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SCHOOLING FEVER THREATS SCHOOLCHILDREN'S PHYSICAL ACTIVITY; A QUALITATIVE STUDY IN IRANIAN FAMILIES

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ABSTRACT

Introduction: Parents play an important role to increase children's physical activity. The aim of this study was to understanding the parents' points of view about physical activity in their students at grade 5th and 6th. **Methods:** To address the aim of this study a qualitative method with in-depth un-structured interview was undertaken. **Findings:** The main theme of this qualitative study was 'schooling fever' with two sub-themes; 'physical activity against learning' and 'screen games against physical activity.' **Conclusion:** Schooling fever is a common barrier to physical activity in students, grade 5th and 6th. Yet, it is important to consider how to conduct appropriate interventions to subsidies the schooling fever.

Keywords: *Schooling Fever, School Children, Physical Activity*

INTRODUCTION

There are many health benefits for physical activity in children, including; obesity and overweight prevention, healthy bones and muscles, chronic disease prevention, self-esteem improvement, and anxiety and stress reduction (Bustamante *et al.*, 2013; Carver *et al.*, 2010; Cheng *et al.*, 2014; Cherry *et al.*, 2012; Corsino *et al.*, 2013). Recent studies indicated that physical activity can improve academic performance and increase school achievements too, and students may be more efficient learners after physical activity performance (Pirrie and Lodewyk, 2012; Ruiz *et al.*, 2010; Van der Niet *et al.*,; Otabe *et al.*, 2014; Carlier *et al.*, 2014). To achieve such benefits, guidelines recommend children to participate in at least 60 minute physical activity every day (Rasberry *et al.*, 2011).

Some other studies have not confirmed such psychological consequences after physical activity. A systematic review about the association between academic performance and physical activity, in USA on forty-three articles revealed a positive association only in slightly more than half articles and in 48% of articles have not been found an association, with negative association in last 1.5% (Rasberry *et al.*, 2011). On the other hand some researchers are believed that only some specific types of physical activity; the rhythmic one like as dancing may improve cognitive performance (Carlier *et al.*, 2014). Anyway, the association between PA and academic performance is discussed by researchers.

Figures show that most children in many countries, developed or developing one, did not meet the recommended level of physical activity (Rasberry *et al.*, 2011; Wilson *et al.*, 2012; Cardon *et al.*, 2014; Corder *et al.*, 2012; Herman *et al.*, 2014). Obesity and overweight in children are two growing public health problem in many countries (Herman *et al.*, 2014; Berdah, 2010; Hallal *et al.*, 2012; Jaballas *et al.*, 2011; Maddah and Solhpour, 2010). Guthold in a study about physical activity and sedentary behavior in schoolchildren at five WHO zones in 34 countries concluded that the majority of students did not meet physical activity recommendations (Guthold *et al.*, 2010). In Iran nearly 1 out of 3 Iranian children is either obese or overweight with no significant variation with sex and age (Kelishadi *et al.*, 2014; Kargarfard *et al.*, 2012). There are many factors contributing to childhood obesity and overweight, yet sedentary behaviors are one of the major factors (Herman *et al.*, 2014; He *et al.*, 2010; Davison *et al.*, 2011; McClain *et al.*, 2014). Sedentary behaviors like as excessive television viewing and computer use and the others defined as any activity with no or less movement that makes low energy consumption (Fitzsimmons *et al.*, 2014; Foti *et al.*, 2011). Family attitudes toward physical activity play an important role to increase PA in children and the effect of family attitudes and preparation to special school entrance exams on students' PA were studied in some counties (Pinar *et al.*, 2014; Rhee *et al.*, 2014; Thorn *et al.*, 2013; Wang *et al.*, 2013; Wilson *et al.*, 2011).

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Grade 5th and 6th of elementary schools are two important stages for many students and their family to enter specific schools; Sharp-Witted governmental schools (*TizHushan* [In Persian]). This study was set on to understand mothers' points of view about the importance and necessity of physical activity for their children at grade 5th and 6th.

