

Perception About Less Physical Activity and its Effect among Service Holders in Dhaka City of Bangladesh

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Abstract

Introduction: Physical activity has been traditionally defined as any bodily movement produced by contraction of skeletal muscle that substantially increases energy expenditure, although the intensity and duration can vary substantially. Lack of physical activity is known to be one of the most important risk factors leading to morbidity and mortality around the world leading to an estimated 3.2 million deaths globally.

Objectives: To assess perception about less physical activity and its effect among service holders in Dhaka city of Bangladesh.

Methods: The study was conducted in Civil Aviation Authority of Bangladesh, Kurmitola; Janata Bank Limited, Satmasjid Road Branch; Rayerbazar Government Primary School, Rayerbazar and six gyms (training centers) of Dhaka, Bangladesh. A total of 15 government workers and 15 key informants purposefully (trainers of physical activities) selected for in-depth interview. Socio-demographic data were entered into SPSS version 21. Thematic area were identified and analyzed based on the themes.

Result: Total 30 study participants (15 Government office worker and 15 Key Informant) were interviewed. All participants have good perception of physical activities. 7 of workers have moderately physically active (fulfill globally recommended physical activity rate) with 150 minutes of physical activity performance per week. The rest 3 workers have insufficient physical activities which is less than 150 minutes of physical activity per week. Factor like laziness, overloaded by office work, lack of self-confidence in doing physical activity, lack of awareness about physical activity, place factor, poor time management, lack of

communication and economic status of workers were found as behaviors or factors affecting doing of physical activities among government office workers.

Conclusion and recommendations: There is high number of physical activity insufficiency among workers and there are large numbers of factors that affect physical activity doing of workers. Therefore, the government should work on these factors to make worker healthy and productive.

Keywords: Physical Activity; Government Workers; Adult

Introduction

Physical activity has been traditionally defined as any bodily movement produced by contraction of skeletal muscle that substantially increases energy expenditure, although the intensity and duration can vary substantially [1]. Lack of physical activity is known to be one of the most important risk factors leading to morbidity and mortality around the world leading to an estimated 3.2 million deaths globally [2]. Physical activities prevent non communicable diseases. Regular physical activity can reduce the risk factors associated with morbidity and mortality among older adults. Being physically active can alter the course of many diseases that are prevalent in the population [2]. Despite such recommendations, many adults, especially middle-aged and elderly individuals, prefer to remain sedentary. Research conducted by the Center for Disease Control and Prevention, United States, in 1996 revealed that more than 60% of the adult population did not participate in physical activity and 25% was sedentary [4]. Similarly, a study from Hong Kong reported that one-fifth of the registered deaths among people aged ≥ 35 years in the country were associated with low levels of physical activity [5]. In another quantitative study conducted in southern Brazil, in 2010, 29.7 percent of elderly populations were physically active for 150 minutes and perceived that the existence of public lighting at night, the sensation of safety during the day, the existence of sidewalks, and of green areas, and the presence of pedestrian tracks are environmental factors that can affect physical activities of elderly patients [6]. In this study one participant said, "It takes a lot of time in the day and we don't have that time... I try to do exercises that are safe for me, for my age, but I don't always know what I can and cannot do..." Multiple women mentioned the importance of safety when exercising, reflecting that they desired more knowledge of safe exercises, age- appropriate exercise programs, and healthy eating habits [7]. Whereas, out of the 65.9% who reported doing physical activity for at least 10-min continuously, 59.0% reported moderate-intensity physical activity at workplaces and 53.9% reported activity during travel to and from places. Approximately 22% of the adults did vigorous-intensity activity for 75-min or more per week. The proportion of men who did vigorous-intensity activity were more than three-fold higher compared to women [8]. The motivations included perceived health benefits of physical activity, social support, and enjoyment associated with engagement in physical activity. Prominent barriers included time and physical limitations, peer pressure and family responsibilities, and weather and poor neighborhood conditions [9]. That means he want to keep aerobics and add walking and yoga. From the above literature we understand peoples may perceive physical exercise in different ways. This will help to analyses perception of adults toward physical exercise. But as to my knowledge, there is no information that shows the perception of regular physical exercise among government workers office. This study will explore the perception of regular physical activities among government workers in Dhaka city and help policy makers and cities health administration in establishing the way of creating awareness and bringing behavioral change in performing regular physical activities to promote health.

Methods and Materials

The study was conducted in Civil Aviation Authority of Bangladesh, Kurmitola; Janata Bank Limited, Satmasjid Road Branch; Rayerbazar Government Primary School, Rayerbazar and six gyms (training centers) Dhaka, Bangladesh. A total of 15 government workers and 15 key informants purposefully (trainers of physical activities) selected respondents were interviewed in in-depth interview. The study populations included all workers working in Dhaka city selected governmental organizations and trainer of physical activities.

