



<https://asml.ui.ac.ir/>

## The Mediating Role of the Students' Autonomy Motivation in the Relationship between Physical Education Teachers' Autonomy Support and Reducing Students' Fear of Failure

Kamran Eidipour<sup>1</sup>, Mohsen Hallaji<sup>2</sup>

1. Department of Physical Education Instruction, Farhangian University, Isfahan, Iran  
eidipour\_kamran@yahoo.com
2. Department of Physical Education Instruction, Farhangian University, Tehran, Iran  
m.hallaji@cfu.ac.ir (Corresponding Author)

### Article Info

### Abstract

**Article type:**  
Research Article

**Received:**

29 Aug 2024

**Accepted:**

31 Dec 2024

**Published online:**

31 Dec 2024

The purpose of this research was the mediating role of student autonomy motivation in the relationship between physical education teachers' autonomy support and reducing students' fear of failure. This study's research method is correlational and is in the category of applied research. The statistical population of the research included 1955 male students of the second secondary school in Tehran. The sample size of the study was 384 people, who were selected randomly and clustered based on the Morgan table. The tools used in the research were three standard questionnaires: autonomy motivation Hager et al (2007), perception of autonomy support by Black and Deci (2007), fear of failure Conroy et al (2002). To analyze the data, the structural equation model was used. The most important results showed that physical education teacher' autonomy support has a direct and positive effect on students' autonomy motivation. Fear of failure plays a mediating role in the relationship between physical education teachers' autonomy support and students' autonomy motivation. Therefore, physical education teachers can use autonomy supportive behaviors to motivate students to make choices in decision-making and thus be successful in reducing the fear of failure to engage in physical activities.

**Keywords:**

Autonomy Motivation, Autonomy Support, Fear of Failure, Physical Education Teacher, Students

**Cite this article:**

Hallaji, M. and Eidipour, K. (2024). The Mediating Role of the Students' Autonomy Motivation in the Relationship between Physical Education Teachers' Autonomy Support and Reducing Students' Fear of Failure. *Archives in Sport Management and Leadership*, 2(2), 43-50. doi: [10.22108/asml.2024.142632.1049](https://doi.org/10.22108/asml.2024.142632.1049)

© The Author(s).

Published by University of Isfahan



This is an open access article under the CC BY-NC 4.0 License (<https://creativecommons.org/licenses/by-nc/4.0/>).

## Introduction

For a long time, sports researchers have been seeking to know the factors influencing the control of teenagers' fear to participate in sports activities. It is expected that knowing the factors affecting the participation of the teenagers in sports activities and controlling their fear will provide the possibility of increasing participation in sports activities. Attracting people to exercise does not only have physical benefits, but also many other benefits. Understanding the factors that influence the behavior of sports participants can lead to direct and indirect benefits for people participating in sports activities. Therefore, researchers seek to know the factors related to behaviors that are effective on people's participation in sports activities (Parsamehr, 2013). One of the key goals of physical education in schools is to provide supportive and highly active environments for students, which facilitates their skills, knowledge and attitude, and beyond that, activity and improving lifestyle and health in the environment outside of school. (Sanchez et al, 2017). Meanwhile, physical education teachers play an important role in developing behavior, attitude, skills and giving students the information needed to engage in physical activity (Biddle et al, 2019). Based on the conducted research, the job performance of physical education teachers is one of the most important factors affecting learning and encouraging students to engage in physical activities (Selamat et al, 2013). The behavior, methods and motivational styles of physical education teachers will have a significant impact on students' emotions and learning and can affect their lives due to adopting an active physical lifestyle and engaging in sports activities (Meng & Kong, 2016).