MATERIALS AND METHODS

Methods

Design: This study is a part of PhD thesis to increase schoolchildren's PA. The whole study was consisted of two sections; quantitative and qualitative stage.

At quantitative study 300 students at grade 5th and 6th with RBMI over than 85 were selected randomly. Their energy consumption for PA was assessed with PDPAR tool and calculated in MET. At qualitative study, we participated 7 out of the students; with daily energy consumption lower than 1.5 MET.

To address the aim of this study a qualitative research was undertaken. Qualitative study is inductive with the in-depth understanding of participants' experiences (Horne and Tierney, 2012; Painter *et al.*, 2014).

Participants: Using purposive sampling method, seven students in grade 5th and 6th at primary school were invited to participate in this study via a telephone contact with school manager. The inclusion criteria were; 1) Relative body mass index over than 85 and 2) Daily energy expenditure for PA lower than 1.5 MET. After that their mothers were invited too. The participants were enrolled in this study between January to April 2013.

Data collection: Approval for this study was obtained from Tarbiat Modares University and Qazvin School Organization. All participants were interviewed for about 30-45 minutes in a place (school or home) and in a time that were convenient for them. The interviews were semi- structured in 3 main topics with the questions related to priority and importance of physical activity in children. These questions finalized after two pilot interviews and discussion with health education experts. These topics and questions are listed in Box 1.

These questions helped interviewer to conduct interview with no anticipating about participants' responses. The study purpose was described for participants and written informed consents were obtained for their involvement and for interview recording.

- Topic 1: Physical activity importance
Are there any benefits in physical activity?
- Topic 2: Physical activity and learning
What is your opinion about physical activity and learning?
- Topic 3: Physical activity and screen games
What is your opinion about screen games?

Box 1: Selection of questions in the interviews sheet

Analyzing: All interviews were recorded with a MP3 Set and were transcribed in full immediately. The transcriptions were validated with the original recordings for accuracy. Using the inductive content analysis approach, all interviews were coded into categories.

Each transcript was read several times and then all relevant keywords were labeled with codes and grouped in similar concepts.

Two trained investigators performed interview coding separately to obtain maximum consensus. Any disagreement in analyzing process was resolved through discussion between authors.

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RESULTS AND DISCUSSION

Results

Fourteen participants (7 students with their mothers) were involved in this study. Demographic characteristics of the participants are shown in table 1.

Table 1: Demographic characteristics of the participants

	Variable	Value	Range
Mothers (n=7)	Age (mean ± SD)	31.2 ± 3.4 years	27-36 years
	Education, n (%)		
	- no formal school	2 (28%)	
	- high school or diploma	3 (43%)	
	- college degree	2 (28%)	
	Employment, n (%)		
	- full or part time	2 (28%)	
	- housewife	5 (71%)	
	Ethnicity, n (%)		
	- Tork	4 (57%)	
- Gilak	2 (28%)		
- Fars	1 (14%)		
Students (n=7)	Age (mean ± SD)	11.2 ± 1.1 years	10.2-12.3years
	Gender		
	- Boy, n (%)	4 (57%)	
	- Girl, n (%)	3 (43%)	
	School grade, n (%)		
	- 5 th	3 (43%)	
	- 6 th	4 (57%)	
	RBMI		
- 85-95 percentile	2 (28%)		
- ≥95 percentile	5 (71%)		

Initially, 148 codes were extracted from interview transcriptions. The main theme established from the process of content analysis was ‘*Schooling Fever*’ with 2 sub-themes ‘*Physical activity against Learning*’ and ‘*Screen games against physical activity*’. These theme and sub-themes are explained as follows;

Theme: Schooling Fever

All participants believed that physical activity has many benefits for children but it can prevent children from educational improvements at school. Most of them believed that children must postpone their physical activity performance to adolescence or later. The participants were under social pressure to push forward their children to achieve success in education. Registering in “*sharp-witted governmental schools*” was a common social norm which prevents participants to allow children doing physical activity. They encouraged children to sit down and read lessons and do home-works and more additional school tasks. They believed this can warranty the children’s future life. We named this appetency as ‘*Schooling Fever*’ (*Tab-e Tahsil [In Persian]*); a situation in which parents encourage children to decrease or omit physical activity and sacrifice it for learning more. The theme comprised two sub-themes of ‘*Physical activity against Learning*’ and ‘*Screen games against physical activity*’.

