

The Effect of Perceived Social Support on Students' Academic Motivation with the Mediating Role of Emotional Intelligence



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ABSTRACT

Background: The purpose of this study was to investigate the effect of perceived social support on students' academic motivation with the mediator role of emotional intelligence.

Methods: The research method was descriptive-correlational and cross-sectional in terms of time. The statistical population was all physical education students of Shahrood University of Technology in the academic year of 2021-2022. 210 questionnaires were analyzed out of 230 available samples. The data collection tool was a questionnaire. The face and content validity of the questionnaires was confirmed by the opinion of 10 sports management professors. In order to determine the reliability of the research tool, Cronbach's alpha and Composite reliability were used. Data analysis was done by structural equation modeling method in Smart PLS software.

Results: The results showed that perceived social support has a significant effect on students' emotional intelligence and academic motivation. Emotional intelligence has a positive effect on academic motivation. The mediating role of emotional intelligence was also confirmed in the relationship between perceived social support and academic motivation ($P \leq 0.05$).

Conclusion: Effective support from the family and the community can be useful for raising the emotional intelligence and academic motivation of students, and as a result, they can play an effective role in the growth and development of society.

1. Introduction

Motivation is the cause of many human actions and plays a crucial role in choosing activities, the amount of one's involvement in problems and insistence on doing actions and explains the type of action and performance (Pašková, 2007). Researchers state that motivation is two-sided, internal and external; internal motivation causes the desire and attraction for performing the action; external motivation, on the other hand, causes an independent purpose for doing the action. As a matter of fact, motivation is something that is innate and intrinsic which is affected by four factors (the environment and external stimulus), temperament (the internal status of the organism), purpose (the purpose of behavior and the attitude) and the means (means of achieving the purpose). Generally, people need motivation in order to achieve their purposes and interests (Seyedmohammadi, 2021). Motivation has different aspects one of which is academic motivation (Areepattamanni, 2011). Academic education is defined as follows: an internal process which stirs things up and its purpose is to achieve success and academic accomplishments. Academic motivation is an effective factor for people's presence in academic environment and getting academic degree (Clark, 2010) and they have a significant role in learning (Akbari, 2007). Knowing why

some students are academically motivated and some lack motivation is of high importance (Yoshida, 2008). Hence, identifying the effective factors on academic motivation could be essential and necessary for educating and breeding capable people, formulating regulations, and preparing facilities. Psychologists believe that effective factors on academic motivation is divided into two groups of personal (such as emotional intelligence EI) environmental factors (such as peers, parents, and society) (Taheri, 2018). One of the effective personal criteria which is presented in order to explain this motivation is Emotional Intelligence (Bimayu, 2020). Goldman defines emotional intelligence as a collection of learnable abilities and skills (Parker, 2008). Moreover, from Bar-On's (2006) point of view, emotional intelligence leads to psychologic health and, finally, success and motivation in education (Bar-On, 2006). Emotional intelligence has attracted the attention of the researchers from both scientific and experimental aspects (Sobhi Gharamalki, 2011) because emotional intelligence helps us with giving us the capacity and ability for solving emotional and rational conflicts. From the viewpoint of Mayer et al (1999), emotional intelligence is defined as the ability to recognize excitement and emotions, relations, deduction, and problem-solving (Mayer, 1999). Those who have a high emotional intelligence, perform better in the face of stressful situations and manage the situation better. Furthermore, emotional intelligence leads to a better performance in four areas of self-consciousness, social-consciousness, relation management, and self-management (Bahrami, 2014).

Some researchers have also analyzed the relationship between environmental factors and academic motivation. Those studies which show the relationship between environmental factors are called social support (family, friends, and so on) by Sharifi (2006) (Sharifi, 2006). Cobb (1976) defined social support for the first time as the amount of one's access to kindness, care, attention of one's family, friends, and others with whom one is connected to and their availability (Cobb, 1976). Generally, social support, as a support channel, refers to a system with a wide or limited range of people who are available when needed. Social support is defined as the received and perceived support. Received support includes those actions which are done by the members of the social channel so that they help the one in need. Perceived social support is a notion which refers to people's mental evaluations about support behavior and relations (Boland, 2016). Based on Song et al (2015) one of the significant effective factors on academic motivation is perceiving the social support (Song, 2015). Perceiving the social support is a more important factors than the amount of received support (Evans, 2013). Similarly, the results of a study conducted by Kekha (2015) also shows that the perceived social support is an effective factor on academic motivation (Kekha, 2015). Moreover, the results of some studies indicate that when social support decreases, the feeling of loneliness increases (Wilson, 2020).

Some researches affirm the relation between social support (peer support, mentor support) and academic motivation (Fallahmenesh, 2018; Legault, 2006; Shen, 2010; Tezci, 2015). For instance, in a research entitled as "the relation of perceived social support and intelligence beliefs with academic motivation", Fallahmenesh and Vatankhah (2018) concluded that such variables as family, friends, teachers' support as well as intelligence beliefs could significantly predict 31% of changes in academic motivation of the students (Fallahmenesh, 2018). The results of Seyedsalehi and Yunesi's research (2014) indicates that there is an indirect significant relation between social support and academic motivation (Seyedsalehi, 2014). Schwartz (2000), based on the theory of self-determination, believe that social support can facilitate overflow of desires and inner potentials (Schwartz, 2000). Camacho et al (2021) found that social support provided by teachers and peers plays a positive significant role in academic motivation of students from the first to the tenth grade in the primary school (Camacho, 2021). In another study entitled as "Personal and Social resources are synergistically correlated in increasing the academic motivation", Fatima et al (2018) also found out that social support from friends, not from family members or any other important person, independently predicted external academic motivation (Fatima, 2018). The study conducted by Tezci et al (2015) also demonstrates that the more the social support increases, the more the motivation (Tezci, 2015). Besides, the studies show that social support, specially family's social support, is important in changing one's emotional intelligence (Maddux, 2002). In analyzing the relation between social support and emotional intelligence, some studies refer to the existence of a positive and significant relation between these two variables (Bimayu, 2020; Ghafarianhatami, 2015; Rahimzadeh, 2017). In this respect, Rahimzadeh and moradianzand (2017) state that there is a direct and significant relationship between perceived social support and emotional intelligence (Rahimzadeh, 2017). The results of the study conducted by Ghafarianhatami et al (2015) also affirm the already-mentioned results (Ghafarianhatami, 2015).

