Relationship between School Climate and Achievement Motivation in High School Students

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Abstract: The purpose of this study was to investigate the relationship between school climate and achievement motivation in high school students. The method of the present study was descriptive-correlational. The statistical population was all high school students in Shiraz in the academic year of 2018-2019. Two hundred five students were selected using multi-stage cluster sampling method. For data collection, Student Perceptions of School Climate (SPOSC) and Hermans Achievement Motivation Questionnaire (HAMQ) were used, and Pearson correlation and regression methods were used to analyze the data. The results showed there is a positive and significant correlation between school climate and achievement motivation. Also, a positive and significant relationship was observed between each of the dimensions of school climate including teacher support, peer support and autonomy with the achievement motivation. However, no significant correlation was observed between the stability of rules and the achievement motivation. The results generally showed that the school climate has a significant predictor of achievement motivation in high school students.

Keywords: School Climate, Achievement Motivation, High School Students

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Introduction

Adolescence is associated with dramatic changes in various areas, including physical, cognitive, moral and social areas, which adaptation to them can bring profound attitudes to the adolescent (Romeo, 2010). Mental health is very important for all classes, especially adolescents (Melnyk et al., 2009). Students need a good environment to learn and meet the challenges of their studies. The organization of the school and the prevailing climate has an important effect on the behavior of learners (Huang, Hochbein, & Simons, 2020). In fact, the social environment or climate reflects the collective perception of individuals of the environment in which they are and is the result of people's interactions with each other (Alhosani, Singh, & Al Nahyan, 2017), which is of particular importance in educational systems (Rudasill, Snyder, Levinson, & Adelson, 2018). Because these systems are associated with a large group of students, the atmosphere in them can affect their learning experiences and personality.

The students' perceptions of the school's psychological climate are very important. Students 'perceptions of a positive learning environment and interpersonal relationship with the teacher are among the most important factors that lead to students' motivation and academic achievement (Fan & Williams, 2018).

The school climate is also a complex structure used to describe the quantity of relationships between adults

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and students in the school. School climate is assessed using students' perceptions of each other and school staff. Students' perceptions of school supportive climate have a significant impact on their adjustment, learning commitment, and academic achievement (Aldridge & McChesney, 2018). Students, teachers, parents and other staff always evaluate the school. Research has shown that providing a positive and supportive climate for students for their smooth and easy transfer during the academic year is of particular importance. Security, confidence, respect, neutrality, high expectations and a pleasant environment are aspects of a positive climate in school (Meraviglia, Becker, Rosenbluth, Sanchez, & Robertson, 2003).

The need for achievement or the motivation for achievement was first introduced by Murray in 1970 and can be defined as "the effort and desire to accomplish something or to achieve a goal" (Hansemark, 2003). Highly motivated people strive to achieve great goals and use their efforts to achieve their ideals. The need for achievement can be seen as the result of an emotional conflict between the hope of success and the desire to avoid failure (Urdan & Schoenfelder, 2006). Achievement motivation is a combination of two psychological variables that include the desire to succeed and avoid failure and causes people to try in life, overcome obstacles and reach high standards (Anderman, 2020).

In order to be successful, there are attributes that the more one is strengthened in one's being, the more one will achieve success. Some of these components are effort-oriented, goal-oriented, realistic, expectation of success, that all are components of motivation for achievement. Motivation plays an important role in revealing certain basic needs and desires that are supported or hindered by the environment (Fong, Acee, & Weinstein, 2018). Motivation leads to the development of behavior towards success and is therefore recognized as an important determinant in the success of individuals; Also, the motivation for achievement is not an individual structure, but a set of different structures such as motivational beliefs, values, goals (Wentzel & Miele, 2009) which refers to the reasons for behavior (Guay et al., 2010) and is a fundamental stimulus for all our actions and pointing. Motivation for achievement is the basis for achieving success and achieving our dreams in life (Kim, Mok, & Seidel, 2020).

Schools and universities are educational institutions that can play a vital and influential role in the development of students' talents. Today, a wide range of behaviors and educational outcomes, including academic retardation, poor academic achievement motivation, dropout, poor academic performance and inappropriate communication with educational environments are considered as threats to the health of adolescents and young people and cause concern for parents, teachers and educators.

