

# Psychometric Analysis of the Translated Version of the Inviting School Survey-Revised (ISS-R-2015) and Perceived School Climate in Diverse Tehran Schools

Maryam Safarzadeh (Ph.D. Candidate)

Dr. Hassan Asadzadeh

Dr. Ali Delavar

Dr. Fariborz Dortaj

Dr. Noorali Farookhi

University of Allameh Tabataba'i, Tehran, Iran

## Abstract

The present study examined the school climate of various types of schools in Tehran Iran. School climate was defined as the perceptions of 9<sup>th</sup> grade pupils in five areas: People, Programs, Policies, Processes, and Places based on the Invitational Theory and Practice paradigm. In this study we examined the climate of three types of schools: public, government samples, and nonprofit schools. In order to examine this, a valid and reliable instrument that measure the perceptions of school climate was needed. Therefore, the researchers used the Inviting School Survey (Revised Version 2015, ISS-R) based on an investigation of the factor structure, validity and reliability of the ISS-R (translated form). Results showed that translated version of ISS-R had an acceptable internal consistency, Cronbach's alpha coefficient for the total scale was 0.96 and for subscales was between 0.73 and 0.92 and confirmatory factor analysis confirmed that the structure of the translated version of ISS-R provided an acceptable fit with the data and all goodness indicators of fitness for the model. The results of the study showed that unfortunately the school climate for Tehran public schools were identified as disinventing. For these schools, the mean of most factors was less than 3. Program (3.09) and Process (3.04) factors for these schools were identified as somewhat inviting. However, with the other two types of Tehran schools studied, all factors but place were identified as somewhat inviting. The mean of the place factor for government samples and nonprofit schools was identified as disinventing.

*Keywords:* Inviting schools, Tehran public schools, Tehran government sample, Tehran nonprofit schools, School climate.

## Introduction

There is growing evidence that school climate is one of the most important factors to student achievement, success, and psychological well-being (Fan, Williams, & Corkin, 2011; Zullig, Koopman, Patton, & Ubbes, 2010; Cohen, McCabe, Michelli, & Pickeral, 2009). School climate influences healthy development as well as effective risk prevention, positive youth development, and increased teacher and student retention (Cohen et al., 2009; Huebner & Diener, 2008). School administrators should be aware of the perceptions from the school community in order to make informed decisions about school development. Therefore, they need reliable and valid instruments that measure the perceptions of school climate from the school community. The *Inviting School Survey-Revised (ISS-R)*, grounded on Invitational Theory and Practice, seeks to meet this need. The ISS-R was designed to assess the total school climate and the five

environmental areas as outlined by Invitational Education theory: People, Places, Policies, Programs, and Processes (Purkey & Novak, 1996, 2008; Purkey & Schmidt, 1990).

The goal of education is to increase the ability of students to adapt to the rapid changes of the world and facing the challenges of globalization and information technology in the future. Educators can improve a student's opportunities for academic success by changing the school environment (Lehr, 2004). The positive school climate makes students have a chance to get quality education and realize high academic achievement (McEvoy & Welker, 2000). Since today the theory of creating an inviting environment in schools, students' self-concept development and positive perception of the school are supported as the basis of the quality education, researcher intends to examine students' perceptions about their school climate in Tehran. In order to assess the inviting and disinviting areas of schools, having appropriate instrument is essential. Therefore, the introduction and presentation of an appropriate instrument and its psychometric evaluation (factor validity and reliability) is needed in this research. In the present study, school climate is defined as the perceptions of 9<sup>th</sup> grade pupils in five areas: People, Programs, Policies, Processes, and Places based on the Invitational theory and Practice Paradigm. In particular, the purposes of this study are: 1) to examine the reliability of inviting school survey. 2) To examine the validity of inviting school survey. 3) To examine school climate of Tehran's schools.

### **The Inviting School Survey-Revised (ISS-R)**

The Inviting School Survey-Revised based on Invitational Theory and Practice, developed by William W. Purkey and colleagues (Purkey, 1978; Purkey & Stanley, 1991; Purkey & Novak, 1996; Purkey & Schmidt, 1987, 1990, 1996) and was developed to empirically identify areas in a school that are inviting and disinviting. Originally, the *ISS* was a 100-item, Likert scale instrument that was scaled manually and used by a small number of schools (Purky and Fuller, 1995). In 2004, a detailed psychometric study of the original 100-item *ISS*, was conducted by Smith & Bernard (Smith & Bernard, 2004). The results of this study and further analyses, such as factor and reliability analyses, showed that reducing the present 100-item *ISS* to 50-item did not compromise its reliability significantly (Smith & Bernard, 2004). The reliability (internal consistency) of the Inviting School Survey was evaluated by Chronbach's alpha coefficients. Results of the analyses can be found Table 1. As shown by the results the internal consistency of the *ISS-R* is reasonably good.