Therefore, it seems that social support, besides affecting the academic motivation, influences emotional intelligence as well. Also, the results of the studies indicate contradictory results between the variables of emotional intelligence and academic motivation. For example, Saheb and Amiri (2019), Ghorbaniya and Izadi (2016) have acknowledged that there is no significant relationship between emotional intelligence and academic motivation. While Ghanbari and Soltanzadeh (2015), Khosravinoodeh and Khosravinoodeh (2014), Bimayu et al. (2020) have emphasized the existence of a

positive and significant relationship between these two variables. Studies show conflicting results between these variables.

As review of the literature and theoretical framework indicate, there has been a lot of research conducted among different ranks of the society about the discussed variables; nevertheless, analyzing the review of the literature shows that few studies have focused on the issue of social support, emotional intelligence and academic motivation on students of physical education or the studies show contradictory results in these variables. Altogether, based on theoretical framework, review of the literature, the variables, and the deduction about the relation between them, a conceptual model, as shown in figure one, is presented and the presuppositions is as follows:

1. The perceived social support affects the academic motivation of the students of physical education in Shahrood University of Technology.
2. Perceived social support affects academic motivation of students of physical education in Shahrood University of Technology.
3. Emotional intelligence affects the academic motivation of the students of physical education in Shahrood University of Technology.
4. Perceived social support affects the motivation of the students of physical education in Shahrood University of Technology with the mediation of emotional intelligence.

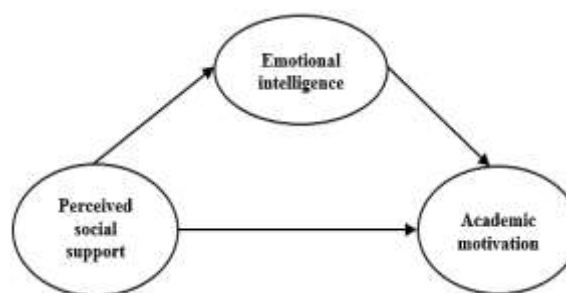


Figure 1. The basic conceptual model for the research

2. Materials and Methods

2.1. Subject

Considering the main purpose of the present research, it is considered as experimental research; and is considered as descriptive survey in terms of data collection which was gathered as field data collection and is a correlation project of structural equation modelling type. This research has a moral code numbered as follows: IR.SHAHROODUT.REC.1401.001 from Shahrood university of Technology. The statistical society of the current research is all students of physical education at Shahrood University of Technology in the academic year 2022-2023. Based on Kline's theory (2014) (Kline, 2014), considering the number of questions in the questionnaire (68 items) and predicting at least two and at most ten times more than the number of the questions, the number of the samples were considered as to be something between 136 to 680 participants. Through availability sampling, 230 questionnaires were distributed among the participants online or in-person. The criteria for the participants' being accepted to enter the study was their approval and the criteria for their exodus from the study was the incompleteness of the questionnaires.

2.2. Apparatus and Task

From among the distributed questionnaires, 210 questionnaires were analyzed. In order to collect data, the following questionnaires were used:

Personal information form: this part of the questionnaire, in which the data related to age, gender, marital status, and academic level was gathered, was created by the researcher.

Perceived social support questionnaire: this is the perceive standard social support questionnaire devised by Zimet et al (1988) which includes 12 items and includes three aspects: family support (4 questions), friends' support (4 questions) and others' support (4 questions) in Likert scale (very little to very much) (Zimet, 1988).

Emotional intelligence questionnaire: this is the standard emotional intelligence questionnaire devised by Bradberry and Greaves (2006) which includes 11 items which are scored based on 5-point Likert scale and evaluates four aspects of self-awareness, self-management, social awareness, and relationship management (Bradberry, 2006).

Academic motivation questionnaire: this is the standard academic motivation questionnaire devised by Vallerand et al (1993) which includes 24 items and 4 small scales of internal motivation for understanding, motivation for progress, internal motivation for experiencing stimulation, assimilated adjustment, injective adjustment and external adjustment in 5-point Likert scale (Vallerand, 1993).

In the present research, in order to analyze the face validity and reliability of the questionnaire, all the questionnaires were given to

10 of the professors of sports management and their comments were drawn; then the questionnaires were revised based on their comments. Convergent and divergent validity of the questionnaire (reported in the findings of the research) were approved as well. In order to analyze the reliability of the questionnaires, Cronbach's Alpha index and composite reliability were used (the results of which are reported in the findings of the study) which were approved. After gathering the completed questionnaires, the invalid questionnaires were put aside and the information of the valid questionnaires (210 questionnaires) were entered into statistical software in order to be analyzed.

2.3. Data analysis

In order to analyze the data based on descriptive and inferential statistics, including descriptive statistics, structural equation modeling, confirmatory factor analysis and path analysis, SPSS v24 and smart PLS.3 were used.

