

## Barriers to Physical Activity among Tabriz Population of Iran

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**Abstract:** Physical activity can help to improve the health of population, through controlling non communicable diseases which are one of the main causes of deaths, now days, various future scenarios, indicate that situation might worsen, that is to say percentage of deaths due to improper life style and sedentary living increases, this will even be substantial in developing, underdeveloped and low income countries. Thereby, due to the importance of the issue and to improve the level of physical activity of population. This study aims to explore the underlying barriers to physical activity in Tabriz Iran, in order to design appropriate interventions to improve the situation. In this household, cross-sectional study 255 house-holds were selected using random sampling method and postal code. A self administered questionnaire with a return stamped envelop was sent to selected subjects. Two hundred and twenty envelop which included 875 completed questionnaires were analyzed by spss 13 and one side variance t-test and chi-square. Considerations physical accessibility, lack of time, cost, accidents, physical hygiene, were mentioned to be important barriers of physical activity regardless of the subject's level of education. There was a significant difference between level of education ( $p = 0.001$ ), cost consideration ( $p = 0.001$ ) relatives disagreement (Parents) ( $p = 0.021$ ), lack of facilities at school ( $p = 0.019$ ), disturbance to neighbors ( $p = 0.011$ ) and cultural constraints ( $p = 0.003$ ). In relation to the occupation of subjects physical accessibility was a concern ( $p = 0.0195$ ). Both sexes, lack of time ( $p = 0.036$ ), Physical accessibility ( $p = 0.012$ ), relatives disagreement ( $p = 0.011$ ), Lack of resources at research ( $p = 0.0001$ ) and cultural constraints for women ( $p = 0.0001$ ) were mentioned as barriers. Findings also indicate that lack of motivation for female subjects is a barrier too ( $p = 0.0001$ ). Parallel to short term interventions to increase the knowledge and expectations of subjects to lessen the effect of the personal barriers, long term intervention must focus on factors associated with build environment.

**Key words:** Physical activity, Barriers population based, public health

### INTRODUCTION

Population's participation in Physical Activity (PA) is one of the effective and efficient approaches to use the scarce resources to promote the physiological and psychological health of the Society (WHO, 1999). Available data indicates that 2 millions deaths occur annually which are due to non-communicable disease (NCD) (WHO, 2002).

It is assumed that in the future these cases will increase up to 10% and it will have much more undesirable affects in developing, under developed and poor countries, which is partially associated with populations inactivity (WHO, 2002). International stakeholders such as NCD Department World Health Organization, recommends the improvement of life style and level of

physical activity as the effective means to combat the NCD (WHO, 2002) In this regard, research findings indicate that 50% of cancer of colone, type 2 diabetes and obesity can be prevented through regular physical exercise (WHO, 2002). Only, in 1998 60% of the deaths, were attributed to NCDs, which includes 43% of the burden of disease and it is estimated to increase to 73% of the deaths and 60% of the burden of disease by the year 2020. In this regard, the low and middle in come countries are drastically affected; it is to say in 1998, 77% of total deaths and 85% of burden of NCDs happened in these countries (WHO, 2002). On the other hand studies show that, physical activities have an important role in preventing obesity and improving the healthy life style (Janssen *et al.*, 2005; Goran *et al.*, 1999; Department of Health, 2004). Which can have a profound affect in

reducing the morbidity and mortality rate of the Population? In majority of Countries in activity is a prevalent social phenomenon (Craig *et al.*, 2001; Grunbaum *et al.*, 2001) and necessitate the involvement of all stake holders in order to improve the present situation. There by assessing and observing (Canadian Society for Exercise Physiology, 2002), the populations PA pattern is necessary to develop practical and effective interventions to improve the situation (Lea and Febiger British Colombia Department of Health, 1975).

To some extend, in many countries the perception of citizens about the benefits and barriers of physical activity and their pattern of participation have been studied (Craig *et al.*, 2001; Grunbaum *et al.*, 2001). There by to develop intervention strategies and to better address the issue, in Iran, city of Tabriz it was necessary to conduct this study to identify the significant barriers of physical inactivity.

Planned physical activity, daily average less than 2 min as part of improving the health of population through primary health care program.

## MATERIALS AND METHODS

This cross-sectional descriptive house hold study, is conducted in Tabriz city North West of Iran, due to the low level of physical activity and considering the maximum error, sample of 850 was needed.

Since, study was on human population and was expected to miss at least 20% due to their not participating in the study 1020 sample size was agreed upon.

