

# Knowledge, Attitude and Practice Regarding Physical Activity in Nursing and Midwifery Students

Kazem Hosseinzadeh,<sup>1</sup> Mahmoud Alipour Heidari,<sup>2</sup> Asghar Karbord,<sup>3</sup> Jalil Azimian,<sup>1</sup> and Atefeh

Alizadeh<sup>1\*</sup>

<sup>1</sup>Faculty of Nursing and Midwifery, Qazvin University of Medical Sciences, Qazvin, IR Iran

<sup>2</sup>Faculty of Social Medicine, Qazvin University of Medical Sciences, Qazvin, IR Iran

<sup>3</sup>Faculty of Health, Qazvin University of Medical Sciences, Qazvin, IR Iran

\*Corresponding author: Atefeh Alizadeh, Faculty of Nursing and Midwifery, Qazvin University of Medical Sciences, Qazvin, IR Iran. Tel: +98-9380025935, E-mail: [atefehalizadeh1372@yahoo.com](mailto:atefehalizadeh1372@yahoo.com)

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## Abstract

**Background:** There are some mediators that affect physical activity such as knowledge and attitude. Some barriers such as lack of time, bad environments may impede doing physical activities. It sounds that lack of time is a common barrier to do physical activity in nursing and midwifery students. Since they encounter some factors that affect their health, this knowledge, attitude and practice (KAP) study may be helpful to maintain and improve their health.

**Objectives:** The current study aimed to explore the knowledge, attitude and practice related to physical activity in nursing and midwifery students.

**Patients and Methods:** By simple randomized sampling method, 200 subjects were enrolled in the study. Based on the international physical activity questionnaire (IPAQ), a standard checklist was used to gather the related data. Then, the data were analyzed by SPSS software in 95% confidence interval (CI).

**Results:** Mean and standard deviation of subjects' attitude was  $5.9 \pm 3.1$  (minimum: -3, maximum: 14, median: 6). There was no significant difference in the means of knowledge and attitude between genders, and also between nursing and midwifery students. There was significant difference only regarding walking ( $P = 0.017$ ), stretching ( $P = 0.050$ ) and body building ( $P = 0.040$ ) between the students in 95% CI.

**Conclusions:** Based on the current study finding, planning is needed to increase KAP of the students regarding physical activity. Some types of physical activity are more attractive than others for males and females separately, yet it is important to encourage the nursing and midwifery students to examine a variety of physical activities and help them find suitable activities.

**Keywords:** Knowledge, Attitude, Practice, Physical Activity

## 1. Background

The physical activity guidelines for Americans (PAG) are an essential resource for health professionals and policymakers. Based on the latest science, they provide guidance on how children and adults can improve their health through physical activity (1, 2). Adults who are physically active are healthier and less likely to develop many chronic diseases compared to the inactive ones regardless of their gender or ethnicity. Based on the recommendations, adults need to do; a) 150 minutes (2 hours and 30 minutes) of moderate-intensity aerobic physical activity each week (such as brisk walking or tennis), b) 75 minutes (1 hour and 15 minutes) of vigorous-intensity aerobic physical activity each week (such as jogging or swimming laps) (3, 4). In adults aged 18 - 64, physical activity includes leisure time physical activity (for example: walking, dancing, gardening, hiking, swimming), transporta-

tion (e.g. walking or cycling), occupational (i.e. work), household chores, play games, sports or planned exercise, in the context of daily, family and community activities. In order to improve cardio-respiratory and muscular fitness, bone health and reduce the risk of noncommunicable diseases (NCDs) and depression (5, 6). There are some mediators that affect physical activity such as knowledge and attitude. Some barriers such as lack of time and bad environments may impede doing physical activities (6, 7). Nursing and midwifery students, candidates for bachelor of science, should pass 138 credit units in four years. It sounds that lack of time is a common barrier of doing physical activities in such students.

