Perceived School Climate and Students' Mental Health

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Background: School climate has been linked with improved academic achievement, reduced behavioral problems and increased students' health, especially mental health. So this concept is often a target of school improvement initiatives.
Objectives: The goal of this study was to determine the effect of school climate on elementary students' mental health.
Patients and Methods: The study comprised 300 grade 6 elementary school students in Shiraz , including 165 girls and 135 boys selected through multi-stages cluster random sampling. During a 45-min school session, the students completed a self-report questionnaires tapping school climate survey provided by Haynes and his colleagues in 2001 and also the general health questionnaire developed by Goldberg in 1978. All descriptive statistics, regression and confirmatory factor analyses, were performed using SPSS 19.
Results: Simultaneous multiple regression of school climate on students' mental health showed that except for building appearance, other dimensions of school climate were predictors of elementary students' mental health.
Conclusions: According to our findings, it seems that school climate plays a critical role in student's mental health. In fact caring for and supportive school environment can promote well-being and students' mental health.

Keywords: School; Climate; Mental Health

1. Background

In recent years, school climate has gained increased attention as a factor that linked to a wide range of considerable student outcomes (1). School climate has been linked with improved academic achievement, reduced behavioral problems and increased students' health, especially mental health. So this concept is often a target of school improvement initiatives (2). Researchers recognized school climate as an essential element of successful and effective educational environment (3). School climate was defined as the quality and atmosphere of school life (4), shared values, beliefs, and attitudes that form relationships between students, teachers, and administrators. Also, these interactions direct the parameters of passable norms and behaviors for the school (3). In fact, the school climate refers to specific contextual characteristics of schools that individualize one from another (5). The national school climate council (6) in New York stated that school climate includes "patterns of school life experiences and reflects norms, goals, values, inter-personal relationships, teaching, learning and leadership practices, and organizational structures" (7). During the past three decades, scholars and educators have tried to exactly recognize some special elements that create positive school climate. Though there is no single list that summarizes the elements of school climate, nearly all scholars pay attention to the following four essential major areas: 1- safety (physical; social-emotional); 2- relationships (diversity; morale, connectedness; community-collaboration); 3- teaching and learning (support for learning; social, emotional, and ethical curricular offerings; leadership; professional development); 4- environment (quality and structure) (4).

Studies have found that the social, emotional and affective qualities of a school environment that represent a school's climate influence a wide range of student outcomes. These include academic outcomes (academic motivation, cooperative learning, test scores, and attendance) (7), social and emotional outcomes (violence, bullying and victimization, alcohol, and drug use behaviors) (7) and psychological outcomes (anxiety, psychiatric problems, and depression,) (7). Several of these studies have found that a caring and nurturing school climate influences a key outcome known to impact academic functioning and achievement on mental health (7, 8). In other word, mental health is one of the important psychological outcomes seriously affected by school climate. The world health organization (WHO) defined health as "…a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (9). Mental health is clearly an integral part of this defi-

nition. Mental health is described by WHO as "…a state of well-being in which the individual realizes his/her own abilities, can cope with the life normal stresses, can work productively and fruitfully, and is able to make a contribution to his/her community" (9). This means that mental health plays a basic role in individual and community because of its impact on well-being and effective functioning. The main concept of mental health is compatible with its wide and varied interpretation across cultures. Multiple and interacting social, psychological and biological factors can determine mental health and mental illnesses, just as health and illness in general.

Over the past years some research showed that a positive school climate is associated with wide ranging student outcomes. For example, there are positive relationship between perceived positive school climate and academic achievement (10, 11). Moreover, desirable school climate is linked to lower levels of psychiatric problems, academic stress and depressive symptoms, personality disorder symptoms, and anxiety trait test among students (12-14). Also, research state that healthy school climate is associated with lower levels of delinquency, bullying, and victimization among students (15-21). The considerable evidence showed that the interpersonal, organizational and instructional "climate" of schools influences students' compatibility such as academic adjustment (22, 23). In early adolescence, a positive and caring school climate is predictive of healthy behavioral outcomes, socio-emotional adjustment, and perceptions of satisfaction for students (24-26). Moreover, seeking suitable school climate predicts and is related to increased positive youth development, health improvement attempt, effective risk prevention, and reduced behavioral and emotional problems of students (7, 20, 27-30). More specifically, a positive school climate and school health can promote students' mental health (23, 31).

