

# The comparison of loneliness in athlete and non-athlete women

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## ABSTRACT

The aim of the present study was to compare the loneliness in athlete and non-athlete women. The statistical population of the present study included all athlete and non-athlete women in Shiraz, Iran. The sample consisted of 764 subjects (382 athletes, 382 non-athletes) that the athletes sample selected by *Gerjesy and Morgan's sample size table* and non-athletes sample selected by purposeful sampling method. Loneliness scale (Dehshiri et al., 2008) was used for measuring the loneliness. Independent t-test and multivariate analysis of variance (MANOVA) tests were used for data analysis. The results showed a significant difference between athlete and non-athlete females in the loneliness and its subscales ( $p < 0/05$ ). According to this finding, loneliness in athletes is less than non-athlete women. Regarding the findings of this study, it can be argued that sport activities play a role in reducing the loneliness of women. **Keywords:** Loneliness; Athlete; Non-athlete; Women.

### Cite this article as:

Hemati-Alamdarloo, G.H., Shojaee, S., Asadmanesh, E., Gholami, M., & Rahmani, H. (2019). The comparison of loneliness in athlete and non-athlete women. *Journal of Human Sport and Exercise*, 14(3), 591-598. doi:<https://doi.org/10.14198/jhse.2019.143.10>

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Submitted for publication May 2018

Accepted for publication October 2018

Published September 2019 (*in press* November 2018)

JOURNAL OF HUMAN SPORT & EXERCISE ISSN 1988-5202

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doi:10.14198/jhse.2019.143.10

## INTRODUCTION

Loneliness is experienced by all human beings in a period of life (Sawir, Marginson, Deumert, Nyland, & Ramia, 2008). Loneliness refers to the subjective sense of being alone (Tomaka, Thompson, & Palacios, 2006). Loneliness reflects the individual's mental perceptions of his/her defects in social relationships (LeRoy, Murdock, Jaremka, Loya, & Fagundes, 2017; van den Broek & Grundy, 2017).

Weiss (1973; 1974) assumes that there are two types of loneliness: 1) Emotional loneliness, which results from the lack of a close and intimate relationship with another person. Those who have just divorced or widowed or ended a relationship experience this kind of loneliness; 2) Social loneliness that results from the absence of a network of social relationships in which the person is part of a group of friends who have common interests. People who move into a new social environment, such as a new city or school, experience this kind of loneliness.

In psychology, the need to belong is defined as the need to keep and maintain minimum interpersonal relationships. Weiss points out that loneliness is the absence of essential relationships. Negative feelings such as loneliness arise if there is not a satisfactory sense of belonging (Sawir et al., 2008). Loneliness increases the risk for a wide range of health problems. In fact, loneliness causes physical problems such as heart diseases, obesity, inactivity, early death (Leroy et al., 2017), depression, cognitive decline, and Alzheimer's disease (Brittain et al., 2017). In this regard, Osterman (2001) states that being ignored leads to negative emotions such as anxiety, depression, sadness, jealousy and loneliness. Social networks provide a base for social activities, feasts and joining the parties for people who have common interests. Social networks create a set of people who can have nightly or daily conversations, and this can lead to the elimination of social isolation that causes life to deteriorate (Sawir et al., 2008).

Pinquart and Sorensen (2001) reported that the quality of social relationships has a stronger correlation with loneliness compared to the quantity of social relationships. Also, Lodder, Scholte, Goossens, and Verhageng (2017) showed that loneliness is related to the number of teens' friends and suggested that alone teenagers interpret their friendships less positively than other teenagers. On the other hand, Malekian, Mohammadiani Biaberi, Saravani, and Fattahi (2015) showed that doing physical activities during adolescence would balance, prevent and improve mental disorders such as loneliness in individuals. Yousefi and Hassani (2012) also reported that female athlete students experience less loneliness than non-athletes. In this regard, Samiei, Nobakht Ramezani and Saadat Hosseini Semnani (2012) found that there is a significant difference between the loneliness of athlete and non-athlete girls, which is due to the effect of sports activities.