Table 1

*Inviting School Survey Chronbach's Coefficient Alphas for 100 and 50 Item (Smith & Bernard, 2004)*

Number of Items	People	Program	Process	Policy	Place	Total
100	0.81 30 items	0.54 10 items	0.68 20 items	0.61 20 items	0.71 20 items	0.93 100 items
50	0.77 16 items	0.48 7 items	0.49 8 items	0.52 7 items	0.66 12 items	0.88 50 items

Smith (2005) revised the original 100-item instrument to become a 50-item, on-line, computer scored instrument, the Inviting School Survey-Revised (*ISS-R*). Both the original *ISS* and the *ISS-R* are designed to be completed by students (ages 8 and above), parents, teachers, school administrators, support staff, and volunteers.

The ISS-R provides school communities with a user-friendly, theoretical-grounded, empirical-based instrument that assists in evaluating schools for future development, as the ISS-R identifies areas of strength and weakness in a school's climate and the five environmental domains of People, Programs, Processes, Policies, and Places, as outlined in Invitational Education theory (Purkey & Novak, 1996). The Inviting School Survey (*ISS-R*) presents a global picture of life in school as inviting or disinviting.

The *ISS-R* (Smith, 2015) based on the theoretically five-factor model is comprised of 50 items in Likert scale: 1. People (16 items), 2. Program (7 items), 3. Process (8 items), 4. Policy (7 items), 5. Place (12 items). The *ISS-R* is designed for electronic, self-administration through the IAIE website. Individuals completing the *ISS-R* are asked to respond to all items ranging from 1, 'Strongly Disagree' to 5, 'Strongly Agree' (0, 'Not Applicable' is treated as missing, if a question is not relevant to the participant's school context). If there are less than six missing or 'N/A' responses these items' scores are replaced by the participant's subscale item mean. As such, the *ISS-R* total scale score can range from 50 to 250. Surveys with more than 5 missing responses are not scored. The validity of the *ISS-R* has been empirically documented and its reliability (internal consistency) has been reported to range from .81 to .97 (Smith, 2015). Results has been shown in Table 2.

Table 2

*Inviting School Survey-Revised Chronbach's Coefficient Alphas for 50 Item (Smith, 2015)*

Number of Items	People	Program	Process	Policy	Place	Total
50	0.93	0.82	0.85	0.81	0.89	0.97

### School climate

According to the National School Climate Centre (NSCC, 2011), school climate is the quality of life in a school experienced by students and staffs. School climate reflects the norms, goals, expectations, values, interpersonal relationships, teaching and learning practices, and organizational structures. A positive school climate fosters students' development and learning necessary for a productive, contributing, and satisfying life in a democratic society. The prevailing school climate is acknowledged to be one of the most important influences on students' achievement and success (Purkey, 2011).

A positive school climate is characterized by trust, effective communication, cooperation, and warmth and commitment shown by school staff towards students, leading to a sense of membership in the school community (DeLuca & Rosebaum, 2000). Students in these schools are more engaged in learning, feel more attachment to the school and staff, and exert greater effort. Longitudinal studies have also suggested that school climate can impact upon student achievement (Esposito, 1999; Ross & Lowther, 2003).

In Invitational Education theory school climate is composed of 5 domains: People, Places, Policies, Programs and Processes. These domains in schools should be so intrinsically inviting as to create a school climate in which each individual is encouraged to develop to his or her highest level intellectually, socially, physically, psychologically and morally (Purkey & Schmidt, 1990). In the current study school climate is defined as the perceptions of 9<sup>th</sup> grade pupils in five areas: People, Programs, Policies, Processes, and Places based on the Invitational theory and Practice Paradigm.

## **Inviting schools**

An inviting school implements the principles of Invitational Education and deliberately adopts policies and practices that are compatible with it (Novak, Rocca & DiBiase, 2006; Purkey & Novak, 1996). The four qualities of Invitational Theory are respect, trust, optimism, and intentionality.

- Respect: People are able, valuable, and responsible and should be treated accordingly.
- Trust: Educational and other helping relationships should be cooperative, collaborative activities where process is as important as product.
- Optimism: People possess untapped potential in all areas of worthwhile human endeavor.
- Intentionality: Human potential can best be realized by creating and maintaining places, policies, process, and programs, specifically designed to invite development, and by people who are intentionally inviting with themselves and others, personally and professionally.

The five domains of Invitational Education: people, places, policies, programs, and processes are powerful part of environmental components that provide a framework for transforming a whole school to become invitational.

