

# The Deterrent Factors of Physical Activities of Female Student Nurses in Islamic Azad University

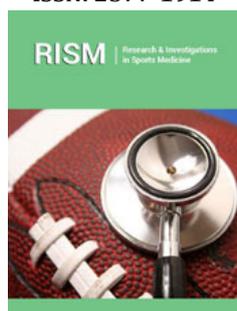
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## Abstract

The aim of this research is studying the deterrent factors of physical activities of female student nurses. This research is of survey-descriptive type and executed in a fielding form, by using "Carol and Alexander's standard questionnaire", "physical activities deterrence's" ( $\alpha=0.85$ ). Statistical universe of this research are practitioner female student nurses with the approximate capacity of 285 people, according to Morgan's table 165 people were chosen as sample using Random cluster sampling method. Was performed using the Pearson correlation, multiple regression, and post hoc LSD tests ( $\alpha=0.05$ ). Data analysis done by using SPSS19 software. Results show that the mean deterrent factors are lack of participant with highest mean 3.47, lack of time 3.22, lack of facilities 2.98, lack of availability 2.47, personal/mental problems 2.32, and lack of interest 2.26, lack of knowledge averagely 2.18. Among deterrent factors and its subgroups (interpersonal deterrence's, inter-personal and structural) with participation rate and between participation rate of individuals in sport activities, there is a meaningful relationship on the basis of education rate. Regarding obtained correlation coefficient, there's a meaningful relationship between participation rate and age in tastes. But individual's age goes up, their participation rate is less.

**Keywords:** Deterrent factors; Physical activities; Student nurse; Women

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## Introduction

Consolidation and firmness of an active & healthy society is undoubtedly in imp ledge of each member's health. Sport is an important factor in physical health and physical health has a positive effect on individual mental and psychical health. In other words, sport decreases stress and increases self-confidence. Improves sleep and feeding quality and reinforces muscles and bones. Doing exercise cause individual and mental changes scientifically and basically. Except making body healthy, it creates positive changes in personality [1]. As regular exercise is not only an effective factor in medicating clinical melancholy but also causes increase of social mental health in healthy individuals [2]. Disregarding social classes, sport or exercise involves learning healthy group behavior, so, the number of sportsmen is higher, resting society will earlier changes to active society. Approximately half of the individuals in society are woman. In recent decades their participation in sport and physical activities considerably increased [3]. Sociologist's investigations indicate that, of 8700 hours, each human during a year, 6830 hours is working and providing biologic requirements and the remaining 1930 hours is leisure hours which has special importance [1]. Participating in sport can properly full these hours. Therefore, recognizing incentive factors and fortification those on the other direction may increase participation of individuals in sport in leisure hours. Nowadays, propagation of physical exercise is one of the main purposes of government according to the public health. And is the result of this fact that preventing from illnesses as a result of inactivity and sitting on the table and encouraging a healthy and proper lifestyle. These purposes are related to health and individual life quality. and government should reach to these purposes. This implication was very important in recent decades and was proved in Epidemiologic research [4] and detailed reports to hygiene organizations in Europe, Canada, England, united states and Latin America [1].

Reports clearly show the existing relations between physical activity, Daily exercise and health, not only in individual level but in public one. And has excellent role in preventing different illnesses. Inversely, this lifestyle, inactivity and sitting on the table have close relation with different illnesses and may threaten individual's health in childhood and in adulthood,

especially among nurses. Large number of people know that regular exercise has a relation with healthy life and also know that inactivity and improper shape of body is one of the main problems in world health nevertheless inactivity habits is high in both childhood and teenage [5]. In most countries, lack of sport exercise was studied. For example, 4.7 Hispania young's, between 15 to 24 years old [6] and 62% between 15 to 74 years old [7] emphasized that they never did exercise. Some Mediterranean countries such as Hispania and Italia have the lowest rate of regular exercise in both vigorous and high active level and in procreative level. Other countries such as Scandinavian countries show the higher rate of physical exercise [8].