Autonomy support theory is a prominent theory about motivation, excitement and human development and emphasizes the factors that inhibit or facilitate the processes related to self-actualization in humans. The main elements of this theory include extrinsic motivation, intrinsic motivation, and a set of basic psychological needs underlying these types of motivations (Hagger et al, 2020). In the theory of autonomy, it is emphasized that the behavior of teachers affects the behavior, attitude and motivation of students' autonomy; According to this theory, a teacher can influence the type of student's motivation by supporting or opposing students' basic psychological needs, i.e., the need for independence, competence, and connection. Coach's support for independence; It creates more joy and liveliness in students. Competency support causes better energy and movement and sports performance, and finally, communication support that is related to the quantitative (amount of communication) and qualitative (how to communicate) communication between the teacher and the student will encourage more students. (Berghe et al, 2013). The feeling of autonomy while doing work leads to a special psychological state that makes a person feel that work outputs are influenced by his own performance and are not controlled by the external environment. This psychological state also leads to the formation of sports motivation to perform the activity (Kuvass, 2009). A classroom structure that supports student autonomy engages and nurtures the individual's psychological needs, personal interests, and integrated values rather than ignoring or suppressing them. Support from internal sources of motivation in students has become important because research evidence has shown that these methods lead to a range of positive educational outcomes in students (Hagger & Weed, 2019). The teacher and the learning environment can be a tool in the classroom to demotivate and engage students less in class activities or vice versa. Therefore, the involvement of each person in the classroom is always the joint result of the motivation of the students and the support of the class structure when they are involved in the classroom activity. The type of atmosphere that a teacher provides can promote a person's intrinsic motivation (Chan et al, 2020). The behavior of teachers and coaches in creating a motivational environment is an essential element in influencing the needs and motivation of students and athletes. Therefore, teacher training is very important to create a class structure based on the theory of autonomy and leads to positive academic outcomes (Hagger et al, 2015). Sheon (2018) believe that lack of social support from teachers is a determining factor in students' lack of motivation in doing physical activity. One of the important consequences of teachers' social support for students is reducing the fear of failure and increasing their motivation to participate in sports activities.

Sagar et al. (2010) believe that sports is one of the most popular areas of success for students and teenagers, where the increased pressure to achieve high sports performances and winning can be a huge increase in the fear of failure to bring among them. Fear of failure is a constant source of stress or anxiety that destroys the mental condition and performance of athletes. In sports, people's biggest fear is based on

their understanding of the importance of performance or the game and what they think others think about their performance (Gustafsson et al, 2016). In relevant research, fear of failure or negative social evaluation has been reported as the most common sources of anxiety and abnormal stress among teenagers. Research on adolescent athletes has shown that both concerns about the process (such as not playing well) and outcomes (such as failure, criticism from parents or coaches) have been associated with fear of failure. For example, the concerns of teenage athletes are related to fear of failure, fear of negative evaluation, feeling of incompetence, lack of motivation, disappointment, etc. (Sagar & Lovely, 2010). Fear of failure makes people choose goals that are not desirable for skill development or do not create the necessary motivation in teenagers (Wikman et al, 2014). Leptokaridou et al. (2016) stated that teachers' autonomy support in physical education classes is effective on the level of fear of failure, fatigue and effort and leads to increased levels of motivation.

Schneider et al. (2020) conducted a research on the use of physical education to promote physical activities in students' free time. The results of the research showed that perceived autonomy teacher through the mediation of autonomy motivation leads to improvement of students' motivation, attitude and mental norms and encourages them to do sports activities in their free time. In a research, Cheon et al. (2018) investigated the use of autonomy support in full-time teachers and concluded that the use of autonomy support by teachers has an effect on the effectiveness of teaching and the intrinsic educational goals for their students. In a research, Sanchez et al. (2017) investigated the effect of teachers' autonomy support on students' physical activity. Autonomy support, autonomy motivation, intention to do physical activity and satisfaction showed a significant increase in the experimental group compared to the control group. Leptokaridou et al. (2016) by investigating the effect of autonomy support training in physical education classes on the level of pleasure, fear of failure, fatigue and effort, showed that autonomy support training leads to an increase in motivation levels compared to the absence of this training, which may lead to the gradual reduction of participation in physical education classes. Also, autonomy support, which is associated with increasing support for students' independence, leads to a decrease in their fear of failure and, in turn, affects the effort to succeed and participation in sports activities. Noorali et al. (2019) investigated the effect of autonomy training on sports motivation and perceived autonomy support in students. The research results showed that teacher autonomy support is effective on students' sports motivation.