2. Objectives

The goal of this study was to determine the effect of school climate on elementary students' mental health. We hypothesized that dimensions of school climate can predict students' mental health.

3. Patients and Methods

This is a descriptive-correlative study comprising 300 grade 6 elementary school students (165 girls and 135 boys) selected by multi-stages cluster random sampling methods from different elementary schools of Shiraz. At first, 8 school of 4 Shiraz' education district were selected, and one class of sixth graders was then randomly selected to study all students in this class. The participants completed self-report questionnaires on school climate survey and general health in the classroom during a 45-minutes school session. It should be noted that participants completed the questionnaires of their own volition, remained anonymous and were not asked by the researcher to reveal confidential details in the questionnaires. All descriptive statistics, regression and confirmatory factor analyses, were performed using SPSS version 19. To analyze the data, relationships between variables were examined, using Pearson product-moment correlations. Also simultaneous multiple regression was performed to investigate the prediction of students' mental health through school climate.

3.1. Research Tool

Two questionnaires including school climate survey (SCS) and general health questionnaire - 28 (GHQ-28) were used in the current study.

3.1.1. School Climate Survey

In 2001, Haynes et al. (32) introduced the school climate survey (SCS) with 42 items for measuring students' perceptions and feeling about their schools. Perceptions of school had six dimensions. These included discipline and order (safety and degree to which rules are conformed), interpersonal relations of student (behavior and treatment of students to each other), student-teacher relationship (competence of teachers and their relational ability), parental involvement (frequent visit of the school by parent, or in fact, connection between school and home), building appearance (school building appearance and its maintenance), and resource sharing (the extent to which all students are equally able to access school resources and activities). Using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), students endorse statements. Having reverse scored the appropriate items; a mean score for each domain is calculated. The internal consistency for each of the domains of this scale in the manual reports is above 0.70 (33). In this study, the coefficient alpha values for dimensions were as follows: 0.65 (resources sharing), 0.70 (discipline and order), 0.68 (parental involvement), 0.77 (building appearance), 0.84 (student–teacher relationship), and 0.90 (interpersonal relations of student).

3.1.2. General Health Questionnaire (GHQ)

Goldberg (34) developed the GHQ scale with 28-items for measuring emotional distress which has been translated into 38 languages. In this scale the respondent is asked to compare his or her recent psychological condition with his or her usual state. Using factor analysis method, this scale, which needs 5 minutes to complete, has been divided into four subscales which includes somatic symptoms (items 1 - 7); anxiety/insomnia (items 8 - 14); social dysfunction (items 15 - 21), and severe depression (items 22 - 28), (18). Some of the items in this scale include 'Have you found everything getting on top of you?', 'Have you been getting scared or panicky for no good reason?', and 'Have you been getting edgy and bad tempered. Based on the Likert scoring procedure that ranges from 1 to 5, the whole scale score ranges from 28 to 140. Higher score on

this scale indicates the poorer psychological well-being of student.

Several studies on different clinical populations have examined reliability and validity of the scale. For example, Banks (35) has detected 100 per cent sensitivity (sensitivity refers to percentage of patients who score below a threshold value) for the threshold score of GHQ-28, where Goldberg and Bridges (36) have found 87 per cent sensitivity for this scale in English-speaking samples. In this study Cronbach alpha coefficient was calculated to determine the reliability of the scale. Alpha coefficient for somatic symptoms, social dysfunction, anxiety/insomnia, and severe depression were 0.70, 0.66, 0.78, and 0.79, respectively.

4. Results

For analysis of the data, at first correlations between the measured variables were calculated. The Pearson correlations between all the measures are shown in Table 1, where there were significant correlations between most of the subscales of GHQ with six dimensions of school climate. According to the results obtained, only these correlations were not significant: 1) correlations between anxiety/insomnia with order and discipline, student-teacher relations, building appearance and sharing of resources, 2) correlations between social dysfunction with parental involvement and building appearance, and 3) correlations between severe depression with building appearance and sharing of resources.

