

Exploring the Practice of Leisure Time Physical Activity among 6-8 Year Old Urban Children

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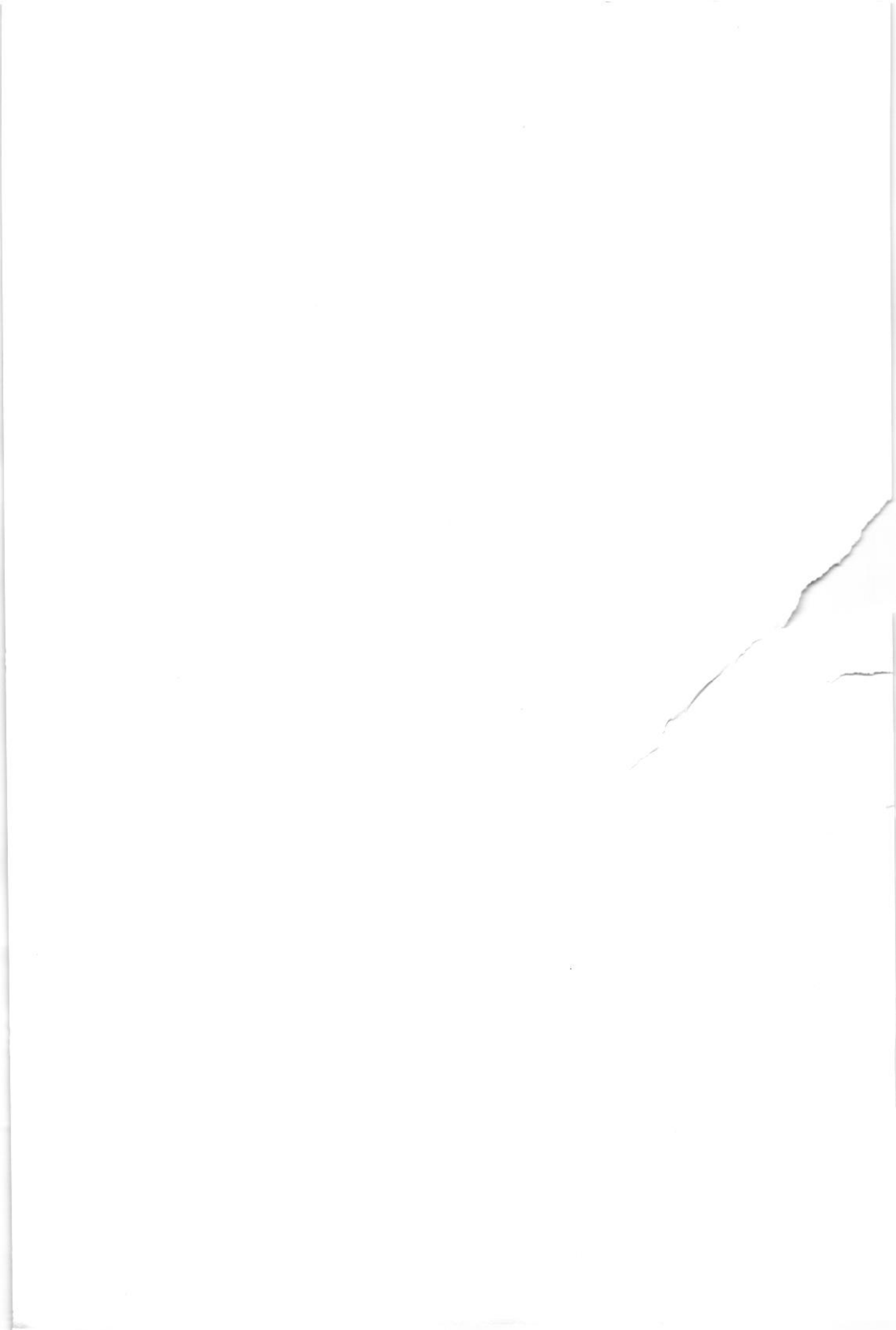
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1. Source of population

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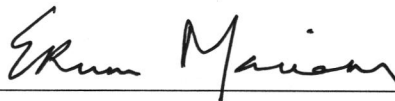
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In my judgment the thesis and the candidate meet recognized scholarly standards for the degree and is therefore ready to submit his/her thesis to the Thesis Committee.

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EXECUTIVE SUMMERY

Children's regular participation in physical activity has multiple benefits to children's physical and mental health. Not only this, physical activity is identified as one of the basic preventive measures for non-communicable diseases where younger generation of developing countries are more at risk than that of developed countries. There is also a growing trend of physical inactivity among the urban population where half of the children population live as well. In case of Bangladesh one third of the total urban population is children and alarmingly, children living in urban areas of Bangladesh are also found to adopt more inactive lifestyle day by day. Still the scenario is not same for the children belonging to different social classes. Parents' perception, parental role, opportunities to play outdoor, neighborhood environment, academic pressure were some of the significant influencing factors in children's participation in physical activity identified by different studies. However, many developed countries have already developed effective intervention programs to ensure children's regular participation in physical activity at all levels. Contrary to that Bangladesh is far behind in adopting the 'best practice' towards physical activity interventions.

Considering the overarching benefits of physical activity for children's development and the need for exploration on this issue in the context of Bangladesh, the present study was conducted with an aim to explore the practice of leisure time physical activity among 6-8 year old urban children living in Dhaka. The objectives of the present study were to explore the practice of physical activity among 6-8 year old children in urban Dhaka and to identify the factors influencing children to be engaged in physical activities.

The study was an exploratory research. Data was collected through qualitative methods. It used two different data collection methods- one was observation of children and another was in-depth interview of parents. Tools used in this study were a semi structured interview questionnaire for parents' interview, a child's interview schedule and an observation guideline for observing each child. The study followed purposive sampling where four 6-8 year old school going urban children of Dhaka were recruited as research participant. Two were from low income group and two were from middle income group. In each group one was male and another was female child. Content analysis was followed in analysing the qualitative data.

The analysis of the data of present study shows that, the practice of leisure time physical activity among 6-8 year old living in urban Dhaka largely varies according to their gender and family income. Male respondents showed more play based physical activity than their female counterparts. For the children from low income group participation in physical activity was included in their lifestyle as a daily routine. On the other hand for the children from middle income group participation in physical activity was optional and it was more like a recreational activity than a routine work. And participation in physical activity was higher for children from low income group than middle income group. Factors which were positively related with children's physical activity participation were parents' encouragement, involvement in children's physical activity, presence of a favorite peer, parents' facilitation in case of male child. On the other hand parents' perception about neighborhood, academic pressure, lack of adult role, parents'

emphasis on food habit and academic work were some of the impediments towards children's participation in physical activity. Apart from this, outdoor and indoor facilities seemed to be less influential as the existing social environment had greater impact.

The study revealed that the practice of leisure time physical activity among the 6 to 8 year old children living in Dhaka seems to follow a distinctive pattern where family income, gender, parental influence, parents' perception about neighborhoods, peer, academic pressure, played key influential role. Finally, it can be recommended that objective study on larger population need to be conducted to determine the actual amount of physical activity, the problem needs to be addressed at policy level and there is also a need for advocacy for a neighbourhood environment that is safer and more accessible to children

ACRONYMS

ABS:	Australian Bureau of Statistics
BBS:	Bangladesh Bureau of Statistics
BRAC:	Bangladesh Resources Across Community
CDC:	Centre for Disease Control and Prevention
ICDDR,B:	International Centre for Diarrhoeal Disease Research, Bangladesh
ILO:	International Labour Organization
NIH:	National Institute of Health
PA:	Physical Activity
STEPS:	STEPwise Surveillance
SES:	Socio Economic Status
UNICEF:	United Nations Children's Fund
UHS:	Urban Health Survey
WHO:	World Health Organization

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CHAPTER ONE

Introduction and Background

Introduction

Children's regular participation in physical activity needs to be ensured for their physical (Janssen & LeBlanc, 2010) and mental wellness (Ahn & Fedewa, 2011). Not only this, children's academic achievement has also been found to have positive link with their regular physical activity (Howie & Pate, 2012). Apart from this, physical activity is identified as one of the basic preventive measures for non-communicable diseases (WHO, 2005) where younger generation of developing countries are more at risk of non communicable diseases than that of developed countries (WHO, 2005). Alarmingly, children living in urban areas of Bangladesh are also found to adopt more inactive lifestyle day by day (Islam, 2008).

Though children's participation in regular physical activity has an overarching effect on their health and achievement, it has not been addressed as an essential part of their leisure activity after school yet. Though some studies have been done to generate knowledge in this area, still the issue needs to be explored in depth. Among those, studies by Sultana (2010), Rahman, Afroze, & Islam (2005), and Mohsin et al. (2010) have explored on the prevalence of obesity and risk factors of hypertension among school going children of Dhaka; Ahmed & Sohail (2008) carried their research on children's play and recreation; Monsur & Islam (2012) studied the impact of street design on children's independent mobility. In addition to this, Nahrin (2008) conducted

research on violation of land use plan and its impact on community life in Dhaka City. It has also been found out that children living in this mega city are deprived of their rights to play out door in their leisure time (Ahmed & Sohail, 2005). The same study also suggests that parents are also not comfortable to send their children for outdoor play for the lack of safety and awareness. Islam (2011) in his article "Our Children Our City" reflects on his experience while conducting a survey on school going children in Dhaka,

My heart was breaking each time children were asked this question about their time spent outdoors. Because most of the time the answer was obvious, same as Rubel's- "Not a single minute"

Since little is known about school aged children's physical activity during their leisure time living in urban areas of Bangladesh which is in fact one of the issues of great concern for children's overall well being, the present study was initiated with a view to explore the practice of leisure time physical activity in the context of school going urban children of Dhaka city. The study intended to know whether parents as well as children are aware of the benefits of physical activity and whether they are knowingly or unknowingly putting it into practice in regular basis. Therefore this paper would like to explore this issue in depth with a detail picture of the present situation and related factors that are affecting children's participation in regular physical activity that can guide the policy makers and the program designers in making interventions. For this, school going children living in urban Dhaka has been selected as study population and the present study has used qualitative approach to explore their practice of leisure time

physical activity where parents' in-depth interview; children's observation and interview have been used for data collection.