According to the objectives of the educational courses of the public official education system of the Islamic Republic of Iran (2017), in the biological and physical field in the second year of high school, the discussion of healthy living standards is discussed, which emphasizes the improvement of the level of physical, mental, social and spiritual health. It indicates that by identifying the methods of forming these levels, to increase them, which is undoubtedly, one way to promote, motivate autonomy and reduce the fear of failure, and the use of effective tools is emphasized. In the policies announced by the Supreme Leader (2006), the promotion of physical and mental health of teachers and students, prevention of social harms and development of physical education and sports in schools have been considered. Therefore, according to the cases that are mentioned in the upstream documents of the country's education system; the concern that exists is how to increase the motivation of students' autonomy in today's environment and correspondingly, to guarantee the fear of failure of students to participate in various fields. In the theoretical foundations of research, the effect of supporting teachers' autonomy on positive educational outcomes has been emphasized, but in practice, research that directly considers its role in motivating autonomy and fear of failure has not been done. At the same time, it seems that most of the researches have been done abroad and few researches have been done inside the country. Carrying out this scientific research can lead to the discovery of useful results in this field and fill the research gap. From a practical point of view, the results of the research can be used by education managers, as well as school managers and sports teachers, who in their planning and decisions in the future, according to the influence of the factors examined in this research, including autonomy support Sports teachers and motivating students' autonomy; to reduce students' fear of failure and help improve students' physical activity. Therefore, according to the few researches that have been done in this field, the main research question is, how does teacher autonomy support directly affect students' fear of failure? And whether autonomy motivation can be effective in this chain and lead to the improvement of this be effective?

## Research Methods

The research method is practical in terms of purpose, and in terms of the method of data collection, it is field-based, in terms of implementation, it is descriptive-correlation, which was carried out in the first half of the academic year 1402-1401. The statistical population of the research included 1955 male students of the second secondary school in public schools in Tehran. The research sample size of 384 people was randomly selected based on Morgan's table. In this way, all the 19 regions of Tehran city were divided into five parts: north, south, east, west and center, and after identifying the regions related to each part, a few of the regions of that part were randomly selected, and the second secondary schools for boys in each the region were identified, then a number of students from each school were randomly selected as samples. From the north; Zones 1 and 3, from the southern part; Areas 15 and 19, from the eastern part; Regions 4 and 8, from the west; Regions 5 and 9, from the center; Regions 6 and 11 were selected. The questionnaires used in the research were the three standard questionnaires of autonomy motivation Hager et al. (2020), perception of autonomy support Black and Deci (2000) and fear of failure Conroy et al. (2002). The autonomy motivation questionnaire has 12 questions. The autonomy support perception questionnaire has 14 questions. The fear of failure questionnaire has 5 questions. A 5-point Likert scale was used to answer the questionnaires. The content validity of the questionnaires was confirmed by 9 sports management professors and the reliability of the questionnaires was determined by Cronbach's alpha coefficient of 0.88, 0.83 and 0.82 respectively. For data analysis, structural equation modeling was used using Spss and Lisrel software.

## Findings

The table below shows the results of the Kolmogorov-Smirnov test to determine the significance of the data. The procedure for using statistical tests is based on the results of this table.

**Table 1- The results of the Kolmogorov-Smirnov test to determine the normal distribution of research data**

Variable	Fear of Failure	Autonomy Motivation	Autonomy Support
Kolmogorov Smirnov	1/14	0/97	<b>0/89</b>
meaningfulness	0/09	0/14	<b>0/31</b>
average	2/71	3/49	<b>3/64</b>
standard deviation	0/55	0/46	<b>0/59</b>
Number of samples	384	384	<b>384</b>

The results of the Kolmogorov-Smirnov test show that because the significance level of the data is higher than 0.05, the data is normal, and for this reason, parametric tests and structural equation models were used. Also, in this table, the results of the average and standard deviation of the data are mentioned, the results show that the average of all variables are almost higher than the standard average.