Maxwell, Reynolds, Lee, Subasic, and Bromhead (2017) in a study entitled "the impact of school climate and school identification on academic achievement: multilevel modeling with student and teacher data" indicated that students' perceptions of school climate significantly expound writing and numeracy achievement and this effect is mediated by students' psychological identification with the school. Moreover, staff perceptions of school climate explain students' achievement on numeracy, writing and reading tests.

Daily et al. (2020) in a longitudinal study investigated the associations between school climate and academic grades in a group of middle school students who transition into high school. They revealed that students with higher perceptions of a positive school climate demonstrated sustained or enhanced academic achievement over time and higher positive perceptions of school climate appear to strengthen students who earn.

Coelho, Bear, and Brás (2020) in a stud entitled " A multilevel analysis of the importance of school climate for the trajectories of students' self-concept and self-esteem throughout the middle school transition" indicated

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that students with more positive perceptions of school climate in the beginning of fifth grade exhibited more positive trajectories in self-concept and self-esteem. Furthermore, students from larger fourth grade classes had more positive trajectories of social self-concept compared to those from smaller classes.

Lee et al. (2017) in a study aimed at investigating the effect of school climate on students' academic achievement: A multilevel model using student and teacher data concluded that students and staff positive perception of school climate predicts students' motivation for achievement, significantly.

The present study using the theoretical and practical background in the fields of school climate and motivation for achievement, by a descriptive and analytical view sought to determine the relationship between school climate and motivation for achievement in high school students in the city of Shiraz, Iran.

Material and Method

The method of the present study was descriptive and correlational, during which while examining the significance of the relationship between school climate and achievement motivation, an attempt was made to examine the predictability of the predictor variable for the criterion variable. The statistical population of the present study includes all high school students in Shiraz who were studying in the academic year 2018-2019. There are various opinions in estimating the optimal sample size for studies related to structural equation modeling and correlation, including Kline (2015) who believes that the minimum sample in complex models is 200 people; Yuan, Wu, and Bentler (2011) also state the standard sample size between 300 and 400 people. According to researchers and experts in this field, the sample size in this study was 275 people. Using multi-stage cluster random sampling method, 303 students were interviewed, of which 275 were evaluated due to the distortion of some questionnaires. The method was that between the four education districts of Shiraz, two districts (1 and 3) were randomly selected and from all high schools in each selected district, two high schools for girls and two high schools for boys were randomly selected. A total of six high schools (3 high schools for boys and 3 high schools for girls) were selected. Two classes were selected from each high school and all class members were selected as the sample group, of which 28 inventories were excluded due to incompleteness.

To measure students' perception of the school climate, the Student Perceptions of School Climate (SPOSC) was used, which is based on the Trickett and Moos (1974) classroom environment scale and has four subscales. There are teacher support, peer support, student autonomy, and clarity and consistency of rules. The peer support subscale has two components: negative interaction with peers and school dependence, and the subscale of clarity and stability of rules also has two components, school structure and strictness of rules. Scoring is done on a 5-point Likert scale (1 = never, 2 = rarely, 3 = sometimes, 4 = most of the time, and 5 = always). In this scale, scores are determined for each component by summing the related questions, which 1-6 items is related to teacher support, 7-16 items is related to peer support, 17-21 items is related to autonomy and 22-31 items is related to the clarity and stability of the rules. This scale has good validity and reliability in measuring students' perceptions of the school climate (Way, Reddy, & Rhodes, 2007). In order to check the validity of the questionnaire of students' perception of the school climate, face validity was used. In this way, the questionnaire was reviewed and revised by several experts and specialists before its implementation and its adequacy to measure students' perceptions of the school climate was confirmed. In the present study, the reliability for the subscale of teacher support was 0.71, for the subscale of peers was 0.76, for the subscale

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of autonomy was 0.73 and for the subscale of stability and clarity of rules was 0.75. The total reliability of it was 0.78.

In the present study, the Hermans (1970) Achievement Motivation Scale was used to measure the achievement motivation variable. The questionnaire contained 29 incomplete statements along with four-choice items for each statement, whereby the participant was allowed to choose one to complete the incomplete sentence. The item choices were scored on a four-point Likert scale from 1 to 4. The scale enclosed 10 aspects of behavior in order to measure the "achievement-oriented" situation of students when they express specific patterns of academic performance such as: being achievement-motivated, persistent, and diligent in doing their academic tasks. Derakhshanrad and Piven (2016) indicated good validity and reliability for this scale in measuring achievement motivation in Iran. In the present study, the reliability coefficient of this questionnaire was reported to be 0.73 using Cronbach's alpha. Content validity was used to check the validity of the Achievement Motivation Questionnaire. In this way, the questionnaire was reviewed and revised before implementation by several professors and experts and its adequacy to assess the motivation of students' achievement was confirmed. Pearson correlation test and univariate regression were used to analyze the data. Statistical analysis was performed in SPSS version 21.