Also, the simultaneous multiple regression was performed to investigate the prediction of student's mental health by school climate. The results showed that, "order and discipline", "student interpersonal relations", "student-teacher relations" and "sharing of resources" were significant predictors of the "somatic symptoms". In addition, only "parental involvement" predicts anxiety/insomnia subscale. Also, "order and discipline", "student interpersonal relations" and "sharing of resources" were significant predictors for social dysfunction. Moreover, only "order and discipline" was significant predictor for severe depression. Finally, for global score of GHQ expect "order and discipline", "student interpersonal relations" and "parental involvement" were significant predictors. As evident, the obtained beta coefficients are negative and because the GHQ measures the symptoms of mental health disorders, the negative coefficients in this study express the positive relationship between school climate and mental health. The results obtained from analysis are summarized in Tables 2 - 4.

Table 1. Correlations Matrix of School Climate and Components of Students' Mental Health in 2014-2015 Academic Years

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. School climate	1											
2. Order and discipline	0.60 [a]	1										
3. Student interpersonal relations	0.54 [a]	0.45 [a]	1									
4. Student-teacher relations	0.67[a]	0.29[a]	0.30[a]	1								
5. Parental involvement	0.45 [a]	0.15 [b]	0.02	0.24 [a]	1							
6. Building appearance	0.60 [a]	0.20 [a]	0.04	0.16 [b]	0.22 [a]	1						
7. Sharing of resources	0.63 [a]	0.05	0.01	0.33 [a]	0.17 [a]	0.56 [a]	1					
8. Global score of GHQ	-0.41 [a]	-0.37 [a]	-0.43 [a]	-0.17 [a]	-0.27 [a]	-0.16 [b]	-0.07	1				
9. Somatic symptoms	-0.45 [a]	-0.35 [a]	-0.38 [a]	-0.13 [b]	-0.16 [a]	-0.23 [a]	-0.30 [b]	0.57 [a]	1			
10. Anxiety/Insomnia	-0.19 [a]	-0.08	-0.23 [a]	-0.07	-0.22 [a]	-0.12	-0.20	0.75 [a]	0.20 [a]	1		
11. Social dysfunction	-0.10	-0.24 [a]	-0.25[a]	-0.02 [a]	-0.09	-0.03	-0.18 [a]	0.57 [a]	0.11	0.20 [a]	1	
12. Severe depression	-0.33 [a]	-0.39 [a]	-0.25 [a]	-0.24 [a]	-0.18 [a]	-0.06	-0.06	0.57 [a]	0.25 [a]	0.13	0.25 [a]	1

[a] $P < 0.05$.
[b] $P < 0.10$.

Table 2. Model Summary [a]

Model	R	R Square	Adjusted R Square	Standard Error	F	P Value
Somatic symptoms	0.54	0.29	0.27	0.43	14.07	0.000
Anxiety/insomnia	0.34	0.11	0.09	0.71	4.50	0.000
Social dysfunction	0.37	0.13	0.11	0.55	5.40	0.000
Severe depression	0.43	0.19	0.16	0.45	8.00	0.000
Global score of GHQ	0.53	0.28	0.26	0.32	13.72	0.000

[a] Abbreviation: GHQ, general health questionnaire.

Table 3. Multiple Regression of School Climate on Somatic Symptoms, Anxiety/Insomnia and Social Dysfunction

Variables	Somatic Symptoms			Anxiety/Insomnia			Social Dysfunction		
	B	β	P	B	β	P	ß	B	P
Constant	0.41		n.s	0.76		n.s	1.49		0.00
Order and discipline	-0.22	-0.21	0.00	-0.13	-0.08	n.s	-0.20	-0.16	0.03
Student interpersonal relations	-0.40	-0.32	0.00	-0.49	-0.27	n.s	-0.27	-0.19	0.01
Student-teacher relations	-0.17	-0.15	0.02	-0.06	-0.03	n.s	-0.05	-0.04	n.s
Parental involvement	-0.14	-0.10	n.s	-0.45	-0.22	0.00	-0.17	-0.10	n.s
Building appearance	0.00	0.00	n.s	-0.27	-0.13	n.s	-0.04	-0.02	n.s
Sharing of resources	-0.33	-0.31	0.00	-0.12	-0.08	n.s	-0.26	-0.21	0.01