In addition, different studies show that, as a whole, participating in physical activities in leisure hours will be less when the age goes up and woman dedicate less time to balanced, high activity and vigorous physical activities [1]. even in adulthood and practicable to university and specially during study in university, disregarding a healthy life- style increases and doing balanced, high activity and vigorous exercise decreases [9]. Knowing and solving the difficulties of these critical conditions is for propagation of physical activity, specially among women who are gradually decreasing their sport and physical activity rate from 11 & 12 years old [10]. Lack of interest in Daily sport is one of the main deterrents in propagation of healthy life style and physical activity. Because a large number of individuals practice like sensing some hardness in continuing related sport and even doing a regular exercise.

As Alexandria [11] said it is maybe the fault of complications in modern social life and individual maturity, because when humans find an opportunity from two social and personal dimensions in life, don't interrupt their activities for life and participate in it again [11]. For this reason, Analysis of deterrents that inhibit from beginning and continuation of an active and mobile lifestyle is a determinant factor of physical activity. Hence, movement before montage and planning strategies is an effort for increase of motivation and tendency to the beginning and continuing an active movement [8]. Lack of interest in sport is the focus of studying in different populations and in developing countries is increasing that has two reasons. From one side, it is because of technology advancement or in other words coherency to technology, people urbanism and mechanizing workplace and from other side it is because of this fact that sport and physical exercise allocated to leisure hours. Results of different studies show that individuals confront with more deterrents have less facilities for physical activity [12] and these cases are different relative to age and genus. Ad achy and his colleague's researches (2010) showed that women don't consider sport as leisure hour activities and for this reason don't participate in it and this case is the result of women's wrong attitude.

Researches indicated that in women population of society, especially nurses, and physical activity doesn't have any proper station [9]. While in industrial societies, sport and physical activities are institutionalized activities in some social and cultural areas. The main point is the presence of deterrent factors in front

of women nurse participation in sport activities in their leisure hours. In addition, studies of Key and Jackson [13]. Alexandria et al. [10] and Samir et al. [5] showed that women relative to men, Salitly confront with more deterrents. Deterrents perception is more among individuals with less education. There is a reverse u relation between deterrents and age.

Married individuals relative to single ones confront with more deterrents in time. In contrast, Key and Jackson [13], Carroll & Alexandria [10] separately studied and contradicted the negative relationship between percept deterrents and participation rate and declared that there isn't any important relationship between participation sport and deterrents. Ostadolska (2000) in his qualitative study on leisure patterns of immigrants reached an inverse result and claimed that deterrent is not inhibitive for immigrants but create more motivation for more participation. So, by knowing the way of spending leisure hours and deterrent factors in sport activities of women nurses and other variables related to participation rate of women in physical activities, it is necessary to provide backgrounds for their more presence in physical activities [14].

## Material and Methods

The current study descriptive - survey type. Statistical universe of this research are practitioner female student nurses of Islamic Azad university of Babol with the approximate capacity of 338 people. According to Morganas' table, 165 people were chosen as sample using Random cluster sampling method. Measurement tools include questionnaire in two parts: part one request tastes to determine age, married statues and education evidence and also participation rate in sport activities during last 12 months. Participation rate includes 5 levels: Daily participation, weekly participation, Monthly participation. Sometime participation and lack of participation. The options were such as: from each day, one day a week, more than one day a week, one day month, some months once and never.

In this questionnaire, part two includes: "physical activities deterrents questionnaire". That was provided by carol and Alexander on the basis of deterrents pyramid model and includes 29 questionnaires. In this questionnaire's, deterrent factors in sport activities were divided in to seven dimensions. These dimensions include lack of knowledge, lack of interest, personal. Mental problems (interpersonal deterrents) lack of participant (inter-personal deterrents), lack of time, lack of facilities, lack of availability to facilities (structural deterrents). Responding to question is on the basis of Likert five- values scales (never, less, to some extent, more and precisely) about scientific researches this remark is true that "without good data's you can't reach to good results". The meaning of good data's is that its measurement means should have enough legitimacy and finality [15-18]. Legitimacy and finality of questionnaire measured by Moshkelgosha [19] in addition, for calculating internal finality, Kronbakh Alpha method was used, and internal finality coefficient participation deterrents questionnaire was calculated 91%.