3. Results

The results from the participants' demographic characteristics show that there were 142 male participants (67.6 percent), 120 participants ranging between 21 to 30 years old (57.1 percent), 110 married participants (52.4 percent), 169 BS participants (80.5 percent). Statistical description of the research variables shows that the average of all the aspects of the research variables were more than medium and from the participants' point of view, the highest medium score was for emotional intelligence variable (3/855+_{-0.55}) and the lowest medium score was for academic motivation (**Table 1**).

Table 1.

Frequency distribution of the participants and descriptive scales of the central tendency and dispersion of the research variable

| | Academic level | | | Age | | | | Marital status | | Gender | |
|-------------------|---------------------|-------|-----|------------------------|-------|-------|---------|--------------------------|---------|--------|------|
| | MS | BA | Phd | 18-20 | 21-30 | 31-40 | Over 40 | Single | Married | Women | Men |
| Abundance | 169 | 27 | 14 | 55 | 120 | 31 | 4 | 100 | 110 | 68 | 142 |
| Percentage | 80.5 | 12.29 | 6.6 | 26.2 | 57.1 | 14.7 | 1.9 | 47.96 | 52.4 | 32.4 | 67.6 |
| | Academic motivation | | | Emotional intelligence | | | | Perceived social support | | | |
| Mean ± SD | 3.494 ± 0.9 | | | 3.855 ± 0.823 | | | | 3.718 ± 0.749 | | | |

Before performing the structural equation modelling with Partial Least Square approach (PLS), the presupposition of noncollinearity of independent variables must be analyzed. In the present research, the most popular method, that is analysis of correlation of independent variables of the research was used in a way that correlation which is above 80% is considered as multi-collinearity.

In the current study, based on table 2, the correlation between independent variables was calculated which have the significance level of 0.01 but these numbers indicate the noncollinearity of independent variables.

Table 2.*Matrix of correlation between research variables*

| | Academic motivation | Perceived social support | Emotional intelligence |
|--------------------------|---------------------|--------------------------|------------------------|
| Academic motivation | 1 | | |
| Perceived social support | 0.603** | 1 | |
| Emotional intelligence | 0.441** | 0.362** | 1 |

In order to ensure whether there is or there is not any relation between the research variables and to analyze the appropriateness of the observed data with the conceptual model of the research, evaluation of the measuring and structural model and total eligibility of the model, partial least square approach was employed. In order to evaluate fitness measurement of the measuring model, convergent validity, divergent validity, and reliability of the instrument, which includes Cronbach's alpha coefficient and composite reliability, were used. In the

present research, in order to achieve a better evaluation of the reliability, both of these two criteria were used. The Cronbach alpha and the composite reliability of all the three research variables were over 0.7 and the appropriateness of the reliability could be accepted. Besides, convergent reliability (AVE) being over 0.5 for the variables show the approval of the convergent reliability of the research variables (**Table 3**).

Table 3.*Cronbach's alpha criteria, composite reliability and convergent reliability of the research variables*

| Variables | Number of questions | Cronbach's Alpha coefficients (Alpha \geq 0.7) | Convergent reliability coefficients (CR \geq 0.7) | Average extracted variance (AVE \geq 0.5) |
|--------------------------|---------------------|--|---|---|
| Perceived social support | 12 | 0.774 | 0.789 | 0.646 |
| Emotional intelligence | 28 | 0.804 | 0.828 | 0.596 |
| Academic motivation | 24 | 0.859 | 0.933 | 0.522 |

Then, divergent reliability and the factor loads of the observed variables were evaluated. Factor load is based on the calculation of the correlation of the indicators of a structure with that structure; the criterion value for appropriateness of coefficient of factor loads is 0.4 and its significance coefficient should also be over 1.96. The factor loads achieved from conducting the model in this research was over 0.4 which shows the appropriateness of this criterion.

current variables which are in the current spaces in the main diameter of the matrix are more than their correlation in the lower and the right-hand part of the main diameter. Therefore, one can state that the structure in the model have more interaction with their index than with the other structures. In other words, the divergent reliability of the model is in an acceptable level (**Table 4**).

In order to analyze the divergent reliability of the measuring model also the Fornell-Lacker criterion was used. Radical value AVE of

Table 4.*Correlation between the current variables and AVE*

| Structure | Academic motivation | Perceived social support | Emotional intelligence |
|--------------------------|---------------------|--------------------------|------------------------|
| Academic motivation | 0.722 | | |
| Perceived social support | 0.603 | 0.803 | |
| Emotional intelligence | 0.441 | 0.363 | 0.772 |

After analyzing the fitness of measurement models, it is time to analyze the fitness of structural model of the research. In the present research, three criterions of significance coefficient (T-values),

coefficient of determination (R²), and predictive power coefficient (Q²) were employed. Path coefficient of the conducted model is shown in **figure 2** and its significance is shown in **figure 3**.