Inclusion Criteria

- Workers working in selected governmental organizations and trainer of physical activities ,who are willing to participate at the time of study period will be included in this study.

Exclusion Criteria

- Workers who are on annual leave.
- Those who newly joined the office in the last six months.
- Workers who are not willing to participate.
- Critically ill and cannot participate in in-depth interview will be excluded.

Sample Size Determination and Sampling Procedure

Purposeful sampling was employed to select three governmental institutions and six gyms (training centers) and Purposeful and random sampling of 10 study participants, two or three from each institution was selected and in depth interview and 10 KII was conducted. Three government office was selected purposefully.

Data Collection Procedures

WHO Global Physical Activity Questionnaire (GPAQ) Analysis Guide is used to prepare questionnaires. Semi structured questionnaires for Socio-demographic part and unstructured questionnaires were prepared and used to collect data from government office employee and key informants by in depth interview. Questionnaires were prepared in English and translated into bengali by Bsc holder of language. The translated questionnaire was re-translated back to English by Language teachers working in Dhaka University to check its consistency. Sony audio recorder was used to record the voice of respondents.

Data Processing and Analysis

Frequency and distribution for socio-demographic data was analyzed using SPSS version 21 and displayed using tables. Key themes was identified after initial review of the text. The data was organized into key themes. Data from each group of respondents was analyzed before they were combined into a summative review.

Results

A total of 15 government workers and 15 key informants purposefully (trainers of physical activities) selected respondents were interviewed in in-depth interview. The mean age of government workers was 40.6 years ($\pm SD=8.87$) and the median age of Key informants is 32 years with IQR of 27.75-37.25, More than half of government workers are at below or equal to 40 years and 12 (80%) of KI are below 40 years. More than three fourth 11 (73.3%) of the government workers were male and all KI are male. Muslims and Hindus accounts for 7 (46.6%) and 6 (40.0%) for Government workers and KIs respectively. All of the government workers were graduated with the first degree and 6 (40.0%) and KIs are at secondary level and degree graduate. The majority of the government workers 14 (93.3%) married and 60% of KIs married. Half 8 (53.3%) of government workers are law expert, earn monthly income of $\leq 50,000$ taka and 6 (40%) of the government workers are from Civil Aviation Authority of Bangladesh (CAAB) table 1. [T.1](#)

In this research four themes generated regarding the regular physical activities of government office workers in Dhaka City; 1). Perception of physical activities 2). Status of workers physical activities 3). Future willing of Physical Activities and 4). Barriers or factors affecting physical activities.

Variables	Gov. Workers		Key Informants	
	Frequency	Percent	Frequency	Percent
Age Category				
< 40 years	9	60	12	80
> 40 years	6	40	3	20
Sex				
Female	4	26.6	0	0
Male	11	73.3	15	100
Religion				
Muslim	7	46.6	8	53.3
Hindu	6	40.0	1	6.6
Other	2	13.3	6	40
Educational level				
9-12 (Secondary)			6	40
Certificate/Diploma			3	20
1st degree	15	100.0	6	40
Marriage				
Not Married			6	40
Married	14	93.3	9	60
Divorced	1	6.6		
Profession				
Accountant	6	40	1	6.6
law expert	8	53.3		
Teacher	1	6.6		
Trainers			14	93.4
Family monthly income Category				
≤50,000 taka	8	53.3	9	60
>50,000 taka	7	46.6	6	40
Organization				
Civil Aviation Authority of Bangladesh(CAAB)	6	40.0		
Janata Bank Limited.	5	33.3		
Rayerbazar Government Primary School	4	26.7	1	6.7
Gym (Training Center)			14	93.3

Table 1: Socio-demographic characteristics of study participants (N=30).

Perception of Physical Activities

At the time of in-depth interview, government workers were assessed how they perceive physical activities and they describe physical activities as follows; " Physical activity is doing different types of sport activities in a regular ways (R1), physical activity mean it is health (R2, R8), ways of preventing diseases (R3), sporting and working (R4), Situation of working peacefully (R5), working, walking and running (R6, R7 and R9), running, jumping rope and participating in other sport activities (R10)."