Sampling was done, using random sampling method and postal code, since average family size is 4 people, 255 households were selected and questionnaire was send by post, including a return envelop.

This self administered questionnaire was developed, through literature review and including the barriers in other population of the word and an open space to include other perceived barriers, content validity was done informant individuals, including university teachers, polity makers, community leaders and 10 houses holds. Questionnaire reliability was piloted on 20 individuals using test and retest method, Kronbakh coefficient value was, 821, a high reliability. Two hundred and twenty envelopes which included 875 complete questionnaires were analyzed by SPSS 13 and one side Variance T-test and Chi-square. Findings presented by  $\bar{X} \pm S.E$ , qualitative data in percentage, frequencies, with significant level of  $\alpha = 0.05$  for SPv.

## RESULTS

Findings of the study, indicates that, almost all groups of educated population emphasize the shortage of

time, cost of PA facilities, physical accessibility, probability of accidents and issues of hygiene as important barriers to PA and there was a significant meaningful difference between lock of time ( $p = 0.001$ ), cost of PA facilities ( $p = 0.001$ ), relatives (Parents) disagreement ( $p = 0.020$ ) and level of physical activity.

There is also a meaningful difference between and having enough facilities at school ( $p = 0.019$ ), disturbance to neighbors ( $p = 0.011$ ), cultural and social constraints ( $p = 0.003$ ).

Further analysis of the data, shows, there is a meaning full relations only between, subjects occupation and level of physical activity ( $p = 0.0195$ ), both sexes emphasized on, lack of time ( $p = 0.036$ ) physical accessibility ( $p = 0.012$ ), relatives (parents) disagreement ( $p = 0.011$ ). Lack of resources at work ( $p = 0.0001$ ) and cultural constraints for females ( $p = 0.0001$ ) as important barriers to physical Activity. In this regard lack of time, lack of resources at work and school settings ( $p = 0.0001$ ) is considered to be of high priority barrier for male individuals and for female subjects, relatives disagreement, Lack of motivation ( $p = 0.0001$ ) is an important constraint.

## DISCUSSION

Our study indicates that barriers related to build environment and cultural and individual characteristics are important determinants of physical activity of population. Our findings in regards to build environment are consistent with those findings of Maea Hohepa *et al.* (2006). This study also shows that those with less than 12 years of education emphasized the importance of accessibility of facilities at school and neighborhood settings on the level of physical activity more than other subjects. This study also indicates that lack of time is an important determinant in inactivity of those with higher education which s compatible to Wads worth *et al.* (2006) survey of Nova Scotia population.

The perception of various occupation subgroups studied showed that except housewives who are concerned about the lack of time, students considers all other, environmental, cultural and individual factors as barriers more than other occupational subgroups.

Our findings also demonstrate that male and female, subjects believe that, lack of time and physical accessibility are important barriers in physical activity levels respectively. These findings are incompatible to findings of Badland and Schofield (2006) in which infrastructure of small cities and personal characteristics of large cities were considered to be barriers.

Study of Janice Thomson *et al.* (2003) found that, females will be motivated to participate in physical activity. Social cultural factors such as, family, friends and society leaders support such an activity (Janice *et al.*, 2003).

We also found that to our female subject the social and cultural barriers are being considered to be and important factors in their level of physical activity.

The cost of (physical activity settings and equipment) and lack of time are being other determinants to level of physical activity in youth and adults respectively. These are some what incompatible to findings of the Wadsworth *et al.* (2006) and Hohepa *et al.* (2006). Lorraine Robbins *et al.* (2003) and Lim and Taylor (2005) which report that build environment factors and personal characteristics are important barriers and the cost of facilities and lack of time are of lower priority Barriers.

The findings in relation to build-environment, individual and social barriers are new in Tabriz context and are much of value in policy making to promote the physical activity and improve the life style.

Barriers for Tabriz population; inhibits, the level of physical activity. The strategies to improve the situation, needs. To consider, both individual and environmental factors parallel to short term interventions (Hohepa *et al.*, 2006; Simon *et al.*, 2006; Cannell, 2005; Lim and Taylor, 2005; Sherwood *et al.*, 2000; Borsika and Rabin, 2006) to improve the personal barriers, such as motivation and cost considerations.

We must focus on policies in regards to long term interventions (Kamphuis *et al.*, 2007; Laura *et al.*, 2006; Borsika and Rabin, 2006) to improve barriers related to build environment, in doing so and in short term we will raise the knowledge and expectations of the population, which in itself will be a driving force to influence the further development of long term interventions.

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