Statement of the Problem

Physical activity for children is one of the basic prerequisites for healthy lifestyle. It has multiple benefits to health and development of young children. Being physically active can have a lifelong impact on our physical and mental wellness (Brehm, 2000). Apart from this WHO identifies physical inactivity as one of the risk factors of Non Communicable Diseases. According to World Health Organisation's recommendation on physical activity for health, 5-17 year old should be involved in moderate to vigorous physical activity at least for 60 minutes per day (WHO, 2011).

But around the world there is a growing trend of physical inactivity among the urban population. Almost half the world's children live in urban areas (Unicef, 2012). In Bangladesh 28% of total population live in urban areas (Unicef, 2012). Bangladesh STEPS survey which is the first national survey on non-communicable diseases (WHO, 2002) showed significant difference in urban and rural lifestyle- rural people are more physically active than urban people of Bangladesh. Another report suggests that leisure time physical activity is not popular in our culture and lack of urban planning is the major reason behind physical inactivity among urban population (WHO, 2010).

Furthermore, in urban area of Bangladesh, 0-15 population covers one third of the total urban population (Angeles et al., 2008). Inactivity is also getting prevalence among the children living in urban area of Bangladesh (Islam, 2008). Day by day children are

getting more involved in sedentary activities like, watching television for long time, playing video game, computer games (Ahmed & Sohail, 2005).

But when we talk about Urban Dhaka we need to consider the different social and economic classes that coexist in the city where there is a “vast majority of urban poor, a several affluent class and an expanding middle class” (Rahman, 2007). In a cross sectional study conducted by Rahman, Afroze, and Islam (2005) found among “apparently healthy school going children”, hypertension is quite common which is significantly linked to obesity. In another study done by Sultana (2010) found overweight and obesity is prevalent in affluent and educated families in Dhaka city. In contrast to that many children from poor class are engaged in different sorts of economic and non economic work. Most of them are deprived of their right to education, leisure and play time (Unicef, 2010). So the scenario is not same for the children belonging different social classes.

However, there are many factors that influence children’s participation in physical activity. Parents’ perception (Zecevic et al., 2010; Cheung & Chow, 2012), parental role (Thompson et al., 2005), opportunities to play outdoor (Fridlund et al., 2012; Thompson et al., 2005), safe neighborhood (Molnar et al., 2004; Salmon et al., 2013), social neighborhood environment (Franzini, 2009), academic pressure (Swaminathan et al., 2011) were some of the significant influencing factors in children’s participation in physical activity identified by different studies.

In terms of intervention for children’s physical activity, many developed countries have already developed effective intervention programs to ensure children’s regular

participation in physical activity at all levels (WHO, 2008). Contrary to that in a review report generated by WHO (2008) shows that Bangladesh is one of the low income countries who is far behind in adopting the ‘best practice’ towards physical activity interventions.

Definition of Key Term

Physical Activity

Physical activity is defined as any bodily movement produced by skeletal muscles that require energy expenditure (WHO, 2012).

Physical activity is any body movement that works your muscles and requires more energy than resting. Walking, running, dancing, swimming, yoga, and gardening are a few examples of physical activity (NIH, 2013).

In this study, the term physical activity will refer to children’s activities which involve any kind of muscle movement. The activities can be structured or unstructured-structured activities like cycling, attending dancing class, swimming, martial art, on the other hand unstructured activities like outdoor and indoor active play or any other physical task, which involve muscle movement of children, will be considered as physical activity.

Leisure Time Physical Activity

Leisure time refers to the time available for ease and relaxation (“Leisure,” 2013).

According to Byrne et al. (2006) “leisure activities are freely chosen and ‘non-obligatory’ in nature, thereby excluding time spent at school and doing school work after school, time spent on household chores and time spent in paid employment”

In this study the term will refer to the time children spend in physical activity outside their regular school time.

Urban

The word urban refer to those who belong to city (“Urban,” 2013). It also refers to an inhabited place of greater size, population, or importance than a town or village (“Urban,” 2013).

According to Weeks (as cited in Rashed & Jurjens, 2010), “Urban is a place based characteristics that incorporates elements of population density, social and economic organization, and the transformation of the natural environment into a built environment”.

In this study, the word ‘urban children’ will refer to the children living in Dhaka City Corporation area.

Purpose of the Study

The main aim of this study was to contribute to an unexplored area of knowledge on urban children’s physical activity as there are few studies that can tell us about the practice of urban children regarding their physical activity in daily life in the context of Bangladesh

Review of the existing literature on children's physical activity suggests that the importance of physical activity for children as well as for nation's wellbeing is globally recognised and in many countries, the issue has been given top priority to prevent non-communicable diseases. However, there is very little exploration on this issue in the context of Bangladesh. So the present study was conducted with an aim to explore the practice of leisure time physical activity among 6-8 year old urban children living in Dhaka. This study also intended to come up with a detail picture of the present situation and related factors that are affecting children's participation in regular physical activity, so that it can guide the policy makers and the program designers in making interventions.

The objectives of this research were

- to explore the practice of physical activity among 6-8 year old children in urban Dhaka.
- to identify the factors influencing children to be engaged in physical activities

Significance of the Study

Prevention of non-communicable diseases is one of major challenges to global public health. In 2001, non-communicable diseases accounted for almost 60% of the 56 million deaths annually and 47% of the global burden of disease. In Bangladesh, non-communicable diseases are estimated to account for 52% deaths in 2008 and two behavioural risk factors are tobacco smoking and physical inactivity (WHO, 2011).

Therefore, the practice of daily physical activity needs to be nurtured from the very early stage. Not only this, existing literature on children's physical activity also shows

that physical activity benefits children in multifaceted ways which again help them to grow up as competent adults. Despite all these beneficial factors related to children's physical activity and its overarching effect on national health and economy, this issue has not been addressed at national level.

Therefore, the present study has tried to produce a scenario on the practice of physical activity of urban 6-8 year old children within their social and cultural context. This study has also tried to generate information on the gaps and impediments that exists in participation of 6-8 year old children's physical activity, which is going to be a source of information to support the future advocacy.

Apart from this, the present study will be a source of information for Early Childhood Development practitioners if they want to provide any intervention to facilitate physical activity among 6-8 year old urban children.

The information this study has generated will also help other researchers to develop research questions for further study.

Research Topic and Research Questions

Research Topic: Practice of leisure time physical activity among 6-8 year old urban children

Urban children are engaged in diverse range of activities during their leisure time after school. Among these activities the proportion of activities that involve physical activity varies from child to child depending on their context. Since the far reaching benefit of participation in regular physical activity for children has already been recognised by the

global community, it has become essential to know the existing scenario of the practice of children's participation in regular physical activity and the factors that are influencing physical activity practice.

The present research attempted to find answers for the following research questions:

1. What kind of physical activities do 6-8 year old children engage in in urban Dhaka?
2. What are the factors influencing children to be engaged in physical activities?

CHAPTER TWO

Literature Review

Physical Activity and Its Importance in Early Years

Development of physical activity habit in early years is crucial as this period lays the foundation for later life (Jess et al., 2006). Physical activity not only benefits physically, it has immediate as well as long term effect on mental wellness which include reduction in stress, anxiety, depression and improvement in self-esteem (Brehm, 2000). Janssen & LeBlanc (2010) in their review study on benefits of physical activity for school aged children and youth found that “the more physical activity, the greater the health benefit”. High blood cholesterol, high blood pressure, the metabolic syndrome, obesity, low bone density, depression, and injuries were the 7 health indicators which they used in the review. They also recommended a minimum moderate intensity physical activity for health benefit of 5-17 year old children. Physical activity is not only essential for children’s health it is also one of the independent predictors of literacy and numeracy performance of children when their SES is constant (Jennifer & Anna, 2012). In a comprehensive and quantitative review study it has not only been found that there is a strong positive relationship between children’s physical activity and cognitive outcomes but also found that aerobic movement has the greater impact on children’s achievements (Fedewa, 2011).

According to dynamic system theory proposed by Lockmman & Thelen (1993), Thelen, & Smith (1994) physical movement, cognitive development are strongly linked (as cited

in Smith 2006). This theory also suggests that physical activity can promote learning outcome (Smith, 2006). Hillman & Drovos (2012) point out that physical activity has a very positive impact on brain health, cognition, and scholastic achievement during childhood and such promotion in cognitive control lead to prevent drug abuse in later stages. So, the benefits of physical activity impose a need to promote such activity among children. To promote physical activity among children, Subramaniam (2011) talks about a “Holistic Approach” by which he suggests to take physical activity as a public health issue and the simultaneous involvement of school, community and parents to promote this practice.

Factors that Influence Children’s Physical Activity

However, there are some factors, which need to be considered before we make any intervention in physical activity. Some factors have direct influence on the practice of physical activity of school-aged children (Sisson, 2005). Broström, (2005) and Hartmann & Rollett (1994) found that academic pressure due to children’s transition to primary school has been found to have association with less participation in physical activities and outdoor play (as cited in Lehrer & Petrakos, 2011). There are psychosocial correlates like attraction to PA, perceived physical competence and parental socialization influence physical activity behaviour (Seabra et al., 2013). Research also suggests that parents have an influential role in children’s physical activity practice. Zecevic et al. (2010) found that parents’ perception about physical activity have influence on children’s amount of daily physical activity. Cheung and Chow (2012) in their research on 872 Hong Kong Chinese children also found that

parents have a mediatory role in children's physical activity participation. Not only this, Maatta, Ray, & Roos (2014) in their cross sectional study, found parents can influence children's practice of physical activity in multiple ways- parents' 'encouragement', 'involvement', and 'modeling' have direct and indirect effect on children's physical activity.