**Table 2- Pearson correlation coefficient for correlation between variables**

Predictor Variable	Criterion Variable	Meaningfulness	Correlation	Number
Autonomy support	Autonomy motivation	0/001	0/65	380
Autonomy support	fear of failure	0/001	-0/56	380
Autonomy motivation	fear of failure	0/001	-0/70	380

Based on the results of Table 2, the significance level is less than 0.01, so it can be concluded that there is a linear relationship between endogenous and exogenous variables. There is a negative correlation of -0.56 and -0.70 between autonomy support and autonomy motivation with fear of failure, and there is also a positive correlation of 0.65 between autonomy support and autonomy motivation.

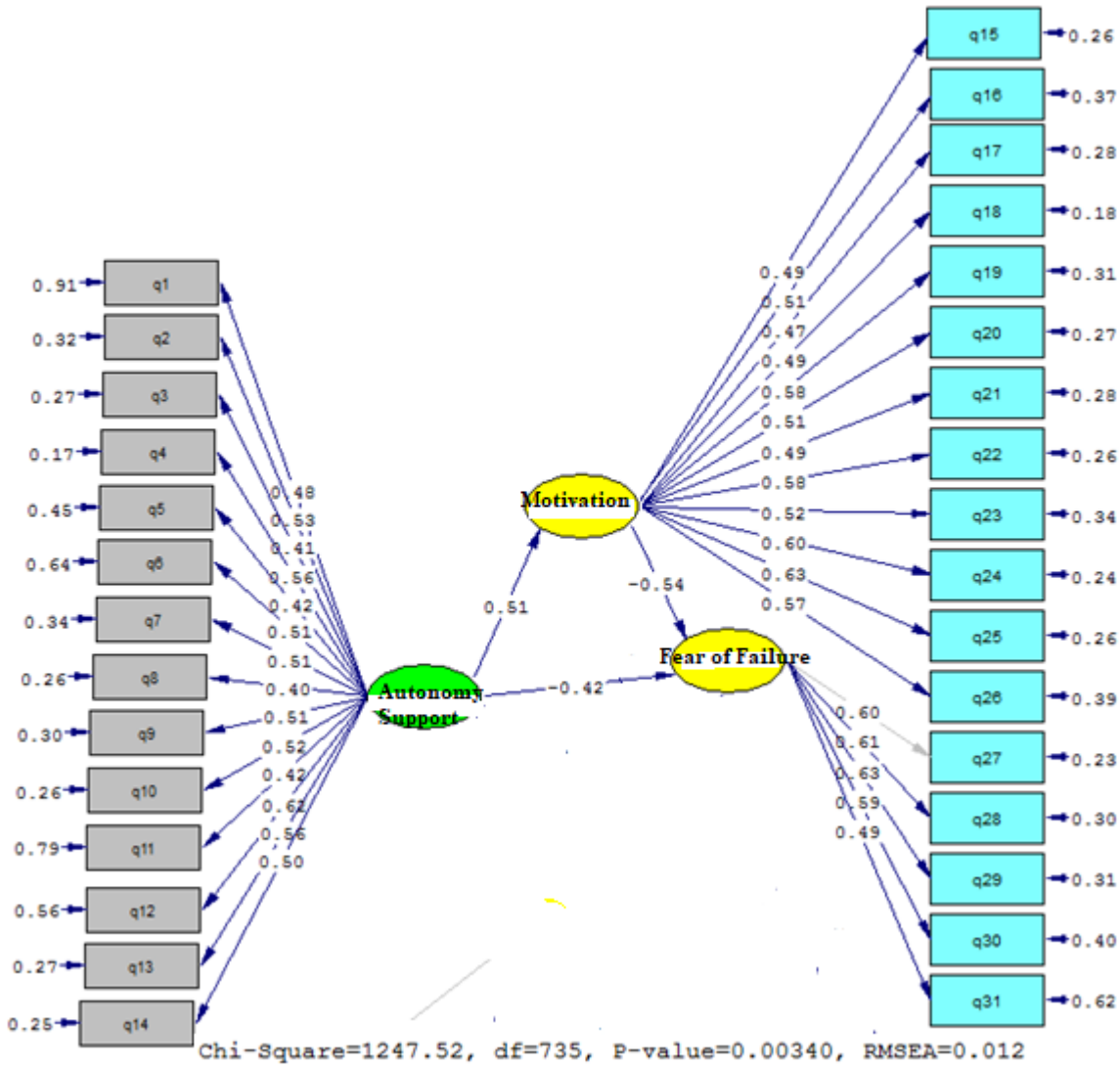


Figure 1. Model of standard coefficients of research variables

Table 3- The results of the structural equation model analysis of the research

Research Hypotheses	T-Value	Impact Factor	Result
The perception of autonomy support has an effect on students' autonomy motivation.	8/94	0/51	Hypothesis verification
The perception of autonomy support has an effect on the student's fear of failure.	-6/49	-0/42	Hypothesis verification
Students' autonomy motivation has an effect on students' fear of failure.	-10/02	-0/54	Hypothesis verification
Autonomy motivation has a mediating role in the relationship between the perception of autonomy support and students' fear of failure.	-3/16	-0/57	Hypothesis verification

Based on the results of Table 3, the perception of autonomy support has a positive effect of 0.51 on students' autonomy motivation. The perception of autonomy support has a negative effect of -0.42 on the student's fear of failure. Students' autonomy motivation has a negative effect of -0.54 on students' fear of failure. The mediation coefficient is obtained from the product of the path coefficient between the independent-mediating variable and the path coefficient between the dependent-mediating variable. According to the mediation coefficient and its significance in the Sobel test; it can be claimed that autonomy motivation has a mediating role of -0.27 in the relationship between the perception of autonomy support and fear of failure of student.

## Discussion

The results of the study showed that the standard coefficient between the perception of autonomy support with students' autonomy motivation and fear of failure is 0.51 and -0.42, respectively. Therefore, it can be concluded that the perception of autonomy support directly and positively affects students' autonomy motivation and negatively affects students' fear of failure. Therefore, the perception of autonomy support improves the autonomy motivation and fear of failure of male high school students. The results of this part of the study are consistent with the results of Schneider et al. (2020) who showed that perceived autonomy leads to improved motivation, attitude and mental norms of students, and also Sanchez et al. (2017) who showed that autonomy support is effective on students' fear of failure.