- People: In inviting school, the most important domain of school climate is “People”. People create and maintain the invitational climate through their actions, attitudes, words and relationships. It is fundamental to the invitational model that all individuals should demonstrate respect for one another. In school, this respect is evident in the caring, supportive and encouraging behaviors that teachers, other adults and students display toward others (Smith, 2007).
- Place: A pleasant physical environment is crucial for helping students feel valued and comfortable. Any part of the physical environment that is unpleasant, unattractive, littered, grimy, dusty or dingy is disinventing. To change an environment for making a school more inviting, the most obvious component to begin is the physical setting.
- Process: Process is the factor that indicates how the school is operating, how the people are acting, rather than what is being done.
- Policies: Policies refer to guidelines, rules, procedures, codes, directives and so forth that regulate the ongoing functions of the school. Policies reveal the perceptual orientations of the policy-makers.
- Programs: Programs, represents an area that can be either inviting or disinventing for students. Some programs are not inviting because they focus on narrow goals and neglect the wide scope of human concerns.

## **Statistical population, sample and sampling method**

This research is part of a non-experimental research conducted within the framework of a descriptive-analytic research project. The statistical population of the study included 9th grade of Public schools, Government sample and Non-profit students studying in the academic year of 2016-2017 in Tehran. The statistical population included 88475 (45225 boys and 43250 girls) ninth grade pupils. According to the number of scale questions and based on the Morgan table, the sample size was estimated at 384 people. In this study, for generalizability and avoidance of loss in the sample, 400 students of the 9th grade were selected through stratified sampling and responded to the translated version of the ISS-R. Out of all distributed questionnaires, 13 non-completed questionnaires were excluded. Finally, 387 (216 girls and 171 boys, consisted of 296 students of Public schools, 64 Nonprofit and 27 students Of Government sample schools) formed the research sample.

## Methodology

In this study to measure school climate, data were collected through a translated version of ISS-R questionnaire. Since, this instrument was used for the first time in Iran, and we translated it to Persian and examined the psychometric analysis (reliability and validity) of the translated version of ISS-R. For this, we carried out the following steps: Step 1: Two bilingual individuals translated the English version (ISS-R) into a Persian version (ISS-RP). Step 2: Two bilingual experts, different from the two translators used in Step 1, converted the translated instrument back into the original English language without having seen the original instrument. Step 3: Experts in the field of educational psychology, examined both versions in terms of consistency, grammar, and structure. Step 4: After reaching a consensus in relation to the consistency of the translations of the ISS-R, a Persian version of the ISS-R was produced.

At last, sample group completed the translated version of ISS-R questionnaire. Cronbach's alpha and coefficient confirmatory factor analysis were used to verify and determine the reliability and validity of the translated version of ISS-R questionnaire. Results of psychometric analysis has been reported in finding section. Participants responded to 50 items on a five-point Likert scale ranging from "strongly disagree" to "strongly agree" ("N/A "if a question is not applicable to the participant's context). The items addressed each of the five factors: People, Places, Policies, Programs, and Processes. After completing the questionnaire by participants, the score of each factor was calculated. Finally, Descriptive quantitative analyses (mean, standard deviation, Standard error of estimation, minimum, maximum) were conducted using SPSS and LISREL to measure school climate and to determine the validity and reliability of translated version of the inviting school survey.

## Findings

In the current study the reliability (internal consistency) of the Inviting School Survey was evaluated by Chronbach's alpha coefficients. Results of the analyses can be found Tables 3-8. As shown by the results, the internal consistency of the translated version of ISS-R is reasonably good, and the coefficients are comparable with Smith's research results (2015).

Table 3

*Chronbach's Coefficient Alphas for the translated version of ISS-R*

Number of Items	People	Program	Process	Policy	Place	Total
50	0.929	0.858	0.884	0.737	0.734	0.963

In this research, the reliability of each area is examined separately. In the following tables, the descriptive indexes of the questions (including the correlation of the question with the whole test and the reliability coefficients of the remaining questions with the removal of each question) for each area are presented. In these tables, the correlation of each item with the total score of the questionnaire was calculated and reported, which indicates that the questionnaire is desirable. Also, the reliability of the questionnaire after the removal of each item is also recalculated, which is known as the Loop method. Removing each item indicates that when the items are deleted, the total reliability of the questionnaire decreases or there is no significant change in the desirability of these statements. Based on the results of Table 3, it is clear that the reliability of all subscales is good. In the following, descriptive features of the measuring tools including mean of scale with

question deletion, scale variance with deletion of question, corrected whole correlation and Cronbach's alpha with question deletion for all subscales are discussed.