Internal finality coefficient of participation deterrents subgroups, relation to personal deterrents is 88% coefficient and its lowest relating to interpersonal deterrents is 81% coefficient. In addition. In this research for removing probable deficiencies internal finality of questions was calculated by Cronbach Alpha method that its value was calculated by Cronbach Alpha method that its value was 85%. According to research purposes and for saving time and price in doing work, in this research on anonymous questionnaire was used. Questionnaires of this research provided according to the number of practitioner nurses and then through coordination with university accountable, were distributed between them and were collected after completion. For investigating or stuffing and statistical analysis, raw information gotten from illative and descriptive statistic were used, descriptive statistic is used for calculating central tendency, mean and standard deviation is

used for distribution measures. Then for studying the relationship between variables, Pearson correlation coefficient was used and finally the effect of participation deterrents on physical activity rate measured by using multiple Regressions and for comparing means LSD continuation test was used. All the above analysis was done by using SPSS19 soft wares ( $\alpha=0.05$ ).

## Result and Discussion

Descriptive findings show that 78.1% female nurses were married and 21.9% were single the mean of age group in this study was 36.2 5.9. The youngest person was 22 years old and the old's one was 52 years old. Study of education evidence status in one sample showed that 9.77% of individual's had superdiplome, 75.14% had graduate and 15.09% had super graduate evidence (Table 1-3).

**Table 1:** Pierson correlation coefficient results between deterrent factors & age with participation rate.

Participation Rate	N	R	P
Deterrent factors	338	0.767	0.021
Age	338	-0.345	0.042

**Table 2:** Variance analysis results for comparison of participation on the basis of education rate in participants.

Statistical Indexes Variations Source	Total Squares	Freedom Degree	Min Squares	F	P
Between groups	26748.7	2	13374.2	72.05	0.001
Inter-groups	28213.1	152	185.6		
Total	54961.8	154	-		

**Table 3:** Pursuance test results LSD about finding the means defense place.

Statistical Indexes	Comparable Groups	Mean Defense	Standard Deviation	P
Expertise superior expertise	Ingenuity	-19.24***	2.71	0.001
		-36.62***	3.05	0.001
Ingenuity superior expertise	Expertise	19.24***	2.71	0.001
		-17.38***	2.62	0.001
Ingenuity expertise	Superior expertise	36.62***	3.05	0.001
		17.38***	2.62	0.001

\*\*\*Meaningful in 0.001 level.

Individual deterrent factors: Obtained marks for participation deterrent of nurses in doing physical activities respectively: Personal/mental problems averagely  $2/32 \pm 1.19$ , lack of knowledge  $2/18 \pm 1.56$ , lack of interest  $2/26 \pm 1.32$ , lack of time  $3/22 \pm 1.08$ , lack of facilities  $2/98 \pm 1.38$  and lack of availability  $2.74 \pm 1.57$ . Among these subgroup's the highest mean related to lack of participant and lowest one related to lack of knowledge. In this research for evaluating that if there is a meaningful relationship between deterrent factors with participation rate in society or not, Pierson correlation coefficient test was used. Table 1 presented the results of Pierson correlation coefficient ( $P=0.021$ ,  $r=0.768$ ) and showed that there is a meaningful relationship between deterrent factors

and participation rate. ( $P \leq 0.05$ ) for evaluating that if there is a meaningful relationship between age and participation rate in society or not, Pierson correlation coefficient test was used Table 1 presented the results of Pierson correlation coefficient ( $P=0.042$ ;  $r=-0.345$ ) and showed that there is a meaningful relationship between structural deterrents and participation rate but in reverse direction. ( $P \leq 0.05$ ), it means that the rate of participant's age goes up, and participation rate in sport activities decreases.

For evaluating this hypothesis that if there is a meaningful difference in nurses participation rate on the basis of education rate in society, variance analysis was used. Obtained results in

Table 2 indicate that: According to the obtained results ( $P < 0.001$ ;  $F = 72.05$ ), zero hypothesis is confirmed. So, the observed difference between means has a meaningful difference statistically. LSD test indicates this difference between means of each three groups in superior expertise, expertise and generalship. According to the obtained results, it is considered that the mean of individual participation with education evidence of superior expertise is more than expertise and generalship. Results show that individual education and knowledge rate goes up, their participation rate in sport activity increases. The obtained results from deterrent factors rate and participation rate in physical activities showed that there is a meaningful relationship of course interpersonal deterrents gotten from their research include: Personal/mental problems, lack of knowledge, lack of interest, lack of mental readiness for doing exercise, lack of necessary physical readiness, lack of necessary expertise, fear of traumatism and If we accept that individuals without motivation abandon participation earlier [20], these results suggest that interpersonal deterrents may have a negative effect on continuation of women participation.