Presence of peer has been identified as another influencing factor on children's physical activity. In an experimental study on Peer Influence and physical activity behavior in young children, Barkley et al. (2013) found children's physical activity increases in presence of a peer. Another study by Salvy et al. (2007) also suggests that children's physical activity is intensified when they are accompanied by their favorite peers.

Franzini (2009) in his study on the influence of social and physical neighborhood environment found social neighborhood environment has stronger influence on children's physical activity whereas physical neighborhood environment has little influence. The study also shows that among the component of social environment social security, social ties among neighbors are positively associated with children's physical activity. Molnar et al. (2004) also suggest that increasing neighborhood safety can increase physical activity participation among urban children. In a very recent study it has been found that children's physical activity and sedentary time depend on mothers' perception on neighborhood environment which again moderated by rural and urban location where urban children were less active than their rural counterpart (Salmon et al., 2013). They identified "Greater access to physical activity equipment in the home, higher levels of descriptive norms for physical activity, greater knowledge of the

neighbourhood, a stronger social network, and higher personal safety” were the five components that were associated with rural location and thus increased children’s physical activity.

Gender difference is another factor, which also plays a role in children’s participation in physical activity. This can be again caused by parents’ different treatment of male and female child (Paetcher, 2007). The study done by Findlay (2010) on patterns of children’s participation in unorganised physical activity, also suggests that though boys’ participation in unorganised physical activity follow a regular pattern throughout their childhood, but girls’ participation declines with age.

Though access to physical activity facilities could be another influencing factor in this area, but the study by Erwin et al. (2007) found that there was no relationship between facilities and physical activity amount among the 6-13 year old children living in South Carolina. But some components in built environment such as land use and transportation system are two very important factors to determine participation in physical activity (Sisson, 2005). In addition to this, community can play an influencing role in ‘informational, social and behavioral, and environmental and policy’ sectors to promote physical activity (Sisson, 2005).

Children’s Participation in Physical Activity: Global Scenario

Globally, physical activity and healthy diet is identified as two basic preventive measures for non-communicable diseases (WHO, 2005). Though previously it was the developed countries alone who suffered the national burden of non-communicable

diseases, at present the risk factors of non-communicable diseases are also getting prevalence in developing countries and most alarmingly, those affected are younger than in developed countries (WHO, 2005). Developed countries like the Netherlands, the United States of America, Finland, Canada have already implemented physical activity intervention programs at national, state and community level (WHO, 2008). Many of the developed countries like Australia, Canada, Finland, Netherlands, New Zealand, Scotland, and Switzerland have national physical activity policies (Bull et al., 2004 as cited in WHO, 2008). Not only this, some of them have developed separate national guideline to ensure children's participation in physical activity (Bull et al., 2004 as cited in WHO, 2008). On the other hand, though some developing countries have been successful in raising public awareness about physical activities and have implemented intervention programs, but some are still far behind implementing "good practice" for promoting physical activity (WHO, 2008). In a recent review study on physical activity and obesity research in Asia Pacific, Khoo & Moris (2012) recommends that interventions to promote physical activity need to be 'contextualised' according to cultural, social and economic structure of countries in Asia Pacific. They also suggest that which proved to be effective in western society may not be applicable to other part of the world.

Children's rate of participation in physical activity in school and in their leisure time also varies from county to country. Around the world, children's physical activity is addressed in curriculum, but in some countries, it is implemented properly and with stability at the same time in others, the subject is totally ignored in practice (Hardman & Marshall, 2009). A survey conducted by Centre for Disease Control and Prevention

(2003) found that 22.6% of 9-13 year old children in America do not participate in any kind of leisure time physical activity. Another study conducted on European children found though younger children meet the regular of physical activity requirements, it decreases with advancing age and gender plays a role in children's participation in physical activity (Riddoch et al., 2004). In a recent survey in Australia found that on average 63% of 5-14 year old children participate in outdoor physical activity and the participation rate for 9-11 age group is higher than 12-14 or 5-8 year olds (ABS, 2011). In case of Asian children, Müller et al. (2013) in their review study found that there is a prevalence of low physical activity among the school aged. They pointed out the major cause behind this low activity is that, as most of the south Asian countries are developing country, they are focusing more on formal education programs which is important for countries 'reputation' and 'economic' status rather than prevalence of physical activity among children. Apart from this, their review also indicated that, south Asian female youth are less active and for both gender activity decreases with age which is again common in other Western and European countries as well (Müller et al., 2013).

Ironically, while countries around the world is trying to promote children's regular physical activity for mental and physical well being, global community is facing the challenge of ensuring the right of over 215 million child labourers who are engaged in such works that are actually hazardous to their mental and physical growth (ILO, 2013).

Concerns Prevailing in South-East Asia and in Bangladesh

Among few studies on children's physical activity patterns in developing countries of South Asia, a longitudinal study done by Swaminathan et al. (2011) on south Indian school going children shows that boys' participation in physical activity is higher than girls but for both sex physical activity participation decreases with age which is due to increased academic work. Another study conducted in Srilanka by Wikramasinghe et al. (2004) found prevalence of obesity among urban children and they suggest that socio economic status is an influencing factor as overweight increase with increase in family income. When it comes to addressing physical education in curriculum, many Indian and Pakistani schools found to have hardly any provision for physical activity classes due to "lack of qualified teachers and facilities, inadequate inspection, perception of physical education as a non-educational fun activity and inferiority to academic subjects" (Hardman & Marshall, 2009).

In Bangladesh urban population is increasing everyday and it is predicted that the country will become a 'city state' very soon (Streatfield & Karar, 2008). In addition there is lack of land use plan which is badly affecting urban lifestyle and thus encroaching people's accessibility to many community facilities (Nahrin, 2008). Children's access to outdoor and independent mobility is also affected as a research carried out by Monsur & Islam (2012) on 'Impact of Street Design on Children's Independent Mobility' found significant lack of "independent mobility" among children. Another study conducted by Ahmed & Sohail (2008) on child's play and recreation in Dhaka City found children's recreational need depends on their socio-economic status, age and gender. The study also indicated a significant gender difference in participation

of outdoor play and physical activity. Moreover a prevalence of obesity among affluent school children in Dhaka has been detected where the percentage was higher among 6-9 year olds (Mohsin et al., 2010). Not only this a very recent and first nationwide survey on childhood obesity and physical activity pattern of urban children reveals that 10 out of every 100 children living in an urban area in Bangladesh are overweight and 4 are obese (icddr,b, 2013). The survey also reveals that children do not participate in vigorous physical activities on regular basis. It again shows that only 45% among the 70% who have access to playground actually go to playground (icddr,b, 2013). It should be acknowledged that in Bangladesh physical curriculum is separately addressed in primary curriculum, but little is known about the practice (NCTB, 2012).

On the other hand, in Dhaka city there are children who are involved in different economic and non-economic activities that causing harm to their health (Unicef, 2010). In a study on child labour situation in Dhaka found working children rarely have any leisure time and if they have, majority of them reported watching television or listening to music, few reported to have participated in sports and outdoor play (Kalam, 2007).

To sum up the review we can say, considering the far-reaching benefits of physical activity we need to explore the practice of physical activity among school going urban children in relation to all the factors that can influence the practice in our social and cultural context.

CHAPTER THREE

Methodology

Research Participants

The targeted group for this research was the 6 to 8 year old school going children living in urban Dhaka. For this four 6 to 8 year old school children and their parents were selected as research participant. All were the residents of same residential area. The participants were split into two income groups-low income group and middle income group and all of them belonged to nuclear families. In each group there was one male and one female child. Among the four children three were in kindergarten class and one was in primary class.

Among the parents, all were mothers and all of them were home makers. Age of the mothers was from 28 to 33 years. From the two low-income family mothers, one studied up to class eight and another studied up to higher secondary. From the middle income family both mothers completed graduation.

Research Site

Setting of the study was Mohammadpur area of Dhaka city. This area was chosen for the current study because it is one of the densely populated urban thanas of Dhaka city corporation (BBS, 2012) and the residents are mostly from middle class ("Mohammadpur," 2013). The study was carried out in one of residential housings under Mohammadpur thana so that the neighbourhood environment and community

facilities remained the same for all participants. Apart from this the participants from two income group such as low income and middle income group could be easily reached in this area.

All interviews and observation of children took place at the participants' residence. But when needed researcher also carried out observation outside the residence as well.

Research Approach

The study was an exploratory research, which intended to generate “insights” about the present situation of children’s practice of physical activity (Saunders et al. 2007 as cited in Research Methodology, 2013). And due to the nature of the problem an exploratory research was initially needed as Brown (2006) suggests, “Exploratory research tends to tackle new problems on which little or no previous research has been done” (as cited in Research Methodology, 2013). For this exploratory study, data has been collected through qualitative methods. As the study intended to explore on the kind of physical activities urban children of Dhaka are engaged in, the influencing factors only qualitative data could provide with ‘a deep understanding of the issue’ (Trochim, 2005).

Measures

Observation Guideline

An observation guideline was used to guide the observer during individual observation of child’s physical activity in leisure time.

Child's Interview Schedule

An interview schedule has been used for interviewing the child during observation

Parents' Questionnaire

A parent's questionnaire was used as one of the measures of the study. It contained semi-structured questions for parents where they provided information on the daily physical activities of their children and their perspectives as well as any other related information regarding physical activity practice of the children.

Data Collection Methods

It used two different data collection methods to collect qualitative data from participants. One was observation of children. Since in this study participating with the children was not feasible, non-participant or external observation (Gay & Airasian, 2003) was conducted. It guided the researcher to understand the practical issues in natural setting (Gay & Airasian, 2003). So the qualitative approach generated descriptive data on children's physical activity practice.