In general, it seems that non-athlete people have more loneliness compared to the most of athletes. Since loneliness leads to a negative look at oneself and others and failure to respond to social interactions, and it is associated with physical diseases and mental health problems such as alcoholism, suicide and depression, therefore, finding the answer to the question of how much non-athlete women feel lonely compared to the athletes is very important and crucial. Hence, the present study was conducted to compare the loneliness in athlete and non-athlete women so that it becomes a step forward to fill the research gaps in this area as well as preventive and interventional measures are performed to reduce the loneliness in women.

## MATERIALS AND METHODS

### **Population, sample, and sampling method**

The research method was causal-comparative. The statistical population of the study included all athlete and non-athlete women in Shiraz, Iran. In the present study, the athletes sample selected by *Gerjesy and Morgan's sample size table* method. After receiving the total statistical population of the athletes women from the active sport boards of Shiraz (the total number of athletes women in Shiraz was 47442 in 2015), 382 were selected as the athletes sample. The sample of non-athlete women was also 382 who were selected by purposeful sampling method. In the way that after completing the questionnaire by the athlete subject, she was asked to introduce a non-athlete friend who would have the criterion to enter the research, and in this way, non-athlete samples were also equally selected as the athletes. It is worth noting that athlete women had at least 5 years of continuous sporting experience in team and individual sports, and non-athlete women were who had no sports activity for at least 5 years.

Sample characteristics for athlete and non-athlete women are presented in Table 1. There were no significant differences in in the mean age, educational level, and family income between the two groups (see Table 1).

Table 1. Sample characteristics for athlete and non-athlete women

	Athlete Women (n = 382)	Non-athlete Women (n = 382)
Mean age (years) (SD)	26.09 (8.32)	26.88 (8.65)
Range (years)	19-60	18-60
Educational level (%): < 12 years (> 12 years)	31.68 (68.32)	32.72 (67.28)
Family income (%): (≤10,000,000 IRR, 10,000,001–30,000,000 IRR, ≥30,000,001 IRR)	(28.9, 50.00, 21.1)	(23.1, 52.3, 24.6)

US\$1 = 47730 IRR.

### **Instruments**

Loneliness Scale (Dehshiri, Borjali, Sheykhi, & Habibi Askarabad, 2008) was used in the study. It features 38 items and 3 subscales of loneliness due to relationship with family, loneliness due to relationship with friends, and affective symptoms of loneliness. This scale is a five-point Likert scale from Very high (zero), high (score 1), medium (score 2), low (score 3), very low (score 4). Negatively worded items are reversed scored so that higher scores on each subscale represent higher problem in the corresponding area. Also, higher scores for all 38 items indicate higher overall loneliness. The researchers have reported the coefficients of reliability (internal consistency) and total scale retest 0.91 and 0.84, respectively. The reliability of its subscales is also acceptable. Also, the convergent and divergent validity of the scale was calculated by its correlation with the scores of the UCLA loneliness scale and the Oxford Happiness Scale and reported as 0.60 and -0.68, respectively. The validity of the scale has also been confirmed through factor analysis (Dehshiri et al., 2008). In the present study, the reliability of the scale was obtained through Cronbach's alpha method as 0.78 for the loneliness due to relationship with family, 0.88 for the loneliness due to relationship with friends, and 0.73 for the affective symptoms of loneliness 0.73 and for the total score was 0.87.

### **Ethical considerations**

Athlete and non-athlete women gave consent for their participation in this study. The participants were aware of the purpose of the study and they have the right to leave the study any time they will. They were assured that all their information would remain confidential. The ethical review board of the regional Sports and Youth Organization approved the study.

## RESULTS

Table 2 presents the scores of loneliness and its subscales in athlete and non-athlete women.