This finding is in the same direction in Jackson [21], Ehsani et al. [22], Haltzman (1995), Alexandria & Carroll [10], Henderson [23] results. Shaw & Banen [24] declared that there isn't any important relationship between participation in sport and deterrents. In formation analysis in sentence-to-sentence methods and specially limited number of tested deterrents are the main limitations of these two studies. Astadolska (2000) in his qualities study, on leisure patterns of immigrants obtained inverse result and claimed that not only deterrents are not inhibitive for immigrant's, but also create motivation for their more participation. Anyway, it should be considered that background of above study is minority society and results were obtained during time and not abruptly. These findings upholding from pyramid model of participation deterrents. According to this model, interpersonal deterrents firstly entering decision making process and are the most powerful ones.

About other factors such as lack of participant that is a part of interpersonal factors, obtained result are the same as Serly & Jackson (1985), Henderson [23], Jackson [25], Sharepour et al. [26] and Ehsani & et al. (2009) results. About other factors such as lack of time. Lack of facilities and lack of availability that is a part of structural factors, obtained results are the same as Roomza & Hafman (1980), Serly & Jackson (1985), Henderson et al. [23], Kay & Jackson [27], Jackson [21], Jackson & Rak [28], Haltzman (1995), Ehsani & et al. [29], Azabdaftaran (1999), Jackson [25], King (2000), Dadashi (2000), Salami et al. (2002). Ehsani & Azabdaftaran [30], Nikpour [31], Ehsani [32], Buchholz & Purath [9], Parsamehr and Zareshahabadi [33], Mirghafoori et al. [34], Ghazanfari et al. [35], Scott [36], Fathi [2], Moshkelgosha [19], Lourel & et al. (2010), Adachymagia et al. (2010) and Samir et al. [5] results.

Interpersonal deterrents in comparison with structural deterrents have more power. But any way, lack of availability in this group of women as a deterrent may have an effect on their lack of motivation. This problem shows that lack of vehicles, noisiness of

vehicles, lack of sport place near hesitancy place, for falling leisure hours has more importance than other structural deterrents (lack of facilities and lack of time) and interpersonal deterrents in individual lack of motivation. These women's view is that there aren't enough facilities but availability to facilities is a more important difficulty and is effective on their lack of motivation to some extent. These results in one sample of women with proportionally medium economical social status were gotten and probably different findings are obtained in other individuals. Other deterrents such as individual differences (age, education rate, married status) are the same as Dame (1987), Matheson [37], Shaw [24], Jackson et al. (1994), Kolter et al. (1995), Francis (1997), Alexandria and Carroll [10], Henderson [23], Bialsky (1999), Hudson [12], Keshker and Ehsani [38], Fathi [2] results.

There is a meaningful difference between deterrent factors rate of sport activities on the basis of education rate in the society under study. Obtained results are the same as Ehsany, Hardman & Carol (2009) results, but are not the same as Fathi [2] results, but other deterrents such as financial problems, deterrents and social reactions, family relations, discouragement factors of family, husband and family patronage, precedence of difficulties and more important concerns, fatigue, cultural problems, health problems, lack of children protection, lack of encouragement, lack of expertise, inability should be considered by future researchers [39-42]. Recreational and sport activities provide some opportunity for individuals to select those behaviors accompany with internal rewards: getting knowledge and experience, behavior learning, excitement experience, gratification of infatuation sense and vigorous interest in one behavior, are some of these samples in internal rewards. Aivasaky & Manel (1999) suggested that richening individual leisure treasure and giving free selection for participation may reinforce internal motivation. Some methods like planning and presenting effective services, conference and education can be effective in reinforcing internal motivation. It should be mentioned that the content of present study was sport with recreational, leisure purposes. Participating in sport less considered as a leisure activity [43,44]. Accomplished studies about participating in competitive sport and exercise reported corresponding results. External reasons such as health and physical readiness, body proportion, weight control is the main stimulus of participating in competitive sport and exercise [45-47].