Most of trainers have similar perception and said that physical activity means; "activities used to have good physical fitness, appropriate physical appearance and body building (R1), the way a person keeps himself from unnecessary things keep him healthy and relax his body and mind (R2), activities that used to keep our health (R3, R4), any activity that any person can do to be health and good physical appearance (5), activities important for human to keep his bodies strong (R6), activities used to keep health (R7), activities that contain not less than 7 Physical activities which are used to have good and strong physical appearances (R8), activities that are used to have good physical fitness, prevent diseases and made us healthy and brilliant and effective in our life (R9), activities of body that cannot static at one place (R10)." Participants of each training center were identified by to check whether government worker participate in higher number or not compared to any other occupations. Almost all of trainers confirm that the number of government worker participating in sport training center or gyms is very small compared to others. "Most of the trainees are students and traders; numbers of Government workers are very low (R1, R2), A large number of trainees are students and other non-governmental workers. Most of the government workers do not came to training centers (R4), the number of government workers is too small (R5), Most of the trainees are children and youths, private worker/traders/ but government workers do not come to gym most of the time (R6, R7), Most of trainees are children and youth and other non-governmental employee, some of governmental employees starts to do physical exercise but most governmental employees do not come to do physical exercise (R8), The number of Government workers who come to training centers and gym are very small (R9), Most of trainees are youth; the number of government workers is small compared to others (R10)."

Status/Level of Workers Physical Activities

We measured the status of workers' physical activities using global recommended physical activities accumulation rate. The recommended global accumulation rate was calculated based the frequency and duration of their physical activities done in a week. Respondent (1, 3 and 6) some of the workers do not fulfill the total physical activities duration of 150 minutes per a week. That means they do not achieve globally recommended accumulation rate and they are in physical activity insufficiency. I walk 20 minutes per day for 7 days (R1), I walk for 30 to 40 minutes per day for 3 days per week (R3) and another respondent run for 30 minutes per day for 2 days per week (R6)." The rest the study respondents (R2, 4, 5, 7, 8, 9, and 10) seven of workers achieved their global recommended accumulation rate that mean they do physical activities more than 150 minutes per week.

Future willing of Physical Activities

From the total respondents (workers), only two (R1 and R2) showed need to go to gym and to do physical exercise other respondents do not need to go to gym and said" ... want to increase walking time and add pushup (R3), I'm interested in football playing and running (R5), if the environment is suitable, I want to play ground tennis and run (R7), I want to play football in my free time if playing place is appropriate (R8), Now I want to play football if it is possible and get appropriate time and I want to participate in programs prepared for mass sport (R9), I want to run and jump rope (R10) and I am interested in football playing and I want to use gyms but it is costly and I cannot afford it (R6)."'

Barriers or Factors Affecting Physical Activities

There are many factors that can affect or influence the workers to do or not to do physical activities. This study shows that what motivates or encourage or discourage worker to do physical activities. Some the workers are motivated and encouraged by family and/or friends "My wife encourages me to do physical activities (R1), My brother encourage me to participate in physical exercise (R2), my family and friends encourage me to do physical exercise (R3), my son and work situation encourage me (R5), my health situation and my family and friends encourage me to do physical exercise (R6)." Others are motivated and encouraged by mass media programs, need of having good physical appearance and prevention of diseases. "Presence of physical activities programs in mass media motivate me (R7), Need of having good physical appearance and being alert in my work after physical exercise motivates me (R8), Participation of my friends in physical activities due diabetes motivates me (R9) and I motivated to do physical exercise by looking at those who are obese and need to reduce their weight. My family and friends motivate me to do physical exercise (R10)." Most of study respon-

dents said that nothing discourage them to do physical exercise but two workers (R 7 and 9) discouraged by some factors "Becoming overloaded by my office work hinders me from doing physical exercise (R7 and R9)". Another factor that may affect workers physical activities may be place factor where workers can do physical activities. "No appropriate place and situation for doing regular physical activities in our area (R1) and There is no place to make, no walking road side place (R2)." Suggestion that may help workers aware and engage to physical exercise have been given to government (their office) by worker. Some the suggestion given by workers are as follows: "Our office should facilitate physical exercise at the time of tea break and it should prepare gyms in our institution so that workers can easily get access and do physical exercise (R1, 3, 4), Government or our office should prepare place for physical exercise so that workers can come early and do physical exercise before they start and after they finish their work in office compound (R2, 7, 8 and 9), Our organization should facilitate the place and gym materials for physical exercise so that workers can do physical exercise and keep their health (R5) and Our organization should establish sport team or club so that we can participate and contribute to the club (R6)."

The main reason why government workers do not go gyms and training centers to do physical activities were assessed by interviewing the trainer of gyms and training centers. The trainers described the reasons as follows; "The reason may be indolence (laziness), Economic status and distance of place for gyms and training centers (R1), The reason may be becoming overloaded by work, no time plan for their life (R2), The reason may be; 1) they think that the time may not appropriate for them. 2) They do not have enough knowledge about Physical activities (R4), they have low awareness about physical exercise (R5), our training center lacks shower room which make them discomfort (R6), The reason for not coming to our gym for most government workers is 1) losing self-confidence (believing that they cannot do physical exercise by this age) 2) Economic problem; fees for gym 3) attitude problem (not believing and accepting physical exercise as part of their life) (R8), the reason is that they do not have good attitude toward the trainers (R9), The reason for not coming to our training center can be 1) Not having interest 2) lack of communication and awareness 3) distance of training center from their home (R10)."