Table 4  
*Descriptive features of people*

Question	Scale mean with question deletion	Scale variance with question deletion	Modified partial-whole Correlation	Cronbach's alpha with question deletion
<b>Q3</b>	47.9974	147.863	.539	.927
<b>Q6</b>	46.9302	146.728	.607	.926
<b>Q9</b>	47.1395	141.364	.764	.921
<b>Q12</b>	47.3902	142.581	.739	.922
<b>Q15</b>	46.5530	146.320	.611	.925
<b>Q18</b>	47.2481	146.581	.652	.925
<b>Q21</b>	46.4599	144.892	.711	.923
<b>Q24</b>	47.1705	140.054	.789	.921
<b>Q27</b>	47.0749	141.308	.760	.922
<b>Q30</b>	47.1912	148.901	.505	.928
<b>Q33</b>	46.6822	142.689	.653	.924
<b>Q36</b>	46.8062	145.183	.580	.926
<b>Q39</b>	47.1680	143.000	.645	.925
<b>Q42</b>	46.7287	143.566	.670	.924
<b>Q45</b>	46.7106	144.849	.515	.929
<b>Q48</b>	47.5013	145.945	.639	.925

Table 5  
*Descriptive features of program*

Question	Scale mean with question deletion	Scale variance with question deletion	Modified partial-whole Correlation	Cronbach's alpha with question deletion
<b>Q2</b>	19.4057	21.568	.608	.841
<b>Q10</b>	19.1680	19.430	.723	.823
<b>Q17</b>	20.1137	22.288	.428	.865
<b>Q23</b>	19.1886	19.304	.711	.825
<b>Q31</b>	19.3979	21.701	.567	.846
<b>Q38</b>	19.1964	20.143	.677	.830
<b>Q46</b>	18.8165	20.601	.664	.832

Table 6  
*Descriptive features of process*

Question	Scale mean with question deletion	Scale variance with question deletion	Modified partial-whole Correlation	Cronbach's alpha with question deletion
<b>Q1</b>	22.6822	27.901	.579	.876
<b>Q7</b>	22.0284	25.696	.672	.868
<b>Q14</b>	21.6382	25.356	.694	.865
<b>Q22</b>	22.0465	26.863	.645	.870
<b>Q29</b>	22.5685	26.536	.675	.867
<b>Q35</b>	22.7080	27.326	.562	.879
<b>Q43</b>	21.8450	26.199	.736	.861
<b>Q50</b>	21.9070	27.173	.664	.869

Table 7  
*Descriptive features of policy*

Question	Scale mean with question deletion	Scale variance with question deletion	Modified partial-whole Correlation	Cronbach's alpha with question deletion
<b>Q5</b>	16.7003	16.770	.395	.719
<b>Q11</b>	17.1137	16.474	.484	.699
<b>Q19</b>	17.4238	17.162	.494	.701
<b>Q26</b>	17.5297	17.296	.485	.703
<b>Q34</b>	16.4935	15.152	.509	.692
<b>Q41</b>	17.2661	17.527	.285	.745
<b>Q47</b>	16.7442	14.336	.555	.680

Table 8  
*Descriptive features of place*

Question	Scale mean with question deletion	Scale variance with question deletion	Modified partial-whole Correlation	Cronbach's alpha with question deletion
<b>Q4</b>	29.5323	20.219	.221	.734
<b>Q8</b>	28.2222	18.862	.512	.702
<b>Q13</b>	27.6848	18.237	.488	.701
<b>Q16</b>	28.9535	18.666	.520	.700
<b>Q20</b>	28.9587	18.915	.402	.712
<b>Q25</b>	28.3101	18.696	.440	.707
<b>Q28</b>	28.6021	18.696	.379	.715
<b>Q32</b>	29.3695	20.513	.211	.734
<b>Q37</b>	29.5814	20.415	.209	.735
<b>Q40</b>	28.7545	19.486	.282	.728
<b>Q44</b>	28.5866	18.658	.416	.710
<b>Q49</b>	27.2868	18.133	.367	.719

The confirmatory factor analysis was used to confirm the factor structure of the instrument (using Lisrel version 8.5). To examine fit modeling, fit indices have been used which are reported in Table 9.

