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School Climate: Parents', Students' And Teachers' Perceptions

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Abstract

Because of the importance of individual perceptions, schools often assess how students or teachers or parents feel about their school, and school climate has often been associated with improved school achievement, but rarely they take into account all these “actors” at the same time. The main aim of this work is to compare the results obtained in a *population study* on school climate that involves students, parents, teachers and non-teaching staff. In this paper, we will present the results of parents', students', teachers' and no-teacher personnel's perception. We have administered 13,500 structured questionnaires addressed to students, parents, teachers, educational assistance personnel, involved in the four orders of schools (Pre-school, Elementary, Middle, High) of the province of Bolzano. Parental permission was obtained for young people. The present study has been conducted in the province of Bolzano, northern Italy, between January and April 2012. A School Climate Perception Questionnaire (SCPQ), that can be completed in 10 minutes, has been developed to assess environments and climate of all Italian language schools. In order to determine the interrelationships among the questionnaire items, a Principal-Axis Factor Analysis was performed. The final scale was used for Confirmatory Factor Analysis that was done to assess its construct validity. We will present the results regarding the school climate perceptions of teachers, parents and students and their comparison.

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1. Introduction

A positive school climate is an environment where learning and growing up. Students will learn more and achieve at higher levels when data drives decision-making, students are engaged, teachers and staff are competent and families and the community are involved. Over the past two decades, researchers and educators have increasingly recognized the importance of school climate. Although there is no consensus on a definitive set of dimensions, the term “school climate” refers to the quality and character of school life as it relates to norms and

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values, interpersonal relations and social interactions, and organizational processes, structures and culture. (Freiberg, 1998). The teacher, in particular, can affect the success or failure of students through the school that chooses strategies in classroom management and communication with students, the latter react to them with their different characteristics and personalities. The teacher-student relationship has therefore to be central for the realization of a good classroom climate (Brophy, 1996). The culture of origin, contest, and the involvement of parents are contributing factors on school climate. Numerous studies show a strong link between parental involvement in the school and educational success of children and young people (Henderson & Berla, 1994; Hickman, 1996). Moos (1979) identifies as elements to develop a positive climate the involvement of families, in particular: allowing families to participate and developing relationships with teachers, with staff and with other families; contributing to the families growth helping them to improve their parenthood; encouraging parents to feel co-responsible of the educational process and learning by their children. Parents who are involved from the school or receiving a commitment from the school to get them involved, they tend to recognize school climate as positive (Dauber & Epstein, 1993).

1.1. Objectives

The first goal of the present study was to develop and validate a measure of school climate that could be used by parents, students, teachers and staff. The second aim was to compare the school climate's perception of the different actors: parents, teachers, staff and students. The third goal of the study was to provide preliminary validity support for using of this measure through both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). Finally, the last aim was to develop an intervention plan to improve the school climate. The objective of this paper is to present some of the data collected in our survey concerning the middle schools.

2. Methods

2.1. Participants

This project is a population-study and it involves the Italian language school of the South Tyrol. The questionnaires was administered to all students, teachers, parents and staff. Data for the current study were collected from 667 parents, 772 students, 239 teachers, 106 staff and 19 public and private middle school.

2.2. Instruments

In Italy, there is not a validated standardized instrument to measure school climate. For this reason a questionnaire was developed to collect data in schools, used as part of a pilot project headed by the research group of Cavrini, Dozza, and Chianese, in collaboration with the Italian School Intendancy of the Province of Bolzano, in northern Italy. 13,500 questionnaires was administered between January 2012 and April 2012. The Questionnaire on Perception of School Climate (SCPQ) written in Italian can be completed in ten minutes. The base of building our SCPQ was the CSCI questionnaire (created by the National School Climate Council of New York). We modified the items of CSCI to adapt it to our school situation. It has been developed to assess the environment and the climate of the Italian school. The SCPQ poses similar questions, but they are formulated in such a way as to be understood by the different actors of the school (students, teachers, parents, staff). The questionnaire investigates the perceptions of interpersonal relationships, context of teaching, learning and informal interaction. The final version, including 33 items, is the result of discussion of focus group involving parents, teachers and staff of all school levels (Preschool, Elementary, Middle, High). The 33 items measure 6 facets of climate (i.e. fairness, order and discipline, parent involvement, sharing of resources, students interpersonal relationship and student-teacher relations). The "actors" responded to each item on the scale by indicating a number from "0=no satisfied" to "10=very satisfied"; some items were reverse scored so that a lower score indicated a more negative school perception. The overall scale were calculate by summing the responses to the individual items and calculating $1 - (\max - \text{value}) / (\max - \min) = 1 - (280 - \text{value}) / 280$. We obtained a number ranking from 0 to 1 which indicates the degree to which students, or teachers or parents reported positive perceptions of school climate. We added a general question on overall satisfaction on