The results of the study showed that the effect that the perception of autonomy support has indirectly and through the mediator variable of autonomy motivation on students' fear of failure is -0.27. Therefore, it can be concluded that autonomy motivation partially mediates the relationship between the variable of perceived autonomy support and students' fear of failure. In analyzing this research result, it can be said that the perception of autonomy support of physical education teachers by students leads to an increase in students' autonomy motivation and a decrease in their fear of failure, which in turn leads to an improvement in students' sports motivation, which ultimately leads to more students participating in physical activities. The results of this part of the research are in line with the results of Snyder et al. (2020), who showed that perceived autonomy through the mediation of autonomy motivation leads to improved students' motivation, attitudes, and mental norms, and Leptokarido et al. (2016), who showed that autonomy support in physical education classes is effective on students' fear of failure and leads to increased motivation levels.

In analyzing the research findings, it can be said; the functional aspect of the supportive-autonomy climate from physical education teachers is that students feel that their behavior originates from themselves and not from external pressures and needs, which in turn leads to a reduction in fear and stress in students. In fact, the pressure felt from the teacher creates a higher fear of experiencing shame and embarrassment for students and leads to a fear of failure in them. Students need more support, especially from their physical education teachers, in dealing with situations of fear and anxiety. Since the autonomous support method minimizes the teacher's pressure and instructions and uses more of the students' opinions, the use of this support method has a great impact on reducing students' fear of failure. Poulamaki (2013) also believes that the teacher's behavior and power can affect the fear of failure in adolescents, and teachers can reduce students' fear and increase their sports performance accordingly by creating favorable conditions for students and using supportive behaviors. On the other hand, autonomy support by physical education teachers can be interpreted as part of the motivational climate in which activities take place, and it can be beneficial if there is a motivation from students to use this autonomy support. Autonomy support and students' motivation for it can increase students' intrinsic motivation, creativity, self-esteem, self-confidence, and sense of competence. It can be said that, in autonomy support behavior, the physical education teacher, who is in a position of power, while minimizing the use of pressure and command, takes advantage of the students' opinions and provides them with appropriate information and opportunities to choose, taking their feelings into account. In this type of behavior, students' freedom is supported and all of them are involved in the decision-making process. Therefore, in this environment, the pressure to choose a particular behavior is minimized and individuals are encouraged to pursue sports activities based on their goals and values, and to pursue their activities with less psychological pressure and more self-confidence.