Table 2. Mean and Standard Deviation of loneliness and its subscales in two groups

Groups	Athlete Women		Non-athlete Women	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Dependent variable				
Total Loneliness	47.92	19.64	55.81	19.04
Loneliness due to relationship with family	17.21	8.72	19.84	9.25
Loneliness due to relationship with friends	16.53	9.81	18.69	8.85
Affective symptoms of loneliness	12.99	6.61	15.80	6.19

As shown in Table 2, there is a difference between the mean of the two groups. To examine this difference, independent t-test and multivariate analysis of variance were used.

Indeed, in order to answer the question whether there is a significant difference between the total score of loneliness of athlete and non-athlete women, independent t-test was used, and the results are presented in Table 3. It is worth noting that the results of Kolmogorov-Smirnov test showed that the distribution of data in all research variables was normal ( $P > 0.05$ ). Also, in order to examine the homogeneity of variances, Levine test was used. This test was not significant for the total loneliness score ( $P \geq 0.05$ ), thus the use of independent t-test is possible.

Table 3. The results of Independent T-test for loneliness in two groups

<i>Variables</i>	<i>Groups</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>df</i>	<i>P</i>
Loneliness	Athlete Women	382	47.92	19.64	5.63	762	0/001
	Non-athlete Women	382	55.81	19.04			

As can be seen in the table, the comparison of total score of loneliness between athlete and non-athlete women has shown that there is a significant difference between athlete and non-athlete women in loneliness. The average score of non-athletes in loneliness is higher than the average score of athletes [ $T = 5.63$ ,  $P < 0.01$ ]. Also, to answer the question whether there is a significant difference between the subscales of loneliness in athlete and non-athlete women, multivariate analysis of variance test was used. Before performing the multivariate analysis of variance, the Levin test was first used to determine the homogeneity of variances, but this test was not significant for any of the variables ( $P \geq 0.05$ ). As a result, the use of MANOVA is allowed. Also, the homogeneity of variance and covariance matrices was examined by the Box's M Test. Results showed that the Box's M value was not significant ( $P \geq 0.05$ ), and consequently the homogeneity between covariates was established. It is worth noting that the results of Kolmogorov-Smirnov test showed that the distribution of data in all research variables was normal ( $P > 0.05$ ).

Table 4. The results of MANOVA for loneliness' subscales in two groups

	Effect	Value	F	Hypothesis df	Error df	P
Group	Wilks' Lambda	0.950	12.98	3.000	733	0.001

Based on the data observed in Table 4, the effect of the group on the linear combination of dependent variables is significant. For this reason, MANOVA has been used to determine that this effect is significant on which of the dependent variables, and the results are presented in Table 5.

Table 5. *The Results of MANOVA for loneliness' subscales in two groups*

Variables	Sum of Squares	df	Mean Square	F	P
Loneliness due to relationship with family	1309.453	1	1309.453	16.45	0.001
Loneliness due to relationship with friends	708.061	1	708.061	8.24	0.001
Affective symptoms of loneliness	1465.303	1	1465.303	36.39	0.001

As seen in Table 5, there was a significant difference between the mean scores of athlete and non-athlete women in the subscale of loneliness due to relationship with family ( $F = 16.45$ ,  $df = 1$ ,  $P < 0.01$ ). Thus, the mean scores of athlete women in the subscale of loneliness due to relationship with family ( $\bar{X} = 17.15$ ) is lower than the mean scores of non-athlete women ( $\bar{X} = 19.82$ ). Also, a significant difference was observed between the mean scores of athlete and non-athlete women in the subscale of loneliness due to relationship with friends ( $F = 8.24$ ,  $df = 1$ ,  $P < 0.01$ ). Thus, the mean scores of athlete women in the subscale of loneliness due to relationship with friends ( $\bar{X} = 16.50$ ) are lower than the mean scores of non-athlete women ( $\bar{X} = 18.46$ ). Also, there was a significant difference between the mean scores of athlete and non-athlete women in the subscale of affective symptoms of loneliness ( $F = 36.39$ ,  $df = 1$ ,  $P < 0.01$ ). Thus, the mean scores of athletes women in the subscale of affective symptoms of loneliness ( $\bar{X} = 12.91$ ) were less than the mean scores of non-athlete women ( $\bar{X} = 15.73$ ).