Table 9  
*Confirmatory Factor Analysis Indicators of Inviting School Survey*

index	Chi-square	RMSEA	NFI	NNFI	CFI	GFI	AGFI
estimate	3144.99	0.074	0.95	0.97	0.97	0.91	0.89

P < 0.01

As shown in table 9 (above), the results indicate that all the indices are highly desirable, and the model is fitted with the data, which indicates the alignment of the elements with the theoretical construct. Table 10 shows the most important parameters of the structural measurements and all reported factor loads are significant at the surface ( $p < 0.01$ ). In table 10 (p. 38), some parameters including standardized load factor, t value and multiple squared correlation are reported. These parameters point to whether the questions of each subscale are appropriate or not. In this table, the value of t shows that all factor loadings of questions are significant at the level ( $p < 0.01$ ). As shown in the above table, in accordance with the model presented in Table (9), which confirms the fitness and suitability of the model, the measurement parameters of the structures are appropriate. The standardized values of the parameter represent the factor load power of each question on the factor of the various sub-scales, and it shows that each question explains how much the sub-scale variance is. Whatever factor load is big, variance will be

explained better. And in sum these factor loads show the variance of each sub-scale. T values greater than 2 shows variance significant. According to Table 10, All reported cases are significant at level ( $p < 0.01$ ). In fact these coefficients are the correlation coefficient of linear correlation and the correlation coefficient of variance indicated. In this table, all the questions of the questionnaire are presented and, in sum, these results indicate that the ISS-R has all necessary parameters for evaluating inviting and disinviting parts of a school.

Table 10  
*Parameters of the ISS-R Measurement Pattern in Confirmatory Factor Analysis*

		$\beta$	t	Multiple squared correlation
1	Students work cooperatively with one another.	0.54	12.61	0.36
2	Everyone is encouraged to participate in athletic (sports) programs.	0.61	14.48	0.45
3	The principal involves everyone in the decision-making process.	0.62	11.78	0.32
4	Furniture is pleasant and comfortable.	0.2	5.14	0.07
5	Teachers are willing to help students who have special problems	0.62	12.02	0.33
6	Teachers in this school show respect for students.	0.68	13.8	0.41
7	Grades are assigned by means of fair and comprehensive assessment of work and effort.	0.8	16.67	0.55
8	The air smells fresh in this school.	0.36	10.85	0.3
9	Teachers are easy to talk with.	0.91	18.39	0.62
10	There is a wellness (health) program in this school.	0.87	18.44	0.64
11	Students have the opportunity to talk to one another during class activities.	0.54	11.31	0.3
12	Teachers take time to talk with students about students' out-of-class activities.	0.85	17.33	0.57
13	The school grounds are clean and well-maintained.	0.44	10.82	0.3
14	All telephone calls to this school are answered promptly and politely.	0.81	16.69	0.55
15	Teachers are generally prepared for class.	0.7	13.80	0.41
16	The restrooms in this school are clean and properly maintained.	0.36	10.47	0.28
17	School programs involve out of school experience.	0.51	9.92	0.24
18	Teachers exhibit a sense of humor.	0.69	15.01	0.46
19	School policy permits and encourages freedom of expression by everyone.	0.43	10.41	0.26
20	The principal's office is attractive.	0.38	9.46	0.24
21	People in this school are polite to one another.	0.76	16.69	0.54
22	Everyone arrives on time for school.	0.68	15.53	0.50
23	Good health practices are encouraged in this school.	0.86	17.61	0.60
24	Teachers work to encourage students' self-confidence.	0.97	19.42	0.67
25	Bulletin boards are attractive and up-to-date.	0.47	12.23	0.37
26	The messages and notes sent home are positive.		11.56	0.31
27	The principal treats people as though they are responsible.	0.92	18.49	0.63

28	Space is available for student independent study.	0.42	9.61	0.24
29	People often feel welcome when they enter the school.	0.69	15.64	0.5
30	Students work cooperatively with each other.	0.59	11.20	0.29
31	Interruptions to classroom academic activities are kept to a minimum.	0.57	12.85	0.37
32	Fire alarm instructions are well posted and seem reasonable.	0.28	2.2	0.07
33	People in this school want to be here.	0.85	15.17	0.47
34	A high percentage of students pass in this school.	0.74	12.91	0.37
35	Many people in this school are involved in making decisions.	0.62	13	0.38
36	People in this school try to stop vandalism when they see it happening.	0.73	12.90	0.37
37	Classrooms offer a variety of furniture arrangements.	0.16	4.09	0.049
38	The school sponsors extracurricular activities apart from sports.	0.77	16.50	0.54
39	Teachers appear to enjoy life.	0.83	14.72	0.45
40	Clocks and water fountains are in good repair.	0.26	6	0.1
41	School buses rarely leave without waiting for students.	0.32	5.6	0.08
42	School pride is evident among students.	0.81	15.43	0.48
43	Daily attendance by students and staff is high.	0.74	18.17	0.62
44	There are comfortable chairs for visitors.	0.42	10.06	0.26
45	Teachers share out-of-class experiences with students.	0.75	11.55	0.31
46	Mini courses are available to students.	0.71	15.99	0.52
47	The grading practices in this school are fair.	0.86	14.45	0.45
48	Teachers spend time after school with those who need extra help.	0.72	14.62	0.45
49	The lighting in this school is more than adequate.	0.46	3.4	0.22
50	Classes get started quickly.	0.63	15.50	0.49

Based on the results reported on Table 11, analysis of the three school types, indicates place (2.60) has the lowest mean and program (3.22) exhibits the highest mean.