Another data collection method was in-depth and individual interview of parents since the focus of the study was to have deep understanding of parents' perception and knowledge (Gay & Airasian, 2003) about children's participation in physical activities. The interview was semi-structured as the objective of the study was very focused (Bryman, 2008). This provided information on children's daily physical activity practice and parents' thoughts and concern on this issue as well as other influencing factors on physical activity of 6-8 year old children.

In this study the two methods complemented each other as one provided data from participants' point of view another gave the natural scenario of the current situation. Thus, two methods enabled the researcher to triangulate the source of data.

Role of the researcher: After approval from the ethical committee of BRAC University data collection process was started on 27th November 2013. Researcher collected the data herself. Researcher started data collection with observation. Researcher herself carried out the observations. With the consent of parents, child's leisure time physical activity was observed. It was a non-participant observation. Researcher developed a checklist for observing the child prior to the observation. Observation of children took place for four days at their residence after school time for four hours a day. During the observation, children were interviewed through informal conversation. After four days of observation, parents' in-depth interview was conducted at their residence. The duration of each interview was approximately 30-40 minutes.

Sampling Procedure

In this study, sampling was purposive. For this some specific criteria have been followed in selection of the samples- age of the children was between 6-8 years, all were school going, belonged to nuclear family. Samples were from two income group- low income and middle-income group. Here low-income household was defined by a nuclear family of 3-5 members with monthly income 15 to 25 thousand in Bangladeshi taka. Middle-income household was defined by a nuclear family of 3-5 members with monthly income 25-50 thousand in Bangladeshi taka per month.

For observation total four children -two from low-income group and two from middle-income group were recruited. And in both group 1 was female child and the other male child. From the same sample, parents were recruited for in-depth interview.

Exclusion criteria: children and parents who were not willing to give their consent for participation in the study were excluded from the study. Working children also fell under exclusion criteria.

Data Analysis

For this study, content analysis was followed in analysing the qualitative data. Data analysis process began with the onset of data collection. Raw data from the field was organised in field notes soon after coming from the field. Researchers' comments and reflections during data collection were also recorded at the same time. After data collection completes, field notes, observer comments, reflection all were sequenced and grouped in two separate computer folders to organise data from in depth interview and data from observation. Before reviewing and memoing the data, at least two copies of data were made and kept in secure place. During memoing all initial impression was recorded and the key data relevant to research questions were highlighted. After this, detailed description of the participants, setting, and relevant phenomena followed. Description led to identify the potential themes of the finding. Then categorising and coding of data was done. And patterns in the category were examined to establish themes and issues of the study. Finally, the findings of the study were presented descriptively under each theme.

Ethical Issues

The study followed all ethical principles of research and the proposal of the study had been submitted for ethical approval from BRAC University ethical review committee. Apart from this during data collection participants were invited for voluntary participation in the study and prospective participants were informed about the procedure and objective of the study before they sign the consent form. The confidentiality and anonymity of the participants were maintained throughout the data collection, analysis and presentation.

Validity & Reliability

The data collection tools such as semi-structured interview schedule for parents and children, observation checklist were developed with the support of national and international supervisors. All tools were translated into Bengali. The content of both English and Bengali version of the tools were validated by the experts of Institute of Education and Development of BRAC University (IED-BU) in the areas of early childhood education. All tools were field tested in the study site to ensure validity, consistency, and understandability of those instruments. After field testing of those tools, some revision and correction were required and were done accordingly.

Limitation of the Study

Though the present study was an explorative study conducted with a very small group of participants, but it followed all the formal procedures of a qualitative research. Still the researcher faced some limitations while conducting the research,

- the findings of the research is difficult to generalize to a large population since the number of participants was very small and they were split into two income group
- Researcher did not use any objective measurement tool to quantify the amount of physical activity each children's do.
- Fathers' involvement in children's physical activity could not be observed as fathers of the children were not available during observation. In case of one child it was possible to observe fathers' involvement as his workshop was at the downstairs of their house.
- At some points it was felt that the presence of an observer is impacting on children's spontaneous activity.

In spite of all these limitations the present study has opened up some scopes for further research on this issue and has come up with recommendations for the policy makers as well as for the respective authority to design intervention program.

CHAPTER FOUR

Findings and Discussion

There are two sections in this chapter. First section is 'Findings' where data collected through three different tools such as, parents' in-depth interview, observation field notes from individual observation of children, and children's interview will be presented. Second section is discussion where the analysed data will be discussed in light of literature and researcher's reflection. This part will be concluded with a conclusion and some recommendations based on knowledge gained from the study.

Findings

The findings of this study have been shown in reference with the information collected from four in depth interview of parents, data from individual observation of four children and their interview during observation. The findings of this exploratory research are focused on the two objectives which include children's daily physical activity practice and parents' thoughts and concern on this issue as well as other influencing factors on physical activity of 6-8 year old children. In the following paragraphs research finding are presented under the headings of demographic information, children's daily physical activity practice and influencing factors on physical activity of children.

Demographic Information

Total four parents were interviewed and their children were observed and interviewed. All of the parents were mother and all of them were home makers. Age of the respondents was from 28 to 33 years. From the two low income family mothers, one studied up to class eight and another studied up to higher secondary. From the middle income family both mothers completed graduation.

Two respondents from low income family reported that their monthly income was between fifteen and twenty thousand. And two from middle income family reported their monthly income between forty five and fifty-five thousand.

From each income group, there was one female child and one male child. The age of the boy from low income group was six years and the other boy from the middle income group was six and half years. The age of the girl from low income group was eight years and the other girl from middle income group was six and half years. And all of them go to school.

Findings on Children's Activities during the Leisure Time after School

Since the first objective of the present study is to explore the practice of physical activity among the 6-8 year old children living in urban Dhaka, this section is going to present the findings to achieve this objective. For this, children's activities are divided into two categories; one will describe the behaviours that show physical activity or activities that involves muscle movement and another will describe behaviours that show physical inactivity which do not involve any muscle movement.

Behaviours that Show Physical Activity

In the following paragraphs findings are presented sequentially of the four respondents.

First respondent, a boy from low income group spends most of his leisure time in the road in front of his house. He was observed playing with his neighbouring friends run and chase, throwing and catching ball, badminton. His mother reported "*he often helps his father while working in his furniture workshop downstairs*". In observation he was seen carrying things from home to downstairs or from down stairs to home upstairs in response to his parents' instruction. This boy also walks to and from his school which is 10 minutes away from his house. During the four consecutive day of observation he was seen to visit his cousin's house twice which he went by walking with his father. His mother also reported that they go for walk in the nearby club field once or twice in a week. Data from observation showed that the boy's participation in physical activity was around 90 minutes per day.

Second respondent, another boy from middle income family living in the same area was most of the time confined to his own house. His mother reported "*he plays cricket, foot ball, badminton in our living room since there is no other safe place to send my son to play these games*". His mother also reported that she together with her two children tries to run inside the house at least for about 10 to 15 minutes everyday. He was also observed running with his mother from one end of the house through the corridor to the other end of the house. Apart from this, he as well as his mother reported (with disapproval) that one of his favourite leisure activities is play fighting with his father and younger brother. He was observed playing fighting with his younger brother which

involved running and chasing each other, acting like fighting with each other, though was not being approved by his mother. The observation report also showed that the boy's participation in physical activity was around 30 to 40 minutes per day.

The third respondent, an 8 year old girl from low income family reported "*on the roof top I with my neighbouring friend play skipping, borof pani (run and chase) on holidays*". On Friday evenings she goes for walk with her mother to the nearby club field. She also walks to and from her school which is ten minutes away from home. She washes her own clothes while bathing. She was observed bringing dried clothes from roof top and folding those and putting them in the right place. Data from the observation showed that the girl's participation in physical activity was around forty-five minutes which mainly comprised of walking to and from school and coaching centre.

The fourth respondent, a six and half year old girl from middle income family does some physical exercise regularly for about five to seven minutes as researcher found in her observation.

"She was watching TV and meanwhile she stood up on the bed and started stretching her hands and trying to reach the toes of her leg. She remained in that posture for few seconds then repeated the same movement. Then she lied down straight on the bed and started pulling her leg upward and trying to touch the toes."

Her mother also reported the same in the interview. She regularly washes her own clothes while bathing. She with her cousin was also observed jumping down from three steps to the ground outside their flat and repeating the same movement for minimum five minutes. She also goes for walk with her grandfather in the club field at least twice

during the week days after dusk. Here it needs to be mentioned that her maternal grandparents live in the same neighbourhood and so does her maternal aunt. The girl was found to spend on average around twenty minutes in doing physical activity per day.

From the above finding we can sum up that none of the four children participated in any kind of structured physical activities such as attending dancing, yoga, skating, swimming classes etc. But all of them reported as well as were observed that they participated in different types of unstructured physical activities in their leisure time such as, running, walking, jumping, playing and doing house hold chores. However, data shows that the types of activities vary from child to child. Besides this, the child's gender played an important role for choosing their leisure activities.

Behaviours that Show Physical Inactivity

The first respondent the boy from low income group watches television with her mother when he finishes his school home works before he goes to sleep. He attends art school twice in a week for one hour each day. He plays with his toys in silence sitting on the bed when his mother does not let him play outside. On weekends they visit relatives' house. Observation data showed that on average the child spent around two and half hour in sedentary activities which included his study, play alone sitting with toys and television watching time.