## 2. Objectives

The current study aimed to explore the knowledge, attitude and practice regarding physical activity in nursing

and midwifery students.

### 3. Patients and Methods

#### 3.1. Sampling

The current descriptive cross-sectional study explored the status of knowledge, attitude and practice regarding physical activities among the students of nursing and midwifery in Qazvin University of Medical Sciences, Qazvin, Iran. The study was approved by the Qazvin University of Medical Sciences. Using quota sampling method, 200 subjects were enrolled in the study. The sample size was calculated in 95% confidence interval (CI) and 5% error with the following formula:  $N = Z^2 pq/d^2$ . Since the total number of nursing students (NS) was twice the number of midwifery students (MS), therefore, for one MS, two NS were selected (67 (33.5%) ver.133 (66.5%)). Written informed consent was obtained from the subjects. The only inclusion criterion was willingness to take part in the study.

#### 3.2. Data Gathering and Analyzing Method

Data were gathered by a standard questionnaire (8) with four sections as follows: a) Demographic section (including six items), b) Knowledge on physical activity (including four items), c) Attitude towards PA (including 13 items), and d) Types of PA (including 16 items). The responses were classified from minimum: 1 to maximum: 4. Attitude was classified in a 3-step Likert-type scale, from agree (score: +1) to disagree (score: -1). To obtain the psychometric criteria (validity and reliability), content validity and reliability were assessed. For content validity, ten experts from the faculty viewed the checklist in qualitative assessment. The Cronbach's alpha for test-retest reliability in 13 participants was 0.75. Data were gathered by four trained staff; all checklists were checked to be completely filled prior to subjects' leaving. All of the gathered data were coded and later transferred to SPSS software. Using descriptive analyzing methods, means and standard deviations of variables were calculated, and then the differences between the genders were analyzed by  $\chi^2$  parameter.

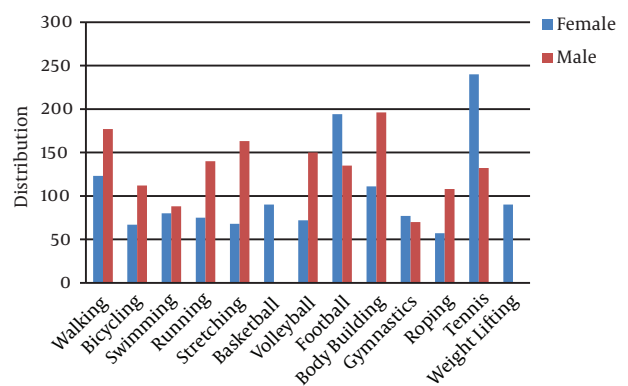
### 4. Results

Mean and standard deviation of age was  $21.88 \pm 2.1$  year, and 143 (71.5%) of the subjects were female. Detailed demographic characteristics are shown in Table 1. Mean and standard deviation for knowledge was  $3.4 \pm 0.7$  (minimum score: 1, maximum score: 4). Most of the subjects, 188 (92%), had a positive attitude towards physical activity. Mean and standard deviation for subjects' attitude was  $5.9 \pm 3.1$  (minimum: -3, maximum: 14, median: 6). Item distribution for

attitude is shown in Table 2. There was no significant difference regarding the means of knowledge and attitudes between the genders, and also between nursing and midwifery students. Differences of the means of physical activity between the genders are shown in Table 4 and Figure 1. There was significant difference only regarding walking ( $P = 0.017$ ), stretching ( $P = 0.050$ ) and body building ( $P = 0.040$ ) between the genders in 95% CI. Differences of means in physical activity between the nursing and midwifery students are shown in Table 5 and Figure 2. There was a significant difference regarding walking ( $P = 0.001$ ) and stretching ( $P = 0.020$ ) between the students in 95% CI.