Table 11  
*Statistical indexes; mean, standard error of mean estimation, and standard deviation in all three school types*

	Mean	Standard Deviation	Standard Error of Estimate	Maximum	Minimum
place	2.6049	.39285	.01997	3.50	1.33
policy	2.8398	.66041	.03357	4.29	1.00
people	3.1365	.79947	.04064	4.81	1.13
process	3.1683	.73119	.03717	4.88	1.13
program	3.2211	.74981	.03812	4.86	1.00
total	2.9843	.60595	.03080	4.18	1.34

Based on the results reported on Table 12, analysis of non-profit schools, indicates place (2.84) has the lowest mean and people (3.72) exhibits the highest mean

Table 12

*Statistical Indicators; Mean; Standard Error Estimates; Standard Deviation in Nonprofit Schools*

	Mean	Standard Deviation	Standard Error of Estimate	Maximum	Minimum
place	2.8398	.27987	.03498	3.50	1.33
policy	3.2076	.43490	.05436	4.14	2.00
people	3.7227	.49874	.06234	4.81	2.50
process	3.6270	.45340	.05330	4.63	2.38
program	3.7031	.74981	.05668	4.86	3.00
total	3.4206	.33468	.04184	4.00	2.76

Based on the results reported on Table 13, analysis of government sample schools, indicates place (2.77) has the lowest mean and people (3.47) exhibits the highest mean.

Table 13

*Statistical Indicators; Mean; Standard Error Estimates; Standard Deviation in government sample schools*

	Mean	Standard Deviation	Standard Error of Estimate	Maximum	Minimum
place	2.7778	.37268	.07172	3.33	2.08
policy	3.2222	.46769	.09001	4.00	2.14
people	3.4745	.62530	.12034	4.44	2.44
process	3.4676	.46847	.09016	4.38	2.63
program	3.4497	.52069	.10021	4.43	2.29
total	3.2674	.44130	.08493	3.88	2.46

Lastly, based on the results reported on Table 14 (p. 41), analysis of public schools, clearly indicates place (2.54) has the lowest mean and people (3.10) exhibits the highest mean.

Table 14

*Statistical Indicators; Mean; Standard Error Estimates; Standard Deviation in public schools*

	Mean	Standard Deviation	Standard Error of Estimate	Maximum	Minimum
place	2.5383	.39218	.03498	3.33	1.33
policy	2.7254	.67465	.03921	4.29	1.00
people	2.9789	.79925	.04646	4.81	1.13
process	3.0418	.75598	.04394	4.88	1.13
program	3.0960	.77264	.04491	4.57	1.00
total	2.8641	.61337	.03565	4.18	1.34

### Discussion

School climate includes the interactions between students' and teachers' perception of their school environment (e.g. environmental factors such as physical buildings and classes, materials used in education); academic performance; feelings of safety (Mayer, 2007); feelings of respect and trust in the school community (Purkey and Novak, 2008; Smith, 2013; Kuperminca, Leadbeatera and Blatta, 2001; Marshall, 2004). School climate is positive when everyone in the school feels comfortable, enthusiastic, valued, accepted and secure (Mayer, 2007). Schools with a positive atmosphere encourage the participation of teachers, students and parents, which in turn make the school successful (American School Counselor Association, 2003; Koth et al., 2008).

Purkey showed that when the school climate is positive it becomes inviting (Novak et al., 2006; Purkey and Novak, 2008). Creating an inviting school requires that students, families, and educators work together to develop, live, and contribute to a shared school vision (Cohen et al., 2009; Novak et al., 2006). A safe and happy school helps children to accept education eagerly (Mayer, 2007). An inviting school leads to less aggression, less vandalism and less absenteeism by students. According to Purkey and Novak (2008), schools should provide a warm, intimate and caring environment for students to learn and succeed.

Therefore, due to the importance of the inviting school, the aim of this study was to investigate the psychometric properties of school climate in the Iranian community. In order to determine the desirability of reliability coefficient index, the coefficient of internal consistency was used. The reliability coefficient for the whole scale and its factors is between 0.73 and 0.96, which is a desirable coefficient and is close to studies conducted in other cultures. Confirmatory factor analysis method has been used to assess the structure of the ISS-R in a sample of Iranian students. According to the findings of the research, it can be concluded that appropriate questions have been selected and the questionnaire with the least possible change and possible removal of some of its structure questions is preserved; therefore, cultural and racial differences and the various experiences of Iranian learners in comparison with non-Iranian learners does not cause it is evaluated differently. In summary, the *ISS-R* is a valuable and informative instrument with reliable and desirable psychometric properties which is used by schools to assess invitational qualities of the school (To identify areas of strength or weakness in a school's climate).