Six year old boy from middle income family reported, "*I usually play games in computer and in afternoon I love to watch doremon and power ranger*". In lunch time

he was observed fed by his mother while he was watching cartoon on computer. His Arabic teacher (*huzoor*) comes on four week days and teaches Arabic from 5 pm to 6 pm in evening. Then he goes to his private tutor who lives on the next floor downstairs on four week days and has tuition from 6.30 to 8 pm. He was observed playing computer games and watching cartoons when he did not have tuition to attend. On Fridays he attends art class from 3 pm to 5 pm which is five minutes walking distance from his home. The child also reported that his mother downloaded new game from internet so that he could play for weekends. On weekend they visit relative's house. In case of this child, the average time spent on sedentary activities was almost five hours daily which included time spent on tuition, computer game, television, mobile and tablet game.

Third respondent, girl from low income family attends coaching classes five week days in evening. After coming from school she quickly get bath, have lunch and then take one hour nap and after that she rushes for her coaching class with her elder brother which is ten minutes walk from home. She spends two hours there from 3.30 to 5.30 pm. At home she helps her mother in the kitchen. She was observed making tea for guests and washing utensils in the kitchen in the evening. In late evening around 8pm she sits for study. Apart from this her mother reported, "*I teach her sewing and hand embroidery when she does not have study pressure or she is on holiday*". The girl also reported she plays ludoo with her cousins on weekends. In case of this child, the average time spent on sedentary activities was almost three and half hour daily which included time spent on tuition, study at home, watching television.

The fourth respondent, girl from middle income family was observed watching TV for a long time

“12.30 pm. She has just entered home from school turns on the television and changes her school uniform in front of TV. She finds her younger two brothers jumping on the bed and playing. Meanwhile she is given some snacks to eat which she eats watching cartoon on TV. After some time her mother asks her to take bath and she ignores and continues TV watching. She goes for bath at 1.45 pm.”

She takes two hour nap in evening. After waking up from evening nap she sometimes sit with her colour box and art book or make something with paper and glue or play with her dolls. In the late evening she does her homework supervised by her mother. Then until dinner time she watches the daily soaps on TV with her mother. When her father comes home at night she is let play with his tablet sometimes. In case of this child, the average time spent on sedentary activities was almost five and half hours daily which included time spent on study at home, watching television and playing alone sitting with toys.

From the above findings we see that children from middle income group spend more time in front of small screen than the children from low income group. Boys from both group show less inactive behaviour than girls. And spending time on academic work is more emphasised in both groups.

What Children Prefer

From parents' interview, observation of individual child, children's interview data on children's preferred activities during leisure time has been recorded.

The boy from low income group wants to play outside with his neighbouring friends. He also loves to visit his cousin's house. In weekends he loves to be taken to 'shishu park', "shahid minar". When he is at home, he prefers to watch cartoons on TV. So does the boy from middle income family. He loves to play computer games as well. He reported "*I want to go to the play ground near our home, but there is no one to take me there*". In his weekend he loves to go to amusement parks with his parents. Playing hide and seek, run and chase with his cousins when they come to his place is another favourite leisure activity to him.

The girl from low income family loves to do hand embroidery in her leisure time. She also loves to play skipping, ice and water, fultoka and chat with her neighbouring friends on the roof top. Apart from these she is also fond of watching TV at leisure. The other girl from middle income family loves to play with dolls, hide and seek with her cousin who is a girl two years younger than her. She likes to run when she with her cousin is taken to the club field by her grandfather. She wants to ride bicycle but she complains that she does not have any. She loves to visit her grand parents' house in weekends. Amusement parks and zoo are also her favourite place to visit.

From the findings it is noticeable that all children want to pass their leisure time with their favourite peers and the activities depend on the place they are in. Outdoor is also loved by all. All of them want to play outdoor. But at the same time, television and

computer game are getting preference when they are at home and when there is no one to play with them.

Influencing Factors on Physical Activity of Children

Parents' Thought and Concern Regarding Children's Physical Activity

All participants want their children to stay healthy first and then they want their children to perform well in academic works. Three among the four participants think, following a healthy diet is the only requirement for children's good health. The same participants also think that physical activity is the consequence of children's being in good health. As one of them reflected "*my child's being active assures me that he is in good health*". Another participant thought "*children do not need to do any physical activity as they are very young. It is essential for adults*". Only one respondent (mother of the boy from middle income group) think it is essential for maintaining children's good health.

In terms of adults' participation in regular physical activity, it was found that, three out of four mothers (1 from middle income group and 2 from low income group) participate in regular physical activity. And one (mother of the boy from middle income group) of them encourages her child to do some physical activity regularly.

Regarding children's participation in outdoor activities, all participants expressed their feeling of insecurities and were not willing to send their children to any public playground or let them play outdoor alone. All of them preferred their children to be accompanied by any adult member of the family when they are outside home. But three of them regretted that they can hardly manage time to take the child outside for walk or

play in their leisure time. There was one respondent whose parents live nearby. So the grandfather often takes the child for walk.

According to them the environment outside is not child friendly, playing on the road is risky as drivers sometimes drive rashly. Not only this, one of the participants complained, *“there is one play ground which is called ‘children’s park’, which used to have swings, slides and play structure for the children, now those facilities are gone for the lack of proper maintenance and children can hardly have the opportunity to play there as the play ground is largely used by the local young boys for cricket and football”*.

Apart from this, none of the parents know any of the guidelines related to children’s physical activity and small screen recreation.

So the findings show that though parents are very much concerned about their children’s health but they consider children’s being physically active as an indicator of their good health. But they are not aware of the far reaching advantages of physical activity in children’s overall development. Beside this, parents are discouraging children’s outdoor activities due to their feeling of insecurity and inability to accompany their children outdoor. It also needs to be mentioned that, parents’ thoughts and concern regarding children’s physical activity did not vary in terms of male and female child.

What Parents Want Their Children to Do after School

All parents are conscious about child's finishing the meals and completing their academic works properly as long as the child stays at home. Only one mother was an exception in this case who consciously encourages her child to take part in physical activity inside home and she herself participated with the child. In case of other three respondents children are free to choose their activity apart from their meal and study time.

During weekends all respondents shared that they usually go to relative's homes along with their children and occasionally they take their children to amusement parks or zoo or any historical places.

Adult's Role in Children's Physical Activities

In case of two children there was hardly any adult involvement in children's physical activity. But in case of the other two children the scenario was different. One child's grandfather took initiative to take the child out for walk on regular basis, another child's mother tried to get her child physically active inside home. Apart from this, all respondents acknowledged that the only activity they do together with their children on regular basis is watching television.

Children are mostly encouraged to eat properly and to study by the adults. As the girl from the middle income group reflected "*my mother is most happy with me when I finish my meal properly by myself and when I become fat*". She added, "*her father*

wants her to eat properly and to study regularly". This kind of preference was also observed during observation

"In the evening the girl's grandfather has come to take her to the field for walk. Mother shows disapproval because she wants her to study at home and she is also scared that the child may get hurt as other big boys are playing cricket there".

Another mother from low income family said that she is most happy with her daughter when her daughter does well in her exam.

On the other hand children were hardly encouraged to participate in physical activity. Even they faced disapproval from parents when they became active. As mother of the boy from low income family complained *"her son does not want to sit for study. Instead he always wants to play with his neighbouring friends. And she does not like her son's being involved in rough and tumble play with his friends"*.

From the above finding we see that there is hardly any encouragement from adults' part for the children to be physically active. The focus of their attention remains on children's good eating practice and academic achievement.

Outdoor facilities for the Child to Participate in Physical Activity

Since all the participants were selected from the same residential area the outdoor environment and facilities for children's physical activity was almost same. There were two public play grounds which are at walking distance from all the participants' residence. The roads adjacent to the participants' houses were ten feet wide and were

not very busy with vehicles. But cars, rickshaws, microbus passed through the road. There were no signs for the drivers to limit their speed and neither was there any speed breaker. Roads were not pitched and were not smooth enough for a child to walk without any impediments.

But in case of one participant the scenario was bit different as outside the house there was a local bazaar. So the road adjacent to the house was comparatively busier than that of other respondents'.

Rooftop was considered as another outdoor facility for children's physical activity. Three of the four rooftops had railings of standard height. One did not have any railings. So among the four participants three had access to their rooftops. But only two of them often used that facility for physical activity.

Indoor Facilities for the Child to Participate in Physical Activity

The facilities for the child to participate inside the house included the space and materials for the child to move and participate in physical activity.

Space inside the house varied between the two income groups. Participants from middle income group were found to live in houses of around 13 square metres whereas participants from low income group were found to live in houses of around 8 square metres. Therefore the participants from the low income group could hardly find any space to move inside their house. In contrast, participants from the middle income group had enough space to run, walk, jump, and hop inside their house. As in researcher's observation she found,

“The boy from the low income family lives on the first floor of a two storied building. There is one bed room, one bathroom and a kitchen in his house. The only place to move is the small place in the middle of the bedroom. The bed room is packed with furniture on all sides of the room. The television is placed on the wardrobe from where it can be watched from every side of the bed room. There are badminton rackets, cricket bat and ball kept with the child’s other toys.”

On the contrary, there was a different scenario in case of the respondent from middle income group

“The boy from the middle income group lives on the third floor of a four storied building. There are three bed rooms, two balconies, one living room, and three bathrooms. There is a wide corridor which connects the two master beds with rest of the house. Living room is also very spacious. Child can easily run, walk throughout the house.”

Children’s physical activity facilities in terms of equipment varied according to their sex. Male respondents were provided with bat and ball, badminton rackets. On the other hand, no such things were found in female respondents’ house. Skipping rope was found in three respondents’ house.

The findings show that the outside setting is more or less quite same for the four participants. But the space for free movement inside the house depended on their size of the house as well as on the respondents’ family income. And equipment facility for physical activity varied according to the sex of the respondents.

Discussion

Children's Practice of Leisure Time Physical Activity after School

Behaviours that Show Physical Activity

The study found that the urban school going children living in Dhaka were engaged in diverse types of physical activities during their leisure time though those activities hardly found to follow any regular routine. Most of their physical activities comprises different unorganised play such as, run and chase, hide and seek, badminton, cricket, playing with ball, jumping, play fighting etc. Some household chores done by the children also involved physical activity and among some other unstructured physical activities, walking, skipping was common.

