. The results of the present study can be considered a first step towards the development of tailored and effective intervention program aiming to improve activity level of youth.

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