**Table 1.** Distribution of Demographic Data of the Nursing and Midwifery Students

Variables	Quantity
<b>Age, y</b>	
Mean $\pm$ SD	21.88 $\pm$ 2.1
Range	18 - 41
<b>Gender, No. (%)</b>	
Female	143 (71.5%)
Male	57 (28.5%)
<b>Field of study, No. (%)</b>	
Nursing	133 (66.5%)
Midwifery	67 (33.5%)
<b>Place of residence, No. (%)</b>	
University dormitory	68 (34.0%)
Home	125 (62.5%)
Rental house	7 (3.5%)



**Figure 1.** Gender Based Distribution of Physical Activity

**Table 2.** Distribution of Items for Attitude Regarding Physical Activity<sup>a</sup>

Items	Agree	Neutral	Disagree
Importance of light physical activity	141 (70.5%)	56 (28%)	3 (1.5%)
Importance of heavy physical activity	130 (65%)	63 (31.5%)	7 (3.5%)
Feeling sad without physical activity	159 (79.5%)	32 (16.0%)	9 (4.5%)
Lack of physical activity in case of disability	7 (3.5%)	60 (30%)	130 (66.5%)
Feeling happy after physical activity	183 (91.5%)	17 (8.5%)	-
Physical activity makes me sound attractive	47 (23.5%)	64 (32%)	89 (44.5%)
Physical activity makes me healthier	192 (96%)	8 (4%)	-
Physical activity for recreation	64 (32%)	98 (49%)	-
Physical activity makes me energetic	189 (94.5%)	9 (4.5%)	2 (1%)
Physical activity decreases stress	179 (89.5%)	20 (10%)	1 (0.5%)
Physical activity doing needs safe environment	87 (43.5%)	60 (30%)	51 (25.5%)
Physical activity guarantees own health	192 (96%)	7 (3.5%)	1 (0.5%)
Necessity for education to do physical activity	26 (13%)	101 (50.5%)	72 (36%)
Necessity for planning to do physical activity	64 (32%)	84 (42%)	51 (25.5%)
Healthy nutrition instead of physical activity	8 (4%)	46 (23%)	145 (72.5%)
New friends found in physical activity environment	145 (72.5%)	52 (26.0%)	3 (1.5%)

<sup>a</sup>Data are expressed as No. (%).

**Table 3.** Distribution of the Types of Physical Activity and Related Duration

Type of Physical Activity	Yes, No. (%)	Minutes Per Week, Mean $\pm$ SD
Walking	200 (100%)	138 $\pm$ 23.0
Bicycling	15 (7.5%)	100 $\pm$ 12.2
Swimming	30 (15%)	84 $\pm$ 14.2
Running	24 (12%)	94.4 $\pm$ 11.5
Stretching	46 (23%)	78.8 $\pm$ 14.0
Basketball	3 (1.5%)	90.0 $\pm$ 5.4
Volleyball	21 (10.5%)	94.7 $\pm$ 4.9
Football	25 (12.5%)	146.8 $\pm$ 13.1
Body building	25 (12.5%)	159 $\pm$ 11.5
Gymnastics	49 (24.5%)	77.5 $\pm$ 15.8
Roping	15 (7.5%)	67.6 $\pm$ 12.6
Tennis	6 (3%)	150 $\pm$ 14.5
Weight lifting	1 (0.5%)	90 $\pm$ 17.8

## 5. Discussion

The current study was conducted to explore the KAP of nursing and midwifery students regarding physical activity. The results of the study revealed that the mean of subjects' knowledge and attitude scores about physical activity were more than 50%. There was no significant difference

in the means of knowledge and attitudes between genders, and between nursing and midwifery students. Since the subjects were studying Bachelor of Science in nursing and midwifery, and once had passed the specific courses of physical activity education, the average of their knowledge and attitude was in high level. Some studies observed a