Male respondents' participation in physical activity was more regular than that of female respondents'. Male respondents were found to participate in more play based physical activity where female respondents' were less engaged in play based physical activities. Such as, male participants were physically active in games like cricket, badminton, run and chase, playing with ball while female participants were physically active in walking, in household chores. The study done by Findlay (2010) on patterns of children's participation in unorganised physical activity, also suggests that though boys' participation in unorganised physical activity follow a regular pattern throughout their childhood, but girls' participation declines with age.

However, in terms of the duration and rate of participation in physical activity among the four participants, only the boy from low income group met the daily requirement of at least 60 minutes of physical activity set by WHO (2010) for 5-17 year olds. The

boy's average duration of participation in physical activity was 90 minutes daily. On the other hand, other three participants' duration of physical activity was below 60 minutes where the girl from the middle income family had the lowest duration of 20 minutes. But both boy and girl from low income family spent more time on physical activity than that of the participants from middle income group. It also needs to be mentioned that boys' participation was higher than girls' within each income group. So the findings of the present study agree with the longitudinal study done by Swaminathan et al. (2011) on south Indian school going children which shows that boys' participation in physical activity is higher than girls but for both sex if their socio economic status is same.

The research findings also come up with an indication on children's practice of leisure time physical activity that for the children from low income group participation in physical activity is included in their lifestyle as a daily routine. On the other hand, for the children from middle income group participation in physical activity is optional and it is more like a recreational activity than a routine work.

Behaviors that Show Physical Inactivity

Among the inactive behaviours television watching was common among all four children. Along with this, children from middle income group were also found to use other gadgets such as tablet, mobile and computer. Play related inactive behaviour was common in female participants such as drawing, sewing, crafting, playing with dolls, board games. Three out of four children participated in structured activities that involved no physical activity such as attending art class, personal tuition, academic coaching.

Children's pattern and duration of inactive behaviors also varied depending on their family income. The findings of the present study showed that participants from middle income group were more involved in inactive behaviors than participants from low income group and they were getting more involved in sedentary activities like, watching television for long time, playing video game and computer game which was also found in the study done by Ahmed and Sohail (2005). This finding is again supported by Sultana (2010) who found over weight and obesity is prevalent in affluent and educated families in Dhaka city in her study on prevalence and risk factor of childhood overweight and obesity in primary school children of Dhaka city. Moreover, similar kind of result was found in the study conducted in Srilanka by Wikramasinghe et al. (2004) which found prevalence of obesity among urban children and they suggest that socio economic status is an influencing factor as overweight increase with increase in family income.

Though some literature such as, studies done by Riddoch et al. (2004), Findlay (2010), Swaminathan et al. (2011), Muller et al. (2013), suggest that children's participation declines with age, but present study does not suggest varied amount of physical activity according to children's age. Because there was one eight years old female child from low income family who was one and half to two years older than other three participants, showed higher participation in physical activity than two other participants from middle income family.

The findings of the present study suggest that children's active and inactive behaviours varied depending on their age, gender, and family income. This finding supports what

Ahmed and Sohail (2008) found in their study on Child's play and Recreation in Dhaka City which also suggests that children's recreational need depends on their socio-economic status, age and gender.

Children's Preferred Activity during Their Leisure Time

In terms of children's personal preference on their leisure activity, irrespective of their gender, family income and age, all of them reported that they prefer to spend their leisure with their favorite peers. Participating in outdoor physical activities, visiting amusement parks and play grounds were loved by all. In a qualitative study carried out by Mulvihill, Rivers, and Aggleton (2000) was also revealed that 5-11 years old children are interested in participating in physical activity during their leisure. But when they were inside home they all preferred to watch their favorite shows on TV or play computer games. Similar findings were found in the study by Marques et al. (2014).

Factors that Influence Children's Participation in Physical Activity

Parents' Thoughts and Concern

The influential role of parents in children's physical activity has been acknowledged in many previous studies. Zecevic et al. (2010) found that parents' perception about physical activity have influence on children's amount of daily physical activity. In the present study it has been found that children were participating in physical activity with or without any facilitation from parents. The girl from the low income family spent around 45 minutes daily on physical activity while her mother thought, "children do not need to do any physical activity as they are very young. It is essential for adults". On

the other hand, in case of the boy from middle income group, whose mother expressed her concern about physical activity and tried to facilitate physical activity for her son, participated in physical activity for around 30 to 40 minutes daily. The same child remained inactive for about five hours daily on average. So the amount of physical activity did not vary much according to mother's concern.

Parents' Encouragement, Involvement and Modelling

During the leisure time after school, all parents preferred their children to have their meal and complete their academic task properly. But regarding parents' concern about children's leisure time physical activity it has been found that, parents consider children's being physically active as a result of their good health but not the cause of their good health. One of them reflected "*my child's being active assures me that he is in good health*". So no parents were found to motivate or facilitate children's physical activity with conscious initiative except one mother. Neither there was any verbal or non verbal encouragement from the parents' side.

Still data from the present study shows that parents' encouragement, involvement and modelling can contribute to children's physical activity, as we see in case of the boy from middle class. Though he had the least outdoor activity among the four participants, still he was encouraged and facilitated to run inside the house by his mother. In contrary, in case of other three children mothers were found to be encouraging while the child was eating or studying. One of the children's reflection was "*My mother is happy with me when I eat properly and become fat*". Matta, Ray and Roos (2014) in their

cross sectional study, also suggested that , parents' 'encouragement', 'involvement', 'modeling', have direct and indirect effect on children's physical activity.

On the other hand parents were observed to facilitate children's academic work. Children were encouraged when they perform well in study. Parents' emphasis on academic work can be considered as a reflection of the country's development policy which is focusing more on children's education. Muller et al. (2013) also pointed out similar kind of reason behind the prevalence of low physical activity among the Asian school aged children. They pointed out the major cause behind this low activity is that, as most of the south Asian countries are developing country, they are focusing more on formal education programs which is important for countries 'reputation' and 'economic status' rather than on prevalence of physical activity among children

Though parents reported that they cannot manage time to take the children for outdoor activity, all parents reported that they watch television with their children in their free time. All parents as well as children reported that they go to visit relatives' place in their weekends. So from the findings it can be suggested that motivating and facilitating children's leisure time physical activity may not be practiced in our culture. This is also supported by a report which suggests that leisure time physical activity is not popular in our culture (WHO, 2010)

Parents' Perception on Neighbourhood Environment

Cheung and Chow (2012) in their research on 872 Hong Kong Chinese children found that parents have a mediatory role in children's physical activity participation. Not only

this, in a very recent study it has been found that children's physical activity and sedentary time depend on mothers' perception on neighborhood environment which again moderated by rural and urban location where urban children were less active than their rural counterpart (Salmon et al., 2013). The present study also shows that children's participation in outdoor physical activity were very limited and even discouraged due to mother's feeling of social insecurity and mothers were not willing to send their children to any public playground or let them play outdoor alone. It was also observed when one of the children's grandfather wanted to take the child for walk in the field mother showed disapproval as she thinks the child may get hurt. One of the participants also complained, "*the play ground is largely used by the local young boys for cricket and football*".

In addition to this, Franzini (2009) in his study on the influence of social and neighborhood environments on children's physical activity found social environment has stronger influence whereas the physical environment has little influence on children's physical activity. The study also showed that among the component of social environment social security, social ties positively children's participation in physical activity.

Similarly, in the present study we see that mothers of the children living in urban area expressed their insecurity about the neighbourhood and showed disapproval to send their children outdoor alone. It was also observed that there was a lack of socialization among the neighbours. Only one out of three children was observed to play with

neighbouring friends. But in case of other three children there was no interaction between neighbours found.

Parents' Different Treatment of Male and Female Child

Gender difference is another factor, which also plays a role in children's participation in physical activity. This can be again caused by parents' different treatment of male and female child (Paetcher, 2007). Different treatment of male and female child was also observed in the present study. While the parents of male children were seemed to facilitate active games like cricket, football, badminton for male children, parents of female children provided materials for art and crafting, dolls to play with. One mother also reported that she encouraged her daughter to learn sewing, hand embroidery, painting during her leisure time. Thus children's leisure activity was shaped according to different treatment they get from their parents.

Academic Pressure

Academic pressure due to children's transition to primary school has been found to have association with less participation in physical activities and outdoor play (Broström, 2005; Hartmann & Rollett, 1994 as cited in Lehrer & Petrakos, 2011). The present study found the similar kind of findings as three participants were in kindergarten and one in primary class. All were found to spend a certain amount of time on their academic work. Two of them attended private tuition. Other two were taught by their mother on regular basis.

Another longitudinal study done by Swaminathan et al. (2011) on south Indian school going children which shows physical activity participation decreases with age which is due to increased academic work. But the findings of present study showed that though the child who was older than other participants and student of primary class three spent more time on academic work than others, still her participation in physical activity was higher than two other younger participants. However, it can also be assumed that this particular child's physical activity might have decreased with time due to academic pressure.

Peer Influence

Presence of peer has been identified as another influencing factor on children's physical activity. In an experimental study on Peer Influence and physical activity behavior in young children, Barkley et al. (2013) found children's physical activity increases in presence of a peer. Another study by Salvy et al. (2007) also suggests that children's physical activity is intensified when they are accompanied by their favorite peers. Similarly, data from the present study also showed that children were most active when they were with their favourite peers. The child who had the lowest duration of participation in physical activity was observed jumping from stairs while she was accompanied by her cousin who she reported was her favorite peer.