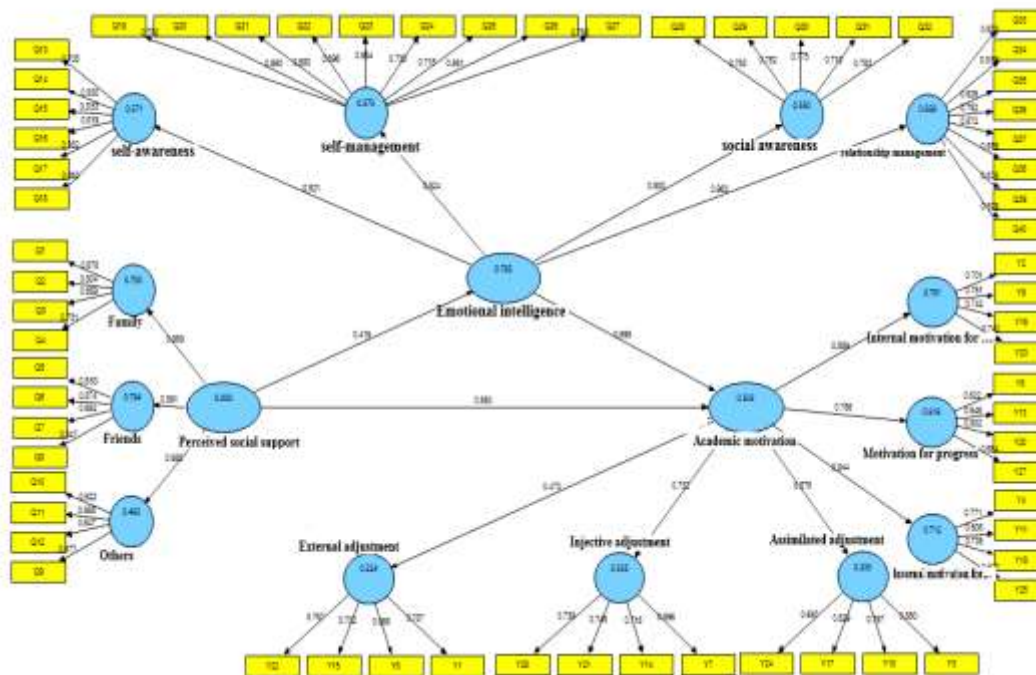


Figure 2. Path coefficient and fitness of the structural model using R2 quantity

Note: As it is shown in the above model, the exogenous variable of the model has a significant effect on the endogenous research variables.

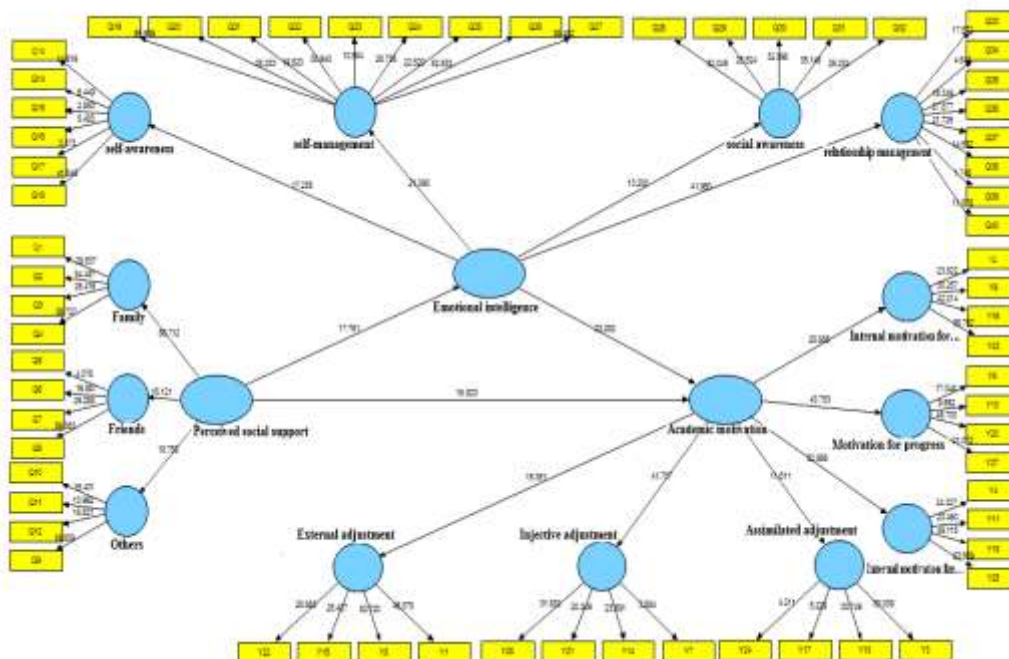


Figure 3. Fitness of the structural model using the T significance coefficients

Based on the significance coefficients in figure 3, one can say that all the relations between the variables of the research model are

significant at the 0.99 confidence level. This means that all the relations between the variables of the model were approved.

Furthermore, as it can be detected in figure 2, the quantity of R2 for emotional intelligence and academic motivation is calculated as to be 0.785 and 0.503 respectively which, considering the three R2 criterion values (0.19, 0.33, 0.67 for weak, average, and strong respectively) for each variable, is evaluated as to be at a strong level. Q2 criterion was also calculated as to be 0.596 and 0.522 for emotional intelligence and academic motivation respectively which to some extent shows the average predictive power of the exogenous variable of the perceived social support. Eventually, in order to

analyze the fitness of the overall model of the research, goodness of fit test was used which is calculated through formula 1. Considering the fact that three quantities of 0.01, 0.25 and 0.36 were introduced as weak, average, and strong quantities, acquiring 0.615 percent for GOF criterion shows very good fitness of the overall model of the research.

$$\text{Formula 1: } GOF = \sqrt{R_{Average}^2 \times AVE_{Average}} \approx 0.615$$

Finally, in table 5, the results of examining the research hypothesis is presented as direct and indirect effects. Based on the results of table 6 perceived social support directly and positively affects the academic motivation and shows 0.55% of the academic motivation in students. Perceived social support also positively and significantly affects the emotional intelligence and shows 41.9% of the changes in the emotional intelligence. Emotional intelligence

also affects positively and significantly the academic motivation and shows 69.5% of the academic motivation. Emotional intelligence also plays the role of a mediator between academic motivation and perceived social support.

Table 5.