**Table 4.** Mean of Physical Activity in Both Genders

Type of Physical Activity	Female	Male	P Value
Walking	123 ± 8.35	177 ± 9.7	0.017 <sup>a</sup>
Bicycling	67 ± 11.5	112 ± 14.0	0.400
Swimming	80 ± 14.2	88 ± 12.5	0.473
Running	75 ± 16.5	140 ± 11.6	0.076
Stretching	68 ± 14.0	163 ± 8.0	0.015 <sup>a</sup>
Volleyball	72 ± 12.0	150 ± 9.95	0.056
Football	194 ± 11.5	135 ± 11.8	0.359
Body building	111 ± 16.4	196 ± 12.3	0.049 <sup>a</sup>
Gymnastic	77 ± 11.3	70 ± 14.25	0.854
Roping	57 ± 8.3	108 ± 11.9	0.289
Tennis	240 ± 12.4	132 ± 9.5	0.374

<sup>a</sup>significant difference in 95% of confidence interval.

**Table 5.** Mean of Physical Activity Between Nursing and Midwifery Students

Type of Physical Activity	Nursing Students	Midwifery Students	P Value
Walking	162 ± 12.3	91 ± 11.2	0.001 <sup>a</sup>
Bicycling	104 ± 11.2	75 ± 12.4	0.675
Swimming	87 ± 13.0	66 ± 15.2	0.143
Running	101 ± 14.2	75 ± 11.2	0.518
Stretching	101 ± 8.65	43 ± 13.0	0.020 <sup>a</sup>
Volleyball	98 ± 7.43	60 ± 8.7	0.555
Football	148 ± 11.5	100 ± 9.25	0.713
Body building	155 ± 14.2	174 ± 14.2	0.755
Gymnasti	79 ± 13.4	75 ± 7.6	0.686
Roping	70 ± 8.94	47 ± 4.6	0.751
Tennis	132 ± 14.2	240 ± 14.9	0.374

<sup>a</sup>significant difference in 95% of confidence interval

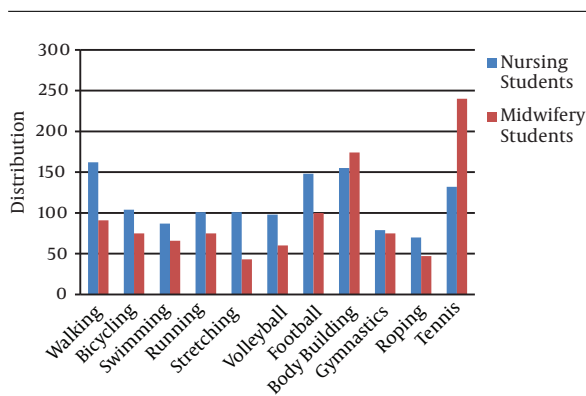
positive relationship between knowledge regarding physical activity and literacy level (9-11). Literacy level had a positive relationship with subjects' attitude towards physical activity (5, 12).

There was a significant difference only between some types of physical activity (walking, stretching and body building) in both genders. Based on the national and international guidelines, the recommended level of physical activity differs in genders (12, 13). Some types of physical activities are more attractive than others for males and females, yet it is important to encourage people to try a variety of physical activities, and help them find activities that they enjoy and that are right for them (14). In the current study,

midwifery students were all female; on the other hand half of the nursing students were male, therefore there were obvious differences between the groups.

It was concluded that, in spite of the similarity of knowledge and attitude level in the participants of the study, the amount of physical activity differed. Therefore, health workers are advised about planning to increase physical activity level in the students. Promoting physical activity level may prohibit some work-related disorders in nursing and midwifery students in future.

The current study was the first one conducted on the nursing and midwifery students at Qazvin University of Medical Sciences. However, regarding the findings, it is



**Figure 2.** Distribution of Physical Activity Between Nursing and Midwifery Students

advised to conduct further investigations to explore other mediators of physical activity among the students.

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### Footnotes

**Authors' Contribution:** Kazem Hosseinzadeh: Supervisor; Mahmoud Alipour Heidari: Data analyzing; Jalil Azimian: Academic writing; Atefeh Alizadeh: Data gathering and paper submission.

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