Physical Activity against Learning

Some participants expressed their own past experiences about physical activity. They said that they had high physical activity in childhood that lead to less attention to achievement in school exams. Most of them were unsatisfied about their present life status and believed that it was the outcome of physical activity in childhood. For example, a mother stated, ‘*When I was at school age, any one, my mother and my father did not encourage me to do my best for school success. Most times I was on playground with*

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my friends. But now I must prohibit my children to do play and activity. I must encourage them to read more and more, do school extra tasks. May be to achieve a good position in their future life' (P. 3).

The participants were under extreme social pressure about their children's school achievements, too. A mother stated, *'Now a days, parents feel that they are in racing field, whose child can be register in a "Sharp-witted governmental school"? Registration in such schools sounds as a social preference. It can warranty their students' future life and entrance to the university' (P. 4).*

For these reasons they expressed that physical activity is not a priority for children's life. They believed that they can do it better when they are in adulthood. A mother said, *'It is not suitable for children to spend their times for physical activity and destroy their future life. They must obey their parents and do their best at school. Children can postpone their physical activity to later, may be at university' (P. 7).*

The participants were aware about benefits of physical activity in children's health status. But they preferred to prohibit children doing physical activity. A father stated, *'Good. I know that physical activity can promote my children health. I fear it cause school lag. Physical activity has no thing for children. They can do it later. Doing physical activity hurts their future life' (P. 5).*

Students believed that physical activity can improve their school achievements. A student said, *'When I become tired from reading and learning, I prefer to do some physical activity. It can refresh me. But, my parents worry if it can be harmful for my school achievements. They only conduct me to lean more and more' (S. 1).*

Another student stated, *'They preferred me to have intensive plan for school. Physical activity in my parents' mind is a waste thing. They wish for me to pass my final exam to register in a special school' (S. 3).*

Screen Games against Physical Activity

On the other hand, the participants believed that Screen games are the common cause for low physical activity performance in children. The participants were strongly incompatible with children to spend their times for screen games (Video games, Computer games, etc.). They believed that the children must engage in physical activity instead of screen games. A mother stated, *'I do not understand, what these spurious games are. I think that there are no benefits in such games. It is better that they do play in the yard instead of these games. It has no things for them, in exception of red eyes and infuriation' (P. 6).*

Another participant stated, *'Screen game damage children eyes. It can increase laziness in children and to become overweight and obese. I try to prohibit them from screen games. But they do it when I am at work or out of home' (P. 2).*

For these reasons the parents believed that children should to plan for physical activity and exercises instead of screen games. A mother stated *'when I was a tiny girls like as she, theses equipments and tools were not exist. We almost were busy in the village districts with the peer groups and performed enjoyable games like as LeyLey, Zu, Cover your eye, and other motive games. Children must plan for such healthy games' (P. 1).*

Knowing what students think is interesting. A student stated, *'When I begin to play with computer, she (Mother) says: "Wow. You are on computer games from when? Stand up. Harry up. Go outside in fresh air and do football or ride bicycle." And when I try to go, she says; "When you want to do your home work? You are not like a student." I think that screen game is a pretext for her' (S. 5).*

Another student stated, *'My parents become very happy when they see me with pen and book, even in the bed. But they do not allow me to play on mobile or TV. Even if allow, about for 30 minute. They say to me: These have no benefits for your future' (S. 2).*

Discussion

This qualitative study has been conducted to clarify the importance and priority of children's physical activity in families. The main theme of this study was *'Schooling Fever'* with two sub-themes *'Physical activity against learning'* and *'Screen games against physical activity'*.