### Suggestions

In the end, it is suggested that physical education teachers should provide conditions that give students choice and freedom in action, understand them in sports scenes and establish intimate relationships with them in order to meet their spiritual and psychological needs in general. The human needs of the students should be answered and in this way they would be successful in creating self-confidence and reducing the fear of failure in students. Trying to empower students in choosing and doing physical activities, participating in sports activities and accepting educational, sports, etc. responsibilities, so as to develop a sense of autonomy and, consequently, the student's internal motivation. Preparation of curriculums appropriate to students' learning abilities and academic interests, in such a way that the challenge with these assignments and overcoming them increases the students' sense of competence.

### Acknowledgments

With the special thanks to masseurs. We are also grateful to everyone who helped us in conducting this research.

### Conflicts of Interest

No potential conflict of interest was reported by the authors.

### Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

### References

- Biddle S. J., Ciaccioni, S., Thomas, G., Vergeer, I. (2019). Physical activity and mental health in children and adolescents: an updated review of reviews and an analysis of causality. *Psychology Sport Exercise*, 42, 146–155. <https://doi.org/10.1016/j.psychsport.2018.08.011>
- Berghe, L. V. D., Soenens, B., Vansteenkiste, M., Alterman, N., Cardon, G., Tallir, I. B., & Haerens, L. (2013). Observed need-supportive and need-thwarting teaching behavior in physical education: do teachers' motivational orientations matter?. *Psychology of Sport and Exercise*, 14, 650-661. <https://doi.org/10.1016/j.psychsport.2013.04.006>
- Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science Education*, 84(6), 740-756. [https://doi.org/10.1002/1098-237X\(200011\)84:6%3C740::AID-SCE4%3E3.0.CO;2-3](https://doi.org/10.1002/1098-237X(200011)84:6%3C740::AID-SCE4%3E3.0.CO;2-3)
- Chan D.K., Zhang, L., Lee, A. S., Hagger, M. S. (2020). Reciprocal relations between autonomous motivation from self-determination theory and social cognition constructs from the theory of planned behavior: a cross-lagged panel design in sport injury prevention. *Psychology Sport Exercise*, 48, 101660. <https://doi.org/10.1016/j.psychsport.2020.101660>
- Cheon, S. H., Reeve, J., Lee, Y., & Lee, J. W. (2018). Why autonomy- supportive interventions work: Explaining the professional development of teachers' motivating style. *Teaching and Teacher Education*, 69, 43-51. <https://doi.org/10.1016/j.tate.2017.09.022>
- Conroy, D. E., Willow, J. P., & Metzler, J. N. (2002). Multidimensional fear of failure measurement: The performance failure appraisal inventory. *Journal of Applied Sport Psychology*, 14(2), 76-90. <https://doi.org/10.1080/10413200252907752>
- Gustafsson, H., Sagar, S., & Stenling, A. (2016). Fear of failure, psychological stress, and burnout among adolescent athletes competing in high level sport. *Medicine & Science in Sports*, 27(12), 2091-2102. <https://doi.org/10.1111/sms.12797>
- Hagger, M. S., Sultan, S., Hardcastle, S. J., Chatzisarantis, N. L. (2015). Perceived autonomy support and autonomous motivation toward mathematics activities in educational and out-of-school contexts is related to mathematics homework behavior and attainment. *Contemporary Educational Psychology*, 41, 111– 123. <http://doi.org/10.1016/j.cedpsych.2014.12.002>