Analysis of the direct and indirect effects

| Paths | Path coefficient | Critical value | Result |
|---|---------------------------------|--------------------|----------------------------------|
| Perceived social support → academic motivation | 0.55 | 19.823 | Accept |
| Perceived social support → emotional intelligence | 0.41 | 17.761 | Accept |
| Emotional intelligence → academic motivation | 0.69 | 23.282 | Accept |
| Perceived social support → emotional intelligence → academic motivation | | | |
| Path coefficient: 0.291 | significance coefficient :6.889 | relation :indirect | result: approval of the mediator |

In this study, Sobel test was also used in order to evaluate the significance of the effect of the mediator of a variable in the relation between two other variables. Considering the results of the Sobel test (**Formula 2**), one can say that with a confidence level of 95%,

the effect of the mediator variable of emotional intelligence, in the relation with the perceived social support with academic motivation is significant.

$$\text{Formula 2: } Z = \frac{a-b}{\sqrt{(b^2 - SQ^2) + (Q^2 - Sb^2)}} = 4.81$$

In order to identify the intensity of the direct effect through mediator variable also VAF criterion was used. VAF is achieved through formula 3. By inserting numbers in the formula 3, 0.346 is

achieved. 0.346 for VAF means that more than 34% of the effect of perceived social support on Academic intelligence is defined indirectly and through mediator variable of emotional intelligence.

$$\text{Formula 3: } vaf = \frac{a+b}{(a-b)+c} = 0.346$$

4. Discussion and conclusion

The results of the current research indicate that perceived social support directly and positively affects the academic motivation of the students of physical education. This part of the findings of the present study goes with some previous studies (Camacho, 2021; Fallahmenesh, 2018; Rezaei, 2015; Yarmohammadzadeh, 2015). In this respect, in a study conducted on the relation between perceived social support (family, teachers, and friends) and intelligence beliefs on academic motivation of the students, Fallahmenesh and Vatankhah (2018) concluded that there is a significant and positive

relation between perceived social support and academic motivation (Fallahmenesh, 2018). Rezaei et al (2015) also in a research entitled as "Prediction of academic motivation based on dimensions of social support among students of Shahid Bahonar University of Kerman" concluded that there is a significant and positive relation between social support and academic motivation (Rezaei, 2015). Besides, in their research, Yarmohammadzadeh and Feizollah (2015) settled that there is a significant relation between variables of social support and academic motivation (Yarmohammadzadeh, 2015). Similarly, in another study, Camacho et al (2021) concluded that the teachers' and peers' social support plays a significant and positive role on the

academic motivation of the students of first to tenth-grade in primary schools (Camacho, 2021). Generally, one can state that the more proper relations and the more chances a student has in their academic environment, the less they are likely to experience a diminishment in their academic motivation; the reason is that one's feeling of having an effective and positive relation either with their teachers or with their peers causes an improvement in the level of their academic motivation and, consequently, their concentration increases and leads to their being preoccupied in their assignments (Evans, 2013). Considering the effect of the perceived social support on the academic motivation of the students, it is recommended that both in the university and in each faculty, different meetings and seminars be held in order to heighten the knowledge about the effective factors on the students' academic motivation. Furthermore, holding such sessions for university professors in order to get them familiarized with their effective role in this respect and teaching support methods which could help students' academic motivation seems crucial.

Moreover, the results of data analysis demonstrate that perceived social support positively and significantly affects emotional intelligence of students of physical education. This part of the findings of the study goes with the findings of the studies conducted by Rahimzadeh and Moradianzand, 2017 and Ghafarianhatami et al, 2015 (Ghafarianhatami, 2015; Rahimzadeh, 2017). In their research, Ghafarianhatami Hatami et al (2015) showed that there is a significant and direct relation between variables of emotional intelligence and perceived social support from the family, friends and important people in one's life (Ghafarianhatami, 2015). In clarifying this finding, one can state that when the social support from parents, friends and important people in one's life increases, the feeling of self-respect, worthiness, and importance leads one to feel more efficient and have a more accurate understanding of one's emotions and, thus, their emotional intelligence increases. Others' admiration and approval (perceiving social support) increases one's understanding ability and power of adjusting their personal emotions and their sense of empowerment. Those who are not supported by the important people in their lives and receive a low perceived social support gradually lose their self-esteem and get disappointed at the dangerous and crucial situations of their life; therefore, they do not act effectively when it is needed and, finally, will show a low emotional intelligence and adjustability with situations (Maddux, 2002). Considering the fact that perceived social support positively affects emotional intelligence, through raising the awareness of the parents and teachers about the importance of emotional intelligence, we can help prepare proper environments to improve emotional intelligence; in this way they will enhance their attempt in increasing academic motivation and bringing about other successes in their children and students.

Additionally, the results of the present research indicate that emotional intelligence has a positive and significant effect on the academic intelligence of the students of physical education. This part of the research findings goes with the research findings of Zahrei et al 2021 (Zaheri, 2021); Ahrari et al 2017 (Ahrari, 2017); Arias et al, 2022 (Arias, 2022); Bimayu et al, 2020 (Bimayu, 2020); in their research, Chinyere and Afeez, 2022 (Chinyere, 2022). Zaheri et al concluded that the more emotional intelligence one has, the more their academic motivation will be (Zaheri, 2021). The results of the research conducted by Ahrari et al (2017) also shows the importance of the role of emotional intelligence in improving one's academic success (Ahrari, 2017). In a research entitled as "The effect of emotional intelligence, student's motivation toward student's achievement", Bimayu et al (2020) concluded that emotional intelligence has a significant and positive effect on the students' success and academic motivation (Bimayu, 2020). In an article entitled as "Emotional intelligence and academic motivation in primary school children", Arias et al (2022) concluded that there is a positive and significant correlation between both variables (Arias, 2022). The results of a study conducted by Chinyere and Afeez (2022) also indicated that participants' emotional intelligence

has a positive and significant relation with their academic motivation (Chinyere, 2022).