As shown in this study based on the analyzing the interviews, parents believed that children should be engaged on school tasks completely. They like to register their students in a "sharp-witted governmental school" and think that doing physical activity is in contrast with achievement at school, so they prefer to

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inhibit children from daily physical activity. In parents' mind registration in such schools sounds as a social norm, and who have such conceptual framework will not allow their children to perform physical activity even at standard amount. It can be considered as an important barrier for physical activity in children. This finding is regarded as a novel in our study that parents restrict their children's physical activity because of perceived likelihood to their own children's school failure.

The parents who have participated in our study regarded the likelihood of children's school failure due to engagement in physical activity as a risk for their child's future life. So, they try to encourage the child to plan more precisely for school achievement with less or no attention to what health effects that physical activity may have to the child.

Parents in our study presented a strange disgust about doing screen games in their children, too. They tended to restrict their children from any screen games and forced them to do physical activity instead of screen games. Parents believed that there are no benefits in screen games, so mentioned that it is better to children doing physical activity such as football, bicycling and etc. At first glance such parental approach seems as a healthy rule, but it is a pretext to restrict children entertainments; both screen games and physical activities, because when the children were going to do physical activity encounter with parental restriction and were constrained to sit down doing school homework more and more. Parents believed that grade 5th and 6th are two important stages for students and engaging in any activity in exception to school homework may be in contrast with school achievement. We can simply imagine the process of such pretext as following:

- Parent: Student! No screen games!! Do physical activity!
- Student: Yeah mom. I am going to play football with my friends.
- Parent: Student! You are at 6th. Sit down and do your homework!

Several studies, qualitative and quantitative, indicated parental concerns as common barrier or restriction to children's physical activity. There is a paucity of data on parents' perceived likelihood of their children being failure in the school due to physical activity, but some studies revealed that parents may restrict their children's physical activity if they perceive a likelihood of risk for them, and so they may incorrectly tend to classify their children as active when the children are inactive (Carver *et al.*, 2010; Corder *et al.*, 2012).

There is a few study about the quality of physical education in Iranian schools, but in many schools the time for physical education is replaced with other lessons such as; Mathematics and other Basic Sciences unfortunately. Many schools have no exercise trainer, and the physical environments are not supportive for physical activity. A late qualitative study by *Mohammadpour* about the contributors of childhood obesity in Iran discovered four main related factors; Intra and interpersonal factors, organizational factors, community factors and national policy factor. In domain of organizational factors he suggested schools as a significant focus of discussion. Based on his study, a structured curriculum and prioritization to other school subjects over physical education was a common barrier to students' physical activity. Participants of his study; parents, school staffs and students, mentioned that physical education is poorly delivered because of low priority and lack of appropriate facilities and resources (Mohammadpour-Ahramjani *et al.*, 2014).

The potential solution for the *Schooling Fever* is the introduction of a compulsory health related homework program in to the school curriculum. The program must to investigate child, parents and teachers in a systematic approach to apply a curriculum for promoting physical activity.

McPhee has conducted such health homework curriculum in a 6 weeks schedule comprised of 5 physical activity and 5 nutrition topics. Then after children's physical activity were increased at home. He concluded that the health related homework curriculum can increase students' physical activity (McPhee *et al.*, 2010). It is important to consider a socio-ecological approach for health promoting interventions in children. Based on this approach, cultural and socio- economical environment should be an account for comprehensive health promotion, in addition to personal factors. Parental views, school and home environment and teacher should be considered for increasing physical activity in schoolchildren (Cardon *et al.*, 2014).

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Our study revealed that *Schooling Fever* in parents make student to decrease their physical activities can be considered as a leading cause to children' health problems. Parents should be aware that; although it is important to encourage children to do the best for school achievements, the more important is to schedule physical activity at recommended amount in daily life program.

As many physical activity interventions have been done to increase students' Physical activity, yet it is important to consider *Schooling Fever* as a common barrier for students' physical activity. Health promotion researchers should help parents to take physical activity in high priority for children's health promotion.

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