## References

1. Educational & Scientific Sectionals Letter, Education Development Office (EDO) (2009) Hygienic Colleague Bughiatollah medicine sciences university 10(36): 1-7.
2. Fathi S (2009) Description of sociably in university students sport participation. Research Letter of Social Sciences 3(4): 145-173.
3. Abazari Y, Chavoshian H (2002) Of social class to lifestyle, new methods in sociological analysis, social identity, two sections of scientific research letter. Social Sciences 20: 3-28.
4. Thune I, Furberg AS (2001) Physical activity and cancer risk: dose-response and cancer. Medicine and Science in Sports and Exercise 33(1): S530-S550.

5. Samir N, Mahmud S, Khuwaja AK (2011) Prevalence of physical inactivity and barriers to physical activity among obese attendants at a community health-care center in Karachi, Pakistan. *BMC research notes* 4: 174.
6. Hultsman W (2000) Negotiation of leisure constraints: An extension of dimensionality. *Journal of Leisure Research* 36: 139-145.
7. Lovell GP, Ansari EW, Parker JK (2010) Perceived exercise benefits and barriers of non-exercising female university students in the United Kingdom. *International Journal of Environmental Research and Public Health* 7(3): 784-798.
8. Sallis JF, Owen N (2002) *Ecologica: Models of health behavior*. In: Clanz K, Lewis FM, Rimer BK (Eds.), *Health behavior education (3<sup>rd</sup> edn)* Jossey-Bass, San Francisco, USA, p. 462 .
9. Buchholz SW, Purath J (2007) Physical activity and physical fitness counseling patterns of adult nurse practitioners. *Journal of the American Academy of Nurse Practitioners* 19(2): 86-92.
10. Carroll B, Alexandria K (1997) Perception of constraints and strength of motivation: Their relation to recreational sport participation in Greece. *Journal of Leisure Research* 29(3): 279-299.
11. Alexandris K, Grouios G, Tsozbatzoudis H, Bliatsou A (2001) Relationship between perceived constraints and commitment to recreational sport participation of university students in Greece. *International Journal of Sport Management* 2(4): 282-296.
12. Hudson S (2000) The segmentation of potential Tourists: Constraint differences between Men and Woman. *Journal of Travel Research* 38(4): 363-368.
13. Crawford DW, Jackson EL, Godbey G (1991) A hierarchical model of leisure constraints. *Leisure Sciences* 13(4): 309-320.
- 14.
15. Mejia AAM, Drake KM, MacKenzie TA, Ernstoff TL, Longacre MR, et al. (2010) Perceived intrinsic barriers to physical activity among rural mothers. *Journal of Women's Health* 19(12): 2197-2202.
16. Alexandria FL, Carroll B (1977) An analysis of leisure constraints based on different recreational sport participation levels: Results from a study in Greece. *Leisure Sciences* 19(1): 1-15.
17. Alexandria K, Carroll B (1977) Demographic different in the perception of constraints on recreational sport participation: From a study in Greece. *Leisure Studies* 16(2): 107-125.
18. Alexandria K, Carroll B (2002) Perceived constraint on recreational sport participation: Investigating their relationship with intrinsic motivation, extrinsic motivation and motivation. *Journal of Leisure Research* 34(3): 233-252.
19. Moshkelgosha E (2010) Women sport-participation development: Recognizability of motivations and deterrents, thesis of superior expertise, Esfahan university, physical education College.
20. Frederick C, Ryan R (1993) Differences in motivation for sport and exercise and their relations with participation and mental health. *Journal of Sport Behavior* 16(3): 124-145.
21. Jackson E (1993) Recognizing patterns of leisure constraints: Results from alternative analyses. *Journal of Leisure Research* 25(2): 129-149.
22. Ehsani M (2000) Investigating deterrent factors of recreational sport activities on the basis if genus differences, physical education and sport convention. South Korea.
23. Henderson KA, Stalnaker D, Taylor G (1988) The relationship between barriers to recreation and gender-role personality traits for women. *Journal of Leisure Research* 20(1): 69-80.