Existing Outdoor and Indoor Facilities for Children's Physical Activity

In terms of the outdoor facilities, children's participation in physical activity was not found to depend on it. The boy from the low income family was observed to spend most

of his leisure time outdoor in the street adjacent to his house though drivers did not seem to follow any traffic rule while driving in the residential streets. Even the concrete surface of the road was not suitable enough for a child to play. On the other hand, there is a safe and spacious rooftop accessible to the boy from the middle income group but he hardly goes there. There were also two public play grounds accessible to all of the participants but they rarely used that facility except one participant. Erwin et al. (2007) also found that there was no relationship between facilities and physical activity amount among the 6-13 year old children living in South Carolina. In addition to that, a recent survey shows that only 45% among the 70% who have access to playground actually go to playground (icddr,b, 2013).

Regarding indoor facilities for children's physical activity children were observed to participate in physical activity regardless of how much space they have inside their house or how many physical activity equipment they have. It is noticeable that though children from low income family rarely had any space to move inside their house, their participation in physical activity was higher than that of the participants from middle income group who had enough space to move inside their house.

Conclusion

The present study was an explorative study which intended to get an overall insight about the present scenario of urban children's practice of physical activity during their leisure time living in Dhaka city. Exploring the practice of physical activity among 6-8 year old children in urban Dhaka and identifying the factors influencing children to be engaged in physical activities were the two objectives of the study. For this four

children from two different income groups were recruited as study sample. Data was collected through parents' in depth interview, children's individual observation and their interview to reach the objectives of the study.

The analysis of the data of present study shows that, the practice of leisure time physical activity among 6-8 years old living in urban Dhaka varies according to their gender and family income. Male respondents showed more play based physical activity than their female counterparts. For the children from low income group participation in physical activity was included in their lifestyle as a daily routine. On the other hand for the children from middle income group participation in physical activity was optional and it was more like a recreational activity than a routine work. And children from low income group seemed more physically active than their counterparts from middle income group.

Factors which were positively related with children's physical activity participation were, parents' encouragement, involvement in children's physical activity, presence of a favorite peer, parents' facilitation in case of male child. On the other hand, parents' perception about neighborhood, academic pressure, lack of adult role, parents' emphasis on food habit and academic work seemed to be discouraging children's participation in physical activity. It is also mentionable that Parents' knowledge on children's physical activity did not influence their amount of participation in physical activity as there were other factors working simultaneously. Apart from this, outdoor and indoor facilities seemed less important compared to social and neighborhood environment for children's participation in regular physical activity.

From the above discussion we can come to a conclusion that, the practice of leisure time physical activity among the 6 to 8 year old children living in Dhaka seems to follow a distinctive pattern which has been observed to vary according to the economic condition of the family. Still gender, parental influence, parents' perception about neighborhoods, peer, academic pressure, played as some key influential factors in children's physical activity practice.

Recommendations

After reflecting on the findings and discussion of the present explorative study on the practice of leisure time physical activity among 6-8 year old urban children living in Dhaka, the researcher has come up with some recommendations on the subject matter.

The recommendations are,

- There is a need for advocacy for a neighbourhood environment that is safer and more accessible to children.
- Implementing awareness raising programs through different public media targeting parents, teachers, community members as well as children themselves.
- Objective study on larger population need to be conducted to determine the actual amount of physical activity done by children living in urban area and to identify the risk factors.
- The problem needs to be addressed at policy level for setting a national guideline for children's participation in physical activity.

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Annexure 1

Observation Guideline

Research Title: Exploring the Practice of Leisure Time Physical Activity among 6-8 Year Old Urban Children

Section A: General Information

Observation Date:

Start time:

End time:

Child's Name:

Age:

Sex:

Section B: Setting

1. How does the outside surrounding of the residence of the child look like?
2. Is there any playground or park in the area accessible to the child?
3. Is the roof top of the house suitable and safe for the child to walk, run or ride cycle?
4. Is the road adjacent to the house suitable and safe for the child to walk, run or ride cycle?
5. Is there enough space for the child to move around and be physically active inside the house?
6. What are the existing facilities for the child to move freely inside and outside of the house?
7. Is there any equipment that facilitates child's physical activity?
8. Is there any equipment that discourages physical activity?

Section C: Child's Involvement in Physical Activity

1. What are the behaviours that show physical activity (activities that involve muscle movement)?
 - a. Structured activities (pre planned/ follow fixed routine): dancing, yoga, martial art, aerobics, swimming, skating etc.
 - b. Unstructured activities (unplanned/ no fixed routine): running, walking, jumping, cycling, skipping, doing household chores, play indoors with toys etc.
 - c. Others
2. What are the behaviours that show physical inactivity (activities that do not involve any kind of muscle movement)?
 - a. Structured activities: attending music , drawing, academic coaching classes
 - b. Unstructured activities: watching television, reading, drawing, doing homework, playing board game, computer game, listening to music
 - c. Others
3. What types of activities does the child prefers to do?
4. How long is the each activity?
5. Does the child participate in any organized game?
 - a. Football
 - b. Cricket
 - c. Basketball
 - d. Cabadi
 - e. Hadudu
 - f. Others
6. What stimulates the child to be physically active (inside/outside the house)?

Section D: Adult's Role

1. Is there any adult's involvement in child's activity? How are they getting involved?
2. Are they providing the child opportunities to engage in physical activity outdoor?

3. Are they facilitating outdoor activity by providing toys and materials?
4. Do they assign the child with any household chores (whether those are age appropriate for the child)? Do they participate with child in household chores?
5. Is there any encouragement from the adults to be active inside home?
6. What are the adult's preferences of activity for the child to do?

Annexure 2

Interview Schedule for Children

Research Title: Exploring the Practice of Leisure Time Physical Activity among 6-8 Year Old Urban Children

Interview Date:

Start time:

End time:

Child's Name:

Age:

Sex:

1. What kind of activities do you do after school?
2. What is your most preferred activity after school?
3. Who do you prefer most as your peer in leisure activities? What kind of activity you do together?
4. Do you take part in any kind of physical activity on regular basis? How frequent do you do that activity?
5. Is there anything that limits your participation in physical activity at home or outside?
6. Do you play outside your home? What do you usually play? How often? Alone or with you friends?
7. What facilities do you think that can make you more physically active?
8. What kind of activities your parents encourage to do?
9. Do you and your parents do any activity (physical activity/play) together? Please explain about the activity.

Annexure 3

In-Depth Interview Questionnaire

Research Title: Exploring the Practice of Leisure Time Physical Activity among 6-8 Year Old Urban Children

Section A: Demographic Information

Interview Date:

Start time:

End time:

Parent's Name:

Parent's Age:

Parent's Education:

Parent's Occupation:

Parent's Income:

Child's Name:

Sex:

Age:

Section B: Parents' Knowledge

1. When I say 'physical activity', what does it mean to you?
2. What is the value of physical activity for young kids? Older children? Adults?
3. How important is physical activity for your child's overall development?
4. Tell me your thoughts about physical activity and your child's health.
5. Do you know of any guidelines about what is recommended for children in regards to physical activity, TV viewing and use of computers?
6. Do you encourage your child to play outside?
7. Are you physically active with or in front of your child?
8. How do you encourage your child to be active? When you spend time with your child what do you like to do together?
9. During leisure what kind of activities do you or your partner do with your child?
10. What kind of activity does your child do with his/her siblings (if any) in leisure time?
11. Do you limit what your child does? If you do, what are the reasons behind this?

12. Developing academically skilled or developing physically fit- how do you consider these two perspectives in case of your child?
13. Does your work schedule or other commitments limit the time you have to play with your child?
14. Do you see any difference in activities in male or female child?
15. What makes your child/children active?
16. Does anything make it difficult for them to be active?

Annexure 4

পর্যবেক্ষণ নীতিমালা

Research Title: Exploring the Practice of Leisure Time Physical Activity among 6-8 Year Old Urban Children

বিভাগ-ক: সাধারণ তথ্য

পর্যবেক্ষণের তারিখ:

শুরুর সময়:

শেষের সময়:

শিশুর নাম:

বয়স:

লিঙ্গ:

বিভাগ-খ: পারিপার্শ্বিক অবস্থা

- ১। শিশুর বাসস্থানের বাইরের পারিপার্শ্বিক অবস্থা দেখতে কেমন?
- ২। শিশুর এলাকাতে কাছাকাছি কোন পার্ক বা খেলার মাঠ আছে কি যেখানে শিশুটি যেতে পারে?
- ৩। বাড়ির সাথে যে রাস্তা আছে তা কি শিশুর হাটা, দৌড়ানো ও সাইকেল চালানোর জন্য উপযোগী?
- ৪। বাড়ির ভেতরে স্বচ্ছন্দে চলাচল করার মত জায়গা আছে কি না?
- ৫। শিশুর ঘরে ও বাইরে স্বচ্ছন্দে চলাফেরার জন্য বিদ্যমান সুযোগ সুবিধাগুলো কি কি ?
- ৬। এমন কোন যন্ত্রপাতি/উপকরণ রয়েছে যা শিশুর শারীরিক ক্রিয়াকলাপে অংশগ্রহণের অনুকূল?
- ৭। এমন কোন যন্ত্রপাতি/উপকরণ রয়েছে যা শিশুকে শারীরিক ক্রিয়াকলাপে নিরুৎসাহিত করে?