Results

In this section, descriptive findings of research variables are reported. For this purpose, the mean, standard deviation, minimum and maximum scores related to research variables have been reported.

Table 1. Mean, standard deviation, minimum and maximum score of school climate and achievement motivation

Variable	Components	Min.	Max.	Mean	SD
School climate	Teacher support	5	22	12.65	3.88
	Peer support	13	46	30.23	6.47
	Autonomy	4	20	13.73	3.71
	Stability of rules	14	48	30.86	6.44
Achievement motivation	Achievement motivation	58	111	84.76	7.98

In order to evaluate the relationship between the variables, Pearson correlation coefficient between the research variables was calculated and reported in the form of correlation matrix. Table 2 shows the correlation matrix of the research variables.

Table 2. Correlation matrix between research variables

Variables	Teacher support	Peer support	Autonomy	Stability of rules
Peer support	0.44*			
Autonomy	0.36*	0.37*		
Stability of rules	0.14	0.01	0.13	
Achievement motivation	0.46*	0.56*	0.49*	0.02

*$p < 0.01$

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According to Table 2, there are a positive and significant relationship among the dimensions of students 'perception of school climate, teacher support, peer support and autonomy and students' achievement motivation. In other words, the increase in the mentioned variables was associated with an increase in students' achievement motivation. The stability of the rules had no significant relationship with the students' achievement motivation.

Table 3 shows the results of univariate regression for the students' perception of the school climate as predictor variable for the achievement motivation as criterion variable. According to Table 3, students' perceptions of the school climate was a significant predictor of achievement motivation.

Table 3. Results of univariate regression

Predictor	Criterion	R	R^2	F	β	T	p
School climate	Achievement motivation	0.50	0.25	2.24	0.16	2.14	0.001

Discussion

The results showed that there was a positive and significant relationship between the dimensions of teacher support, peer support and autonomy with students' motivation for progress, but no significant relationship was observed between other dimensions such as rule stability and achievement motivation.

Explaining these results, we can say that students spend many hours in relation to the school environment, teachers and peers. The climate of the school, the way students interact with peers and teachers and staff as well as teachers with each other can have a great impact on students' perception of the school climate.

Home, school, and community are key contexts for adolescent development and can enhance adolescent performance and positive development at any point in life. Dietrich, Dicke, Kracke, and Noack (2015) showed that teacher support will lead to more student effort. On the other hand, motivated students should be eager to make an effort to learn. In this regard, teacher emotional support can also meet the needs of students' dependence and thus increase the level of intrinsic motivation (Ruzek et al., 2016). If students find their teacher warm and supportive, it is likely More are motivated internally and students who have a negative view of the school environment and their teacher will not have these experiences (Ruzek et al., 2016).

Bandura (1995) believes that friends and peers play an important role in strengthening and weakening motivation and other academic practices. Explaining the importance of the role of peers in motivating adolescent development, it can be said that adolescents' relationships with their peers are complex and at the same time very effective. Usually, peers agree and are influenced by each other on basic issues such as goals, aspirations and relationships. Therefore, the more the school environment and the relationships that govern it are accompanied by acceptance, respect and support, the more freedom of action, security and competence they feel. Mutual communication and support of adolescents with teachers and peers in the school environment can induce a positive feeling in the student.

These findings are also supported by previous studies (Fong et al., 2018; Huang et al., 2020; Maxwell et al., 2017; Ruzek et al., 2016). These studies found the role of teacher to be effective on students' autonomy and concluded that students whose teacher supported their autonomy were more motivated to learn lessons.

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In general, the results of the present study showed that school climate is one of the effective variables on students' achievement motivation. The results of the present study can be used in academic counseling with students. Beside the findings, the present study had some limitations that should be considered in generalizing the results. Limited study to high school students and the use of a self-report questionnaire have been among the most important of these limitations. It is suggested that the present study be conducted in other age groups and in different cultural contexts.

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