24. Shaw SM, Bonen A, McCabe JF (1991) Do more constraints mean less leisure? Examining the relationship between constraints and participation. *Journal of leisure Research* 23(4): 286-300.
25. Jackson E (2000) Investigation of leisure constraints. *Journal of Leisure Research* 38: 129-139.
26. Sharepour M, Hosseinirad A (2008) Study the relationship between social capital and sport participation (case study of citizenry 15-29 years old, Babol city). *Movement* 37: 131-153.
27. Kay T, Jackson G (1991) Leisure despite constraint: The impact of leisure constraints on leisure participation. *Journal of Leisure Research* 23(4): 301-313.
28. Jackson EL, Crawford DW, Godbey G (1993) Negotiation of leisure constraints. *Leisure sciences* 15(1) 1-11.
29. Ehsani M, Hardman K, Carroll B (1996) A comparative study of leisure constraint factors on the sporting activity of English and Iranian students. In annual comparative study conference. Tokyo, Japan.
30. Ehsani M, Azabdaftaran M (2003) Study of deterrent factors of girl students sport activities participation in Islamic Azad university of Khorasgan. *Olympic* 11(4-3): 29-40.
31. Nikpour S (2004) Comparison of women sport activities status and men practitioner in medicine sciences university and therapy hygienic services in Iran. *Iran medicine sciences university magazine* 13(52): 205-216.
32. Ehsani M (2005) Women sport participation level in Iran and deterrent factors of sport activities, thesis of superior expertise. Tarbiat Modares university of Tehran. *Olympic* 12(3): 15-27.
33. Parsamehr M, Zareshahabady M (2008) Study the role of percept advantages on young women participation in physical education. *Olympic* 1(41): 7-16.
34. Mirghafoori S, Sayyadi Touranlou H, Mirfakhreddini S (2009) The analysis of factors affecting women's participation in sport (Female Students of Yazd University). *Journal of Sport Management* 1(1): 83-100.
35. Ghazanfari Z (2009) Description of regular physical activity from women's view who are affected to Diabet, a qualitative study, Doctoral treatise Tarbiat Modarress university, sectional of medicine sciences university and therapy hygienic services of Gonabad 15(1) 17-22.
36. Scott D (1991) The problematic nature of participation in constraint negotiation. *Journal of Leisure Research* 25: 120-128.
37. Matheson J (1991) *Participation in sport* London. HMSO, England, UK.
38. Kashker S, Ehsani M (2007) Study the importance of women deterrent factors in Tehran city, of participation in creational sport. *Women studies* 5(2): 134-173.
39. Azarhani A, Kalantari R (2003) *Principles of physical education and sport*. Aeej emission, Tehran, Iran.
40. Cramer SRDC, Lee JW (1991) The effects of moderate exercise training on psychological well-being and mood state in women. *Journal of psychological Research* 35(4-5): 437-449.
41. Deci L, Ryan M (1985) *Intrinsic motivation and Self- determination in human behavior*. New York, USA.
42. Khodabaksh MR, Mansouri P (2011) Frequency of job fatigue dimensions in women and men nurses. *Journal of Research in Medical Sciences* 13(4): 40-42.
43. Ahola IS, Mannell R (1985) Social and psychological constraints on leisure. In: Wade MG (Ed.), *Constraints on Leisure*. pp. 111-151.
44. Lily T, Kohn N (2009) Health promotion in nurses: Is there a healthy nurse in the house? *Applied Nursing Research* 22: 211-215.
45. Mathes SA, McGivern AT, Schneider CM (1992) The influence of participation and gender on employees' motives for involvement in a corporate exercise program. *Journal of Sport Management* 6(1): 1-14.

46. Stodolska M (1998) Assimilation and leisure constraints: Dynamics of constraints on leisure in immigrant populations. *Journal of Leisure Research* 30: 521-551.
47. Sánchez ZV, Cashion AK, Cowan PA, Jacob SR, Wicks MN, et al. (2007) Perceived barriers and facilitators to physical activity in kidney transplant recipients. *Progress in Transplantation* 17(4): 324-331.

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