On the other hand, this part of the findings of the present research does not go with the results of the studies conducted by Chang and Tsai (2022) and Ghorbaninia and Izadi (2016) (Chang, 2022; Ghorbaninia, 2016). It appears that one of the reasons for such unevenness of the results is the minor difference in defining academic motivation and success motivation. In these three studies, academic achievement motivation was studied. In stating the findings from the present study, one can state that, generally, one's success in academic environment of the university is related to the emotional and social skills and emotional intelligence skills such as having enough motivation, tolerance, obeying orders, impulse control, the skill of asking for others' help, and expressing emotional and academic needs (Keshavarz, 2013). As a matter of fact, emotional intelligence stirs motivation in a failed person (Braun & Clarke, 2006). Besides, students with higher emotional intelligence are more realistic in their interpersonal relationships which in turn brings about their academic motivation (Sobhi Gharamalki, 2011). Considering the positive effect of emotional intelligence on academic motivation, it is recommended that academic and educational programmers pay attention to incorporating materials in textbooks which lead to the improvement of emotional intelligence and related skills. Since students are emotional, it is recommended that they not punish them. Academic workshops be prepared to teach the students how to control their emotional intelligence. It is also recommended to the students that they pay attention to their behavior and actions in dealing with others and their life affairs; they should pay attention to people's characteristics and the environment; they should try to control their emotions and take responsibility in dealing with different emotional situations.

Finally, the findings of the present research demonstrate that the effect of the emotional intelligence mediator in relation of perceived social support with academic motivation is significant and more than 34 percent of perceived social support is stated directly and through mediator variable of emotional intelligence. This part of the research findings goes with the findings of Fallahmenesh and Vatankhah (2018) (Fallahmenesh, 2018). In their research, Fallahmenesh and Vatankhah (2018) found out that improvement of perceived social support and the educations related to intelligence beliefs could underlie the increase in academic motivation of the students (Fallahmenesh, 2018). Considering the indirect effect of social support through emotional intelligence on academic motivation of the students, it is recommended that they do self-awareness exercises and get acquainted with their weaknesses and strengths; and also learn the methods of managing their emotions and feelings so that they could use them in different situations, heighten their activity and motivation, have adjustability and sympathy with others and improve their social skills so that they can have individual stability. Generally, they can improve their emotional intelligence through understanding their own feelings and behaviors and through taking responsibility which can consequently increase their academic motivation.

There are limitations to the present research which causes us to be precocious in generalizing the results of the study. First, the present study was conducted in Shahrood University of Technology. Other universities in other provinces and cities were not studied. Therefore, not studying the other universities probably affects the generalization of the findings. The present study is limited to studying the students of physical education; thus, one should be cautious in generalizing the results to students of other fields of study. Hence, it is suggested that in further studies they would analyze the variables which are related to students of other universities and other fields of study. Third, this is the first research which intermittently analyzes the effect of perceived social support on academic motivation of students of physical education with emotional intelligence as the mediator. Thus, generalizing the findings of the present study to other time periods should be done

cautiously and all the findings of the research should be preferably considered as the first points which require more analysis. That is why this research can also be conducted in the form of longitudinal study as well. Also, in this research, the movement aspect has been less studied and the level of physical activity of the students with the variables has not been investigated. Therefore, it is suggested to examine the amount of physical activity or sports participation in future studies.

Authors' contribution

Conception and design of study: H.D; data collection: E.SH; Data analysis and/or interpretation: E.SH; Drafting of manuscript and/or critical revision: H.D; Approval of final version of manuscript: M. M.

Conflicts of Interests

There is no conflict of interest.