- Hagger, M. S., Cameron, L. D., Hamilton, K., Hankonen, N., & Lintunen, T. (2020). *The handbook of behavior change*. Cambridge University Press. <https://doi.org/10.1017/9781108677318>
- Hagger, M. S., & Weed, M. E. (2019). DEBATE: Do behavioral interventions work in the real world. *International Journal of Behavioral Nutrition Physical Activity*, 16(1), 36. <https://doi.org/10.1186/s12966-019-0795-4>
- Kuvas, B. (2009). A test of hypotheses derived from self-determination theory among public sector employees. *Employee Relations*, 31(1), 39-56. <https://doi.org/10.1108/01425450910916814>
- Leptokaridou, E. T., Vlachopoulos, S. P., & Papaioannou, A. G. (2016). Experimental Longitudinal Test of the Influence of Autonomy-Supportive Teaching on Motivation for Participation in Elementary School Physical Education. *Educational Psychology*, 36(7), 1135-1156. <https://doi.org/10.1080/01443410.2014.950195>
- Meng, H.Y., & Keng, J. W. C. (2016). The effectiveness of an Autonomy- Supportive Teaching Structure in Physical Education RICYDE. *Revista Internacional de Ciencias del Deporte*, 12(43), 5-28. <http://dx.doi.org/10.5232/ricyde2016.04301>
- NoorAli, J., Sheikh, M., Hemayattalab, R., & Bagherzadeh, F. (2019). The effect of autonomy training on sports motivation and perceived autonomy support in students. *Sports Psychology Studies*, 9(31). 47-66. [https://spsyj.ssrc.ac.ir/article\\_2179.html](https://spsyj.ssrc.ac.ir/article_2179.html) [In Persian].
- Puolamaki, M. (2013). *Performance-Related Fear Experiences, Coping and Perceived Functional Impact on Highly Skilled Athletes* [Master thesis, University of Jyväskylä]. <https://jyx.jyu.fi/handle/123456789/41458>
- Parsamehr, M. (2013). Investigating people's motivations to participate in sports activities. *Research In Sports Management and Movement Behavior*, 4(8). 22-34. <http://jrsm.khu.ac.ir/article-1-2212-fa.html> [In Persian].
- Sanchez-Oliva, D., Pulido-González, J. J., Leo, F. M., González-Ponce, I., & Garcia-Calvo, T. (2017). Effects of an intervention with teachers in the physical education context: A Self-Determination Theory approach. *PLoS ONE*, 12(12), e0189986. <https://doi.org/10.1371/journal.pone.0189986>
- Selamat, N., Samsu, N. Z., & Mustafa kamalu, N. S. (2013). The impact of organizational climate on teachers, job performance. *Educational Research*, 2(1), 71-82. <https://dialnet.unirioja.es/servlet/articulo?codigo=4234817>
- Schneider, J., Polet, J., Hassandra, M., Lintunen, T., Laukkanen, A., & Hankonen, N. (2020). Using Physical Education to Promote Leisure-Time Physical Activity in Lower Secondary School Students: *The PETALS Trial*. *Research Square*, 4, 1-51 <https://doi.org/10.21203/rs.3.rs-37085/v1>
- Sagar, S., Bradley, K., & Jowett, S. (2010). Success and Failure, Fear of Failure, and Coping Responses of Adolescent Academy Football Players. *Journal of Applied Sport Psychology*, 22(2), 213-230. <https://doi.org/10.1080/10413201003664962>
- Sagar, S., & Lavallee, D., (2010). The developmental origins of fear of failure in adolescent athletes: Examining parental practices. *Psychology of Sport and Exercise*, 11(3), 177-178. <https://doi.org/10.1016/j.psychsport.2010.01.004>
- The strategic transformation document of the public official education system of the Islamic Republic of Iran/values statement* (2017). Ministry of Education.
- Wikman, J., Stelter, R., Melzer, M., Louise Hauge, M. (2014). Effects of goal setting on fear of failure in young elite athletes. *International Journal of Sport and Exercise Psychology*, 12(3), 185-205. <https://doi.org/10.1080/1612197X.2014.881070>