বিভাগ-গ: শারীরিক কার্যক্রমে শিশুর অংশগ্রহণ

- ১। কোন কোন আচরণে শিশুর শারীরিক ক্রিয়াকলাপ লক্ষ্য করা যায় (যেসব কাজে শিশুর পেশির সঞ্চালন হয়) ?
 - ক. গঠনমূলক কর্মকাণ্ড: নাচ, ইয়োগা, ক্যারাতে, সাঁতার, স্কেটিং, ইত্যাদি।
 - খ. অগঠনমূলক কর্মকাণ্ড: হাটা, দৌড়ানো, লাফানো, সাইকেল চালানো, দড়ি লাফ, ঘরের কাজ, খেলনা দিয়ে খেলা ইত্যাদি।
 - গ. অন্যান্য

- ২। কোন কোন আচরেন শিশুর শারীরিক নিষ্ক্রিয়তা লক্ষ্য করা যায় (যে সব কর্মকাণ্ডে কোন পেশীর সঞ্চালন হয় না) ?
- ক. গঠনমূলক কর্মকাণ্ড : সংগীত, অংকন বা কোচিং ক্লাসে অংশ গ্রহন
- খ. অগঠনমূলক কর্মকাণ্ড: টেলিভিশন দেখা, বই পড়া, কম্পিউটারে গেম খেলা, আঁকা, স্কুলের বাড়ির কাজ, বোর্ড খেলা, গান শোনা।
- গ. অন্যান্য
- ৩। শিশু কী ধরনের কর্মকাণ্ডে অংশ নিতে পছন্দ করে?
- ৪। শিশুর প্রতিটি কর্মকাণ্ড কতক্ষণ স্থায়ী হয়?
- ৫। শিশু কী কোন সংগঠিত খেলায় অংশ নেয়?
- ক. ফুটবল,
- খ. ক্রিকেট
- গ. বাসকেট বল
- ঘ. কাবাডি
- ঙ. অন্যান্য
- ৬। কোন ধরনের কর্মকাণ্ড শিশুকে সক্রিয় হতে উদ্দীপিত করে?

বিভাগ-ঘ: বড়দের ভূমিকা

- ১। শিশুর কর্মকাণ্ডে বাড়ির বড়দের কোন সম্পৃক্ততা আছে কি না? থাকলে তাঁরা কিভাবে সম্পৃক্ত হন?
- ২। বড়রা কি শিশুটির জন্য ঘরের বাইরে শারীরিক ক্রিয়াকলাপে অংশগ্রহনের কোন সুযোগ সৃষ্টি করে দেন?
- ৩। তাঁরা কি কোন খেলনা বা উপকরণ দিয়ে শিশুটিকে ঘরের বাইরে শারীরিক কার্যক্রমকে উৎসাহিত করে?
- ৪। তাঁরা কি শিশুটিকে দিয়ে ঘরের কোন কাজ করান? বা নিজেরা শিশুদের সাথে একত্রে ঘরের কোন কাজ করেন?
- ৫। শিশুটি ঘরের ভেতরে সক্রিয় থাকার জন্য বড়দের থেকে কোন উৎসাহ পায় কি?

৬। বাড়ির বড়রা শিশুটিকে কি করতে উৎসাহিত করছেন?

Annexure 5

শিশুর জন্য সাক্ষাতকারের প্রশ্নমালা

Research Title: Explore the Practice of Leisure Time Physical Activity among 6-8 Year Old Urban Children

সাক্ষাতকারের তারিখ:

শুরুর সময়:

শেষের সময়:

শিশুর নাম:

বয়স:

লিঙ্গ:

- ১। স্কুলের পর অবসর সময়ে সাধারণত তুমি কি কর?
- ২। স্কুলের পর অবসর সময়ে তুমি সবচেয়ে কি করতে ভালোবাসো?
- ৩। অবসর সময়ে তুমি কার সাথে সময় কাটাতে সবচেয়ে বেশি পছন্দ কর?
- ৪। তুমি কি প্রতিদিন কোন না কোন শারীরিক কর্মকাণ্ডে অংশগ্রহণ কর? করলে সপ্তাহে কতদিন তাতে অংশগ্রহণ কর এবং কত সময়ের জন্য?
- ৫। এমন কি কোন বিষয় আছে যা তোমাকে ঘরে ও বাইরে শারীরিক কার্যক্রমে অংশগ্রহণে বাধা সৃষ্টি করে?
- ৬। তুমি কি ঘরের বাইরে খেল? কি খেল? সপ্তাহে কত দিন খেল? একা যাও নাকি কেউ সাথে থাকে?
- ৭। তোমার মতে কোন কোন সুযোগ সুবিধা থাকলে তুমি আরও বেশি শারীরিক কার্যক্রমে অংশ নিতে পার?
- ৮। তোমার বাবা মা অবসর সময়ে তোমাকে কি করতে বেশি উৎসাহ প্রদান করে?
- ৯। তুমি, তোমার বাবা মা একসাথে কি কোন কর্মকাণ্ডে (শারীরিক কার্যক্রম/ খেলায়) অংশ নাও?

Annexure 6

পিতা/ মাতার জন্য সাক্ষাতকার ও প্রশ্নমালা

Research Title: Exploring the Practice of Leisure Time Physical Activity among 6-8 Year Old Urban Children

বিভাগ-ক: ডেমোগ্রাফিক তথ্য

সাক্ষাতকারের তারিখ:

শুরুর সময়:

শেষের সময়:

পিতা/মাতার নাম:

বয়স:

শিক্ষাগত যোগ্যতা:

পেশা:

মাসিক আয়:

শিশুর নাম:

বয়স:

লিঙ্গ:

বিভাগ-খ: পিতা-মাতার সচেতনতা

- ১। শিশুদের “শারীরিক কার্যক্রম” কথাটি বলতে আপনি কি বোঝেন?
- ২। শারীরিক কার্যক্রম শিশুদের এবং প্রাপ্তবয়স্কদের জন্য কতটা গুরুত্বপূর্ণ বলে আপনি মনে করেন?
- ৩। আপনার শিশুর সার্বিক বৃদ্ধির জন্য শারীরিক কার্যক্রম কতটা গুরুত্বপূর্ণ?
- ৪। আপনার শিশুর সুস্থতা ও শারীরিক কার্যক্রম সম্পর্কে আপনার চিন্তা ভাবনাগুলো বলুন?
- ৫। শিশুদের শারীরিক কার্যক্রমে অংশগ্রহণ, টেলিভিশন দেখা ও কম্পিউটার ব্যবহার সম্পর্কিত কোন নির্দেশনাবলী সম্পর্কে আপনি অবহিত আছেন কি?
- ৬। আবহাওয়া ভাল থাকলে আপনি কি আপনার সন্তানদের ঘরের বাইরে খেলতে উৎসাহিত করেন?
- ৭। আপনি কি আপনার শিশুর সাথে বা সামনে কোন সক্রিয় কর্মকাণ্ডে অংশগ্রহণ করেন?
- ৮। আপনি কি আপনার শিশুকে সক্রিয় হতে উৎসাহিত করেন? আপনি যখন তার সাথে সময় কাটান সাধারণত কি করতে বেশি পছন্দ করেন?
- ৯। অবসর সময়ে আপনি ও আপনার স্বামী/স্ত্রী বাচ্চাদের সাথে কি করে সময় কাটাতে পছন্দ করেন?

- ১০। আপনার সন্তান অবসর সময়ে তার ভাই বোনদের সাথে (যদি থাকে) কি ধরনের খেলা বা কার্যকলাপে লিপ্ত হয়?
- ১১। আপনার সন্তান ব্যথা পেতে পারে এই ভয়ে আপনি কি তাকে কোন কার্যক্রমে বাধা দেন বা সীমাবদ্ধতা সৃষ্টি করেন?
- ১২। আপনার সন্তানের ক্ষেত্রে কোনটি আপনার কাছে বেশি প্রাধান্য পায়- শারীরিকভাবে সুস্থ্য সবল পারদর্শী হয়ে বেড়ে ওঠা নাকি শিক্ষাক্ষেত্রে পারদর্শিতা অর্জন করা?
- ১৩। আপনার কর্মব্যস্ততা বা অন্য কোন দায়িত্ব কি আপনার শিশুর সাথে সময় কাটানোতে বাধা সৃষ্টি করে?
- ১৪। আপনি কি ছেলে ও মেয়ে শিশুর কর্মকাণ্ডে কোন পার্থক্য লক্ষ্য করেন?
- ১৫। আপনার শিশুকে কোন কোন জিনিস বা বিষয় অনেক কর্মচঞ্চল করে তোলে?
- ১৬। এমন কিছু কি আছে যা তাদের কর্মচঞ্চল হতে বাধা সৃষ্টি করে?

Annexure 7

Consent Form for Parents

Title of the Research: Exploring the Practice of Leisure Time Physical Activity among 6-8 Year Old Urban Children

Researcher: Tanzina Quddus Dina

Purpose of the research

I am conducting this research as a part of my Masters Degree requirement from the Institute of Educational Development (IED) - BRAC University. The aim of this research is to explore the practice of physical activity of 6-8 year old children of Dhaka city.

Expectation from you

If you agree, you will be expected to share information regarding your child's practice of leisure time physical activity as well as your views, feelings, expectations on this issue. The in-depth interview may take 30 to 40 minutes, depending upon your response. With your permission I will observe your child once at his/her leisure time which is after he/she comes from school till sleeping time. During observation, you may be asked some related questions regarding your child.

Risks and benefits

There is no risk to you or your child for participating in this study; directly or indirectly parents, children, policy makers may be benefited in future if any national policy or intervention program incorporates your perception and child's needs in regard to practice of physical activity.

Privacy, anonymity and confidentiality

All information collected from you will remain strictly confidential. I would be happy to answer any of your queries about the study and you are welcome to contact me.

Future use of information

Some of the information collected from this study may be kept for future use. However, in such cases information and data supplied to other researchers, will not conflict with or violate the maintenance of privacy, anonymity and confidentiality of information identifying participants in any way.

Right not to participate and withdraw

Your and your child's participation in the study is voluntary, and you are the sole authority to decide for and against your participation in this study. Refusal to take part in the study will involve no penalty.

If you agree to my proposal of participating in my study, please indicate that by putting your signature in the specified space below.

Name of the Parents:

Signature of the Parents:

Name of the Researcher:

Signature of the Researcher:

Thank you very much for your cooperation. For any further query, you may contact me. My contact no is, 01712231606, or you can email at tanzina.dina@gmail.com.