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References

- Ahrari, E., Najafi, M & Mohammadifar, M.A. (2017). The Relation of Emotional Intelligence and Academic Achievement: the Mediating Role of Self-Esteem and Social Support. *Journal of Educational Psychology Studies*, 14(30), 1-28. [Doi: 10.22111/jeps.2018.3617](https://doi.org/10.22111/jeps.2018.3617).
- Akbari, B. (2007). Validity and reliability of Hermen's Achievement Motivation Test on the Guilan's High School Students. *Research in curriculum planning*, 21(16), 73-96. <https://www.sid.ir/paper/127508/fa>.
- Areepattamannil, S. (2011). *Academic self-concept, academic motivation, academic engagement, and academic achievement: A mixed methods study of Indian adolescents in Canada and India (Doctoral dissertation, Queen's University)*. <https://library-archives.canada.ca/eng/services/services-libraries/theses/Pages/item.aspx?Idnumber=1019467671>.
- Arias, J., Soto-Carballo, J. G., & Pino-Juste, M. R. (2022). Emotional intelligence and academic motivation in primary school students. *Psicologia: Reflexão e Crítica*, 35(1), 1-9. <https://doi.org/10.1186/s41155-022-00216-0>.
- Bahrami, N., Najafvand Derikondi, S., Bahrami, S., Karmi Vernamkhashti, P & Mahdipourkorani, L (2014). The Status of Emotional Intelligence and its Association with Demographic Variables among Students of Dezful University of Medical Sciences in 2013. *Jondishapur Scientific Medicine Journal*, 14(3), 283-292. <https://www.magiran.com/paper/1432983>.
- Bar-On, R. (2006). *The Bar-On model of emotional-social intelligence (ESI)* 1, 13-25. <https://reunido.uniovi.es/index.php/PST/article/view/8415>.
- Bimayu, W., Kristiawan, M., & Fitriani, Y. (2020). The effect of emotional intelligence, student's motivation toward student's achievement. *International Journal of Progressive Sciences and Technologies (IJPSAT)*, 20(1), 6-16. <http://ijpsat.ijsh-journals.org>.
- Bimayu, W., Kristiawan, M., & Fitriani, Y. (2020). The effect of emotional intelligence, student's motivation toward student's achievement. *International Journal of Progressive Sciences and Technologies (IJPSAT)*, 20(1), 6-16. <http://ijpsat.ijsh-journals.org>.
- Boland, H., Entezari, M & Saadat, S. (2016). The relationship between Perceived social support from family and psychological resilience with academic self-efficacy among university students. *Scientific Journal of Education Strategies in Medical Sciences*, 10(2), 115-122. <https://edcbmj.ir/article-1-1116-fa.pdf>.
- Bradberry, T., & Greaves, J. (2006). *The emotional intelligence quick book: Everything you need to know to put your EQ to work*. Simon and Schuster.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101. <https://www.tandfonline.com/doi/abs/10.1191/1478088706QP0630A>.
- Camacho, A., Correia, N., Zaccoletti, S., & Daniel, J. R. (2021). Anxiety and social support as predictors of student academic motivation during the COVID-19. *Frontiers in Psychology*, 12, 644338. <https://doi.org/10.3389/fpsyg.2021.644338>.
- Chang, Y. C., & Tsai, Y. T. (2022). The Effect of University Students' Emotional Intelligence, Learning Motivation and Self-Efficacy on Their Academic Achievement-Online English Courses. *Frontiers in Psychology*, 13, 818929-818929. [doi: 10.3389/fpsyg.2022.818929](https://doi.org/10.3389/fpsyg.2022.818929).
- Chinyere, O. T., & Afeez, Y. S. (2022). Influence of emotional intelligence ability level of electrical/electronic technology university students on academic motivation and attitude to study. *The International Journal of Electrical Engineering & Education* 59(3), 191-231. <https://doi.org/10.1177/0020720919840984>.
- Clark, M. H., & Schroth, C. A. (2010). Examining relationships between academic motivation and personality among college students. *Learning and individual differences*, 20(1), 19-24. <https://doi.org/10.1016/j.lindif.2009.10.002>.
- Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine*, 38(5), 300-314. <https://doi.org/10.1097/00006842-197609000-00003>.
- Evans, S. E., Steel, A. L., & dilillo, D. (2013). Child maltreatment severity and adult trauma symptoms: Does perceived social support play a buffering role? *Child abuse & neglect*, 37(11), 934-943. <https://doi.org/10.1016/j.chiabu.2013.03.005>.
- Fallahmenesh, E. V., H.R. (2018). Predicting the academic motivation based on perceived social support and intelligence beliefs in students. *Journal of Excellence in Counseling and Psychotherapy*, 8(32), 74-86. https://journal-counselling-islamshahr-iau.ir/article_671791.html?Lang=en.
- Fatima, S., Sharif, H., & Zimet, G. (2018). Personal and social resources interplay synergistically to enhance academic motivation. *International Journal of Educational Psychology*, 7(2), 196-226. <https://doi.org/10.17583/ijep.2018.3017>.
- Ghafarianhatami, P., Mazaheri, M., Rahman-Shenas, Sh & Esfandiarmoghadam, A. (2015). *The relationship between social support and feelings of loneliness with emotional intelligence in drug addicts leaving Tehran*. Paper presented at the National conference on the role of women in sustainable development, Ahar. (In Persian). <https://civilica.com/doc/605255>.
- Ghanbari, S., & Soltanzadeh, V. (2015). The mediating role of emotional intelligence in the relationship between research self-efficacy and academic achievement motivation (case study: postgraduate students of Boali-Sina University, Hamadan). *Educational measurement and evaluation studies*. 6(14), 41-67. <https://www.sid.ir/paper/255230/fa>.
- Ghorbaninia, R. I., F. (2016). The Relationship of Academic Achievement Motivation with Emotional Intelligence and Quality of Life of University Students. *Journal of Health-Based Research*, 3(3), 297-307. <http://hbrj.kmu.ac.ir/article-1-212-fa.html>.