Table 4. Multiple Regression of School Climate on Severe Depression and Global Score of General Health Questionnaire [a]

Variables	Severe Depression			Global Score of GHQ		
	B	ß B	P	B	β	P
Constant	0.86		0.00	0.85		0.00
Order and discipline	-0.33	-0.32	0.00	-0.14	-0.18	0.01
Student interpersonal relations	-0.08	-0.07	n.s	-0.32	-0.35	0.00
Student-teacher relations	-0.11	-0.10	n.s	-0.04	-0.05	n.s
Parental involvement	-0.15	-0.11	n.s	-0.24	-0.23	0.00
Building appearance	-0.07	-0.05	n.s	-0.06	-0.06	n.s
Sharing of resources	-0.02	-0.02	n.s	0.00	0.00	n.s

[a] Abbreviation: GHQ, general health questionnaire.

5. Discussion

The present study sought to examine the effect of school climate on predicting components of students' mental health in the elementary school setting. In general, the results obtained provide empirical evidence that a caring and supportive school environment and climate promotes the well-being and mental health of the students, which can contribute to the available literature.

As the results demonstrate, expect "building of resources" other dimensions of school climate predicted students' mental health. These findings is consistent with the results of previous study (37-40) where students who feel connected to their school communities as well as supported and cared for by teachers and other school staff have enhanced well-being and motivation and lower likelihood of exhibiting depressive symptoms and thoughts of suicide. One explanation for this finding is that school-based approaches that promote such aspects as school assemblies, activities, clubs, cultural displays (i.e. bulletin boards), and extracurricular activities can help create a sanctuary for students experiencing psychological strain of household and community stressors (37). In a recent study, McGuire et al. (38) demonstrated that school efforts to make a classroom or school culture compatible with transgendered students, influenced the way these students felt emotionally and socially connected to other students and school staff. At the same time,

these "transgender friendly" approaches transformed the cultural norms of students and staff, making them more welcoming for transgendered students.

According to the findings, it seems that school climate play a critical role in student's mental health. In fact caring and supportive school environment can promote well-being and mental health of the students. In other world, these results support developmental theories that express emotional supports, for both teachers and students, are essential for the mental health and psychological well-being of students (27, 39, 40).

One limitation to this study is that it deals with elementary school student and the results obtained cannot be extrapolated to other populations. But based on the available literature, our findings can be generalized to include other populations such as older age school students. Also, because students' experiences outside of their present environment (e.g., academic and social risk factors, as well as demographic characteristics), affect their perceptions of school climate (33), future studies using more potentially objective assessments (e.g., behavioral observations; teacher and parent reports of school climate) are needed to explore school climate, in part, and provide external validation of the youth self-report data. Furthermore, longitudinal research is needed to confirm the hypothesized direction of assumed relationships in

the current study, and to determine the impact of interventions on enhancing school climate on student mental health. For example, instead of students' mental health being affected by school climate, the situation may be reversed, such that students with poor mental health are more likely to have negative perceptions of their school climate.

Despite these limitations, the findings of this study help contribute to the literature by demonstrating that students with greater mental health have a more positive perception of the school climate. Such results suggest that the effort to develop a positive school climate is a global effort and is highly effective in promoting mental health and mental wellness.

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Authors' Contributions

Study concept and design: Naeimeh Kohoulat, Mohammad Reza Dehghani, Najmeh Kohoulat; acquisition of data: Najmeh Kohoulat; rafting of the manuscript: Naeimeh Kohoulat critical revision of the manuscript: Mohammad Reza Dehghani; statistical analysis: Naeimeh Kohoulat, Najmeh Kohoulat; technical support: Mohammad Reza Dehghani; study supervision: Najmeh Kohoulat.

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