Therefore, the ISS-R has validity and reliability in Iran's society, accurately assesses the climate of the school, and can be used in educational, research, and behavioral modification situations, and can provide numerous studies in the realm of educational psychology. Of course, it should be noted that since the psychometric evaluation of this questionnaire took place for the first time in Iran and only 9th grade students were involved in this study, the 9th grade of the subjects may affect the outcome. Therefore, more psychometric studies of this questionnaire are suggested for different grades and other people (teachers, staff). Also, the predictive validity of this instrument should be examined. Further psychometric support of this instrument will allow it to be used as an instrument to determine students' perceptions of inviting areas of the school climate and the sense of security in it, designing appropriate interventions and preventative programs.

Also, this research was carried out with the aim of spreading knowledge about the school climate of Public schools, Government sample and nonprofit schools in Tehran.

In the current study, aspects of school climate were considered “most inviting” if the scores were equal to or more than 85% (mean 4.25 to 5), “somewhat inviting “ between 60 -85% (mean 3 to 4.25) , “ disinviting” between 50 - 60% (mean 2.5 to 3) and “most disinviting “ when the score is less than 50% (mean less than 2.5).As shown in table 11, in all 3 school types, the ISS-R total score was 2.98 and subscales ranged from 2.60 (place) to 3.22 (program).

The results of the present study indicate that in all 3 school types, processes”, “program” and “people” had means of 3.16, 3.22 and 3.13 respectively which shows that the perceptions of the respondents were somewhat favorable and therefore fairly inviting. However, “place” and “policy” had means of 2.60 and 2.83 respectively which shows that the perceptions of the respondents were not favorable therefore these aspects were disinviting. But in Nonprofit and Government sample schools the mean were more than 3 for each aspect, which shows that the perceptions of the respondents were somewhat favorable and therefore fairly inviting in these schools, but in both schools the mean of place was less than 3, so, this aspect of the schools were disinviting. Unfortunately, in Public schools most of the aspects had means less than 3. “People”, “place” and “policy” had means of 2.97, 2.53, and 2.72 respectively which shows that the perceptions of the respondents were not favorable, indicating these aspects were disinviting.

“Processes” and “programs” had means of 3.04, 3.09 respectively which shows that the perceptions of the respondents were somewhat favorable and therefore fairly inviting. The total mean of public school was less than 3 (2.86) therefore, the perceptions of the respondents were not favorable and public schools was disinviting, but the total mean of Nonprofit and Government sample schools was 3.42 and 3.26 respectively which shows that the perceptions of the respondents were somewhat favorable and therefore these schools were fairly inviting. Results in this study shows that, none of the factors have been perceived by students as the most inviting, and the factor of place in all 3 school types were disinviting. Due to the importance of the school climate, it is desirable for officials and policymakers to pay special attention to promoting the inviting atmosphere of schools, particularly in public schools that have exhibited a total disinviting score.

## References

- American School Counselor Association (ASCA) (2003). Taking your school's temperature: How school climate affect students and staff. School Counselor Resource Series. Retrieved from <http://www.schoolcounselor.org/files/school%20climate.pdf>
- Cohen, J., McCabe, E. M., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *School Climate Research and Educational Policy*, 3(1), 180-213.
- Deluca, S., & Rosenbaum, J. E. (2000). Are dropout decisions related to safety concerns, school isolation, and teacher disparagement? Retrieved from <http://www.northwestern.edu/ipr/publications/workingpapers/wpabstracts00/wp0018.html>
- Esposito, C. (1999). Learning in urban blight: School climate and its effect on the school performance of urban, minority, and low-income children. *School Psychology Review*, 28(3), 365-377.
- Fan, W., Williams, C., & Corkin, D. (2011). A multilevel analysis of student perceptions of school climate: The effect of social and academic risk factors. *Psychology in the schools*, 48(6), 632-647.
- Huebner, E., & Diener, C. (2008). Research on life satisfaction of children and youth: Implications for the delivery of school-related services. In M. Eid & R. Larsen (Eds.), *the science of subjective wellbeing* (pp. 376-392). New York, NY: Guilford.
- Koth, C. W., Bradshaw, C., & Leaf, P. J. (2008). A multilevel study of predictors of student perceptions of school climate: The effect of classroom-level factors. *Journal of Educational Psychology*, 100 (1), 96-104.
- Kuperminca, G. P., Leadbeater, B. J., & Blatta, S. J. (2001). School social climate and individual differences in vulnerability to psychopathology among middle school students. *Journal of School Psychology*, 39(2), 141-159.
- Lehr, C. A. (2004). Positive school climate: Information for educators. Retrieved from [http://www.nasponline.org/communications/spawareness/schclimate\\_ho.pdf](http://www.nasponline.org/communications/spawareness/schclimate_ho.pdf)
- Marshall, M. L. (2004). Examining school climate: Defining factors and educational influences [white paper, electronic version]. Retrieved from Georgia State University Center for School Safety, School Climate and Classroom Management website: <http://education.gsu.edu/schoolsafety>
- Mayer, J. E. (2007). *Creating a safe and welcoming school*. Geneva: UNESCO.
- McEvoy, A., & Welker, R. (2000). Antisocial behavior, academic failure, and school climate. *Journal of Emotional and Behavioral Disorders*, 8(3), 130-140.
- Novak, J. M., Rocca, W., & DiBiase, A.-M. (Eds.). (2006). *Creating Inviting Schools*. San Francisco, CA: Caddo Gap Press.
- NSCC (National School Climate Centre). (2011). what is school climate and why is it important? Retrieved from: <http://www.schoolclimate.org/climate/>