Discussion

The result of this study shows that government workers perceives physical activities as activities that is used to keep body strong, used to be healthy and to promote health. The key informants described in the same way somewhat deeper than the government workers. The result of this study similar with studies conducted in Ghana [7] again similar with another qualitative study conducted among university students in Malaysia [10] and again similar with In another qualitative study conducted in two different municipalities in Sweden [11]. The similarity may be due to the fact that worker can search and read about the physical activities. The levels of physical activity of the workers have been assessed using WHO GRPAR. A total of 15 government workers and 15 key informants purposefully (trainers of physical activities) selected respondents were interviewed in in-depth interview. The mean age of government workers was 40.6 years ($\pm SD=8.87$) and the median age of Key informants is 32 years with IQR of 27.75-37.25, More than half of government workers are at below or equal to 40 years and 12 (80%) of KI are below 40 years. More than three fourth 11 (73.3%) of the government workers were male and all KI are male. Muslims and Hindus accounts for 7 (46.6%) and 6 (40.0%) for Government workers and KIs respectively. In this study, about 30% of workers have physical activity of less than 150 minutes per week, which means 30% of workers have insufficient physical activity but the key informant are 100% achieved GRPAR and vigorously physically active. The result of this study inconsistent with the study conducted in Brazil. The inconsistency could be due difference in study population, study setting and economic status of the study participants and geographic locations [12]. Physical inactivity 30% of this study is very high compared to another study conducted in Mexico which was 19.4%. The discrepancy may be due difference in study population, study setting and economic status of the study participants [13]. The result of this study shows that workers in need to participate in to regular physical activities. Keeping in mind the factors that may affect their need and the workers said that they want to go gyms, keeping up their activities that they are doing and want adding new types of activities. The result of this study is similar with the study conducted Australia. Even though, the type physical activities are not similar the idea of keeping up activities and need of adding another type of activity is similar. Similarity may be due to need to be health and strong by doing physical activities [9]. In this study, different factors have investigated as factors that affect physical activities of workers. Some of the factors are Need of having

good physical appearance, prevention of diseases like diabetes, reduction of weight and family and friend support as motivators. Being overloaded by work (tiredness) as discouraging factor and facility factors like not safeness, distance, lack of motivation due to lack of aware, economic status, lack of transportation and etc are factors that affect physical activity of workers. The result of this study is similar with the study conducted in Malaysia [14] and America [9]. The similarity may due to the fact that all factors described can happen anywhere in any person and place factors are common in developing counties like Ethiopia and benefits of physical activity is almost similar everywhere. In this study, I tried to see the number of government worker doing physical activities in gyms. Almost all KI said that there is very small number of government office worker come to Gyms or training centers by describing the reasons. I can find to triangulate this to others. Both workers and key informants give suggestion regarding of engagement of workers into physical activities. The workers claim absence of place, distance of gyms and inability to pay for gym as a major reason for not to do physical activities. Therefore, they give suggestion that the government should prepare gyms in each organization and facilitate mass physical activities. But key informant believe that the main reasons for not doing physical activities as factors like laziness of workers, distance of gyms from residential area, lack of awareness among workers, not having interest, not having good attitude toward trainers and lack of communication. Key informants give suggestions that all these factors can get solution by government. Therefore, government should facilitate and establish gyms in every organization facilitate and make physical activity working place safe and suitable in residential area and create awareness about physical activities and its benefits regarding keeping the workers healthy and productive.

Conclusions

This study reveals that workers have good physical activity perception and the majority (70%) of workers attain moderate level of physical activities based of WHO GRPAR and still a large number 30% of worker are physically inactive. Factors like place for physical activity, Being overload by office work, lack of awareness about physical activities, distance from gyms, safeness of roadside places, lack of communication with trainers and loss of interest in physical activity and ability to time management were considered as factors that can be reason for worker not to do physical exercise gyms or other places. Not doing physical activities of the workers will result in low office work performance. The government should give attention on the physical activities of the workers facilitation so that the workers will be enough active at their office work. Should facilitate and prepare places for physical exercise for workers and community by allocating budget for establishing gyms and green arean that are used for physical activities so that the worker can be healthy and alert and provide good service for communities. Government should motivate trainers and hire trainer in each organization so that they can help worker to engage into physical activities. Government should create awareness use of physical activities in its structure and help workers to engage to physical activities.

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Nil.

Conflict of Interest

None.

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