## DISCUSSION AND CONCLUSION

Based on the findings of this study, athlete women are less likely to feel lonely than non-athlete women, and sporting activities play a role in reducing women's loneliness. In explaining this finding, it can be argued that in many cases, sport activity is a social activity that creates large social networks and reduces loneliness and provides a lot of social support (Wijndaele et al., 2007). In fact, social network variables such as the size of the social network and the intimacy of people in the social network play a role in reducing of loneliness (Green, Richardson, & Schatten-Jones, 2001).

In another explanation, it can be said that participation in sports activities will increase the relationships and opportunities for more friendships and reduces loneliness. In fact, the possibility of establishing positive social relationships with others raises satisfaction in various areas of social life, and on the contrary, the lack of positive social relationships leads to loneliness and lack of social growth. Thus, it can be said that participation in sports clubs strengthens the relationships and feeling of belonging, and the feeling of belonging to others also acts as a shield against loneliness (Haugen, Säfvenbom, & Ommundsen, 2013). It can also be said that peoples gain merits by participating in sports activities, which in turn affect and reduce loneliness (Taliaferro, Rienzo, Miller, Pigg, & Dodd, 2010). Therefore, participation in sport activities plays an important role in preventing or reducing loneliness by raising the individual's perceptions of his/her social competence which is due to positive relationships with peers, social recognition, and learning social skills (Haugen et al., 2013).

In explaining the finding that loneliness due to relationship with family in athlete women is lower than of non-athlete women, it can be said that family relations quality indicators include warmth, supportive parental relationship, positive control, and sense of belonging (Goldberg-Looney et al., 2015). For this reason, if the need for feeling of belonging is not satisfactory, negative feelings such as loneliness are created (Sawir et al., 2008). Family relationships also include a variety of aspects, such as intimate relationships, the allocation of time for each other, the feeling of trust and acceptance. Lack of emotional support (for example, the lack of empathy, love, trust and care) can be associated with poor family relationships quality (Berg, Kiviruuu, Karvonen, Rahkonen, & Huurre, 2017), which would reduce the individual's sense of belonging to the family and causes loneliness.

In explaining the finding that loneliness due to relationship with friends in athletes is less than of non-athlete women, it can be said that participating in sports activities increases the social, emotional and physical qualifications of individuals through engaging in team sports with their friends. The friendly relationship that exists among friends through these activities is an important opportunity for companionship, recreation and support, which is effective in reducing loneliness in individuals (Fitzgerald, Fitzgerald, & Aherne, 2012). To confirm this, Tomaka et al., (2006) concluded that social relationships are the main factor in psychological health, including happiness and mental well-being. Also, Beyers and Seiffge-Krenke (2007) state that close friendships are a mental health protective factor.

In explaining the finding that affective symptoms of loneliness in athletic women are less than non-athletic women, it can be said that engaging in sports activities involves certain personality traits (characteristics) and there exists a personality difference between those who participate in sports activities and those who do not. In the way that athletes have more emotional stability (Kajtna, Tušak, Barić, & Burnik, 2004). In fact, engaging in sports and being forced to communicate and collaborate with others will help to develop the desirable personality traits, such as extraversion, which increases the level of communication and social interaction (Allen, Greenlees, & Jones, 2013) and decreases the affective symptoms of loneliness, such as being shy, avoiding crowds, and so on.

In the end, it should be noted that this research was conducted only on women in Shiraz, therefore, it is necessary that such research also be carried out on males and in other cities in order to make the results more generalizable. According to the findings of this study, it is suggested to the officials and custodians of the Sports and Youth Organization to prioritize practical actions such as conducting public sports for all women in order to reduce women's loneliness.

## FUNDING

This research conducted by financial support of Sports and Youth Organization of Fars Province in Iran which is hereby acknowledged

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