- Purkey, W. (1978). *Inviting school success*. Belmont, CA: Wadsworth.
- Purkey, W. W. (2011). School climate contributes to student achievement and success. *Invitational Education Forum*, 31(1), 7.
- Purkey, W., & Fuller J. (1995). *The Inviting School Survey (ISS): User's Manual*. Greensboro, NC: University of North Carolina at Greensboro.
- Purkey, W., & Novak, J. (1996). *Inviting school success: A self-concept approach to teaching, learning, and democratic practice* (3rd ed.). Belmont, CA: Wadsworth.
- Purkey, W., & Novak, J. (2008). *Fundamentals of invitational education*. Kennesaw, GA: International Alliance for Invitational Education.
- Purkey, W., & Schmidt, J. (1987). *The inviting relationship: An expanded perspective for professional helping*. Englewood Cliffs, NJ: Prentice-Hall.
- Purkey, W., & Schmidt, J. (1990). *Invitational learning for counseling and development*. Ann Arbor, MI: Eric/Caps Clearinghouse. The University of Michigan.
- Purkey, W., & Schmidt, J. (1996). *Invitational counseling: A self-concept approach to professional practice*. Pacific Grove, CA: Brooks/Cole.
- Purkey, W., & Stanley, P.H. (1991). *Invitational teaching, learning and living*. Washington, DC: National Education Association Professional Library Publication.
- Ross, S. M., & Lowther, D. L. (2003). Impacts of the Co-nect school reform design on classroom instruction, school climate and student achievement in inner-city schools. *Journal of Education for Students Placed at Risk*, 82(2), 215-246.
- Smith, K. (2007). *Manual for the Inviting School Survey- Revised (ISS-R). A survey for measuring the Invitational Qualities (I.Q.) of the total school climate*. Retrieved from <http://www.invitationaleducation.net>.
- Smith, K. (2013). *Manual for the Inviting Survey (ISS-R): A survey for measuring the invitational qualities (I.Q.) of the total school climate* (2nd ed.). Retrieved from: <http://www.invitationaleducation.net>
- Smith, K. (2015). *Inviting School Survey- Revised (ISS-R). A survey for measuring the invitational qualities of school climate*. Retrieved from: <http://www.invitationaleducation.net>.
- Smith, K., & Bernard, J. (2004). The psychometric properties of the Inviting School Survey (ISS): An Australian study. *Journal of Invitational Theory and Practice*, 10, 7-25.
- Zullig, K. J., Koopman, T. M., Patton, J. M., & Ubbes, V. A. (2010). School climate: Historical review, instrument development, and school assessment. *Journal of Psychoeducational Assessment*, 28(2), 139-152.

To contact the authors:

Hassan Asadzadeh (PhD) [asadzadeh@atu.ac.ir](mailto:asadzadeh@atu.ac.ir) Associate Professor of Educational Psychology,  
University of Allameh Tabataba'i, Tehran, Iran

Maryam Safarzadeh, PhD candidate in Educational Psychology, University of Allameh  
Tabataba'i, Tehran, Iran

Ali Delavar (PhD) Professor of Research Methods and Statistics, University of Allameh  
Tabataba'i, Tehran, Iran

Fariborz Dortaj (PhD) Professor of Educational Psychology, University of Allameh Tabataba'i,  
Tehran, Iran

Noorali Farookhi , Associate Professor of Educational Psychology, University of Allameh  
Tabataba'i, Tehran, Iran