- Ghorbinia, R., & Izadi F. (2016). Investigating the relationship between academic achievement motivation, emotional intelligence and quality of life in students. *Health-oriented research*, 3(3), 297-307. <https://www.sid.ir/paper/88381/fa>.
- Kekha, K. (2015). *Investigating the relationship between perceived social support and academic motivation of Zahedan high school students*. Paper presented at the International conference on psychology and educational sciences law and social sciences at the beginning of the third millennium, Shiraz. (In Persian). <https://civilica.com/doc/516545>.
- Keshavarz, N., Amini, M., Mani, A., Nabiei, P., Safari, Z & Jafari, M.M. (2013). Investigating the relationship between emotional intelligence and academic progress in medical students of Shiraz University of Medical Sciences. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, 5(3), 70-77. <https://www.sid.ir/paper/249925/fa>.
- Kline, P. (2014). *An easy guide to factor analysis*.: Routledge. <https://doi.org/10.4324/9781315788135>.
- Khosravi Nodeh, Z., & Khosravi Nodeh, M. (2014). *Investigating the relationship between emotional intelligence and academic motivation in secondary school students (a case study of high schools in Aliabad Katul)*. The second scientific research conference of educational sciences and psychology of social and cultural harms in Iran, Tehran. <https://civilica.com/doc/419105>.
- Legault, L., Green-Demers, I., & Pelletier, L. (2006). Why do high school students lack motivation in the classroom? Toward an understanding of academic amotivation and the role of social support. *Journal of Educational Psychology*, 98(3), 567-582. <https://doi.org/10.1037/0022-0663.98.3.567>
- Maddux, J. E. (2002). *Self-efficacy: The power of believing you can*. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 277-287). Oxford University Press. <https://psycnet.apa.org/record/2002-02382-020>.
- Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, 27(4), 267-298. [https://doi.org/10.1016/S0160-2896\(99\)00016-1](https://doi.org/10.1016/S0160-2896(99)00016-1).
- Parker, J. D., Taylor, R. N., Eastabrook, J. M., Schell, S. L., & Wood, L. M. (2008). Problem gambling in adolescence: Relationships with internet misuse, gaming abuse and emotional intelligence. *Personality and Individual Differences*, 45(2), 174-180. <https://doi.org/10.1016/j.paid.2008.03.018>.
- Pašková, L. (2007). Gender differences in achievement motivation. *The new educational review*, 13(3-4), 245-252. https://www.educationalrev.us.edu.pl/dok/volumes/tner_3_2_007.pdf#page=245.
- Rahimzadeh, R. M., P. (2017). *Analysis of the relationship between emotional intelligence and social support with mental health in the elderly of one area of Tehran city in 2016*. Paper presented at the The fourth national conference of knowledge and technology of educational sciences, social and psychological studies of Iran, Tehran. <https://civilica.com/doc/821887>.
- Rezaei, E., Tohidi, A & Mosavinasab, S.M.H. (2015). *Prediction of academic motivation based on dimensions of social support*. Paper presented at the he first international conference of psychology and social sciences, Tehran. <https://civilica.com/doc/534587>.
- Sahib, Kh., & Amiri, H. (2019). The relationship between emotional intelligence and academic achievement and creativity in female students of the second year of high school. *Journal of New Approaches in Islamic Studies*, 2(5), 425-449. <https://www.noormags.ir/view/fa/magazine/number/126423>.
- Schwartz, B. (2000). Self-determination: The tyranny of freedom. *American Psychologist*, 55(1), 79-88. <https://doi.org/10.1037/0003-066X.55.1.79>
- Seyedmohammadi, Y. (2021). *Motivation and excitement*. Reeve, John Marshall. <https://www.adinehbook.com/gp/product/9646184049>.
- Seyedsalehi, M. Y., J. (2014). Explaining role of academic self-efficacy on academic performance and academic motivation based on social support, academic self-concept, and personality traits: structural equation modeling. *Research in school and virtual learning*, 3(9), 7-20. (In Persian). https://etl.journals.pnu.ac.ir/article_1960.html?Lang=en.
- Sharifi, H. P. (2006). Assessment of intrinsic and extrinsic motivation and attitude towards educational condition of students in different level of study to predict school achievement. *Quarterly Journal of educational innovations*, 5(18), 171-202. http://noavaryedu.oerp.ir/article_78814.html?Lang=en.
- Shen, B., Li, W., Sun, H., & Rukavina, P. B. (2010). The influence of inadequate teacher-to-student social support on amotivation of physical education students. *Journal of Teaching in Physical Education*, 29(4), 417-432. <https://doi.org/10.1123/jtpe.29.4.417>
- Sobhi Gharamalki, N. (2011). The predictino of achievement motivation from students' emotional intelligence. *Journal of School Psychology and Institutions*, 1(3), 49-63. https://jisp.uma.ac.ir/article_34.html?Lang=en
- Song, J., Bong, M., Lee, K., & Kim, S. I. (2015). Longitudinal investigation into the role of perceived social support in adolescents' academic motivation and achievement. *Journal of Educational Psychology*, 107(3), 821. <https://psycnet.apa.org/buy/2014-52632-001>
- Taheri, A. M. F., M. (2018). The relationship of emotional intelligence and its components and anxiety symptoms among country olympiad students. *Technology of Education Journal*, 5(4), 287-298. https://jte.sru.ac.ir/article_777.html?Lang=en
- Tezci, E., Sezer, F., Gurgan, U., & Aktan, S. (2015). A study on social support and motivation. *The Anthropologist*, 22(2), 284-292. <https://doi.org/10.1080/09720073.2015.11891879>
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senécal, C. B., & Vallières, É. F. (1993). Academic motivation scale (AMS-C 28), college (CEGEP) version. *Educational and Psychological Measurement*, 52(53), 1992-1993. http://www.lrcs.uqam.ca/wp-content/uploads/2017/08/emecegep_en.pdf
- Wilson, J. M., Weiss, A., & Shook, N. J. (2020). Mindfulness, self-compassion, and savoring: Factors that explain the relation between perceived social support and well-being. *Personality and Individual Differences*, 152, 109568. <https://doi.org/10.1016/j.paid.2019.109568>
- Yarmohammadzadeh, P. F., Z. (2015). The Relationship between Social Support, Academic Motivation with Academic Self-Efficacy of High School Students. *Journal of Applied Sociology*, 27(61), 157-169. https://jas.ui.ac.ir/article_20487.html?Lang=en
- Yoshida, M., Tanaka, M., Mizuno, K., Ishii, A., Nozaki, K., Urakawa, A., ... & Watanabe, Y. (2008). Factors influencing the academic motivation of individual college students. *International Journal of Neuroscience*, 118(10), 1400-1411. <https://doi.org/10.1080/00207450701242982>.
- Zaheri, A., Eshaghi, S.Z., Kheyri, S & vashghaderi, H. (2021). The Association of Emotional Intelligence with Academic Achievement and Academic Motivation in students of Shahrekord Paramedical School in 2018-2019. *Horizon of medical education development*, 12(2), 21-32. https://hmed.mums.ac.ir/article_17062.html?Lang=en.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of personality assessment*, 52(1), 30-41. https://doi.org/10.1207/s15327752jpa5201_2.