school environment. Socio-demographic information was also asked (gender, school level, number of teaching years – to the teachers, age). In this paper we present the results of the middle school.

2.3. Statistical Analysis

Univariate statistics were used to describe the sample and examine the distributions of variables of interest. Explorative Factor Analysis was utilized to explain the variables in terms of their common underlying dimensions (factors). Factor analysis is frequently used to develop questionnaires. It is a statistical approach that can be used to analyse interrelationships among a large number of variables and to explain these variables in terms of their common underlying dimensions (factors). The statistical approach involving represent a way of condensing the information contained in a number of original variables into a smaller set of dimensions (factors) with a minimum loss of information. In order to determine the interrelationships among the questionnaire items, a Principal-Axis Factor Analysis was performed. The number of factors to be extracted was based on the following criteria: minimum eigenvalues of 1.0 (Kaiser, 1960); each factor contains individual items with a minimum loading of 0.32 (Mori & Gobel, 2006); eigenvalues appear before the decrease of eigenvalues level off on the scree-plot. Moreover, we considered the overall Cronbach's Alpha and we deleted the item that increased the Alpha if it was deleted.

3. Results

3.1. Descriptive analysis

3.1.1. Analysis of parents

667 parents have responded to the questionnaire, with a response rate of 74.3%. The parents of Middle students can seem to be more critical than those of Pre and Elementary schools. In fact, all the means of the scores are lower below 7.6. The relationship with teachers is better than the other relationship. Despite this, parents seem to be moderately satisfied of the average school attended by their sons (7.6). Table 2 show the descriptive values of general index, created as explained in Methods part.

Table 1. Middle Students' Parents: Analysis of questionnaires

	N	Mean	Std. Deviation
How satisfied are you of the school of your child?	670	7.56	1.70
How good is the relationship with teachers?	669	7.88	1.58
How good is your relationship with the Principal?	651	7.34	2.29
How good is your relationship with the school staff?	661	7.73	2.29
How good is your relationship with the other parents?	665	7.43	2.06

Table 2. Mean standard deviation and coefficient of variation of index perception for parents

id school	N	mean(index)	sd(index)	cv
BASMEC	15	0.65	0.10	15.78
BASMF1	56	0.63	0.12	18.92
BASMGP	27	0.66	0.10	15.34
BZSMAF	27	0.65	0.09	13.94
BZSMAN	56	0.65	0.09	14.48
BZSMAR	61	0.63	0.10	15.46
BZSMCS	9	0.62	0.08	13.56
BZSMEF	40	0.60	0.12	19.50

BZSMIR	54	0.70	0.09	12.83
BZSMMA	49	0.66	0.10	14.91
BZSMUF	42	0.61	0.12	19.97
IPSMMDM	32	0.64	0.08	12.09
IPSMDO	13	0.64	0.11	17.85
IPSMMA	49	0.60	0.11	18.59
IPSMPA	36	0.57	0.14	23.56
VVSMNE	44	0.57	0.12	20.31
VVSMSE	56	0.63	0.14	22.91
VVSMSE	11	0.59	0.17	29.14

3.1.2. Analysis of teachers

The teachers' Questionnaires completed were 239. The Table 3 shows the frequency distribution.

Table 3 Analysis of teachers' questionnaires

	N	Mean	Std. Deviation
How satisfied of the school where you work?	236	7.61	1.66
How good is your relationship with the parents?	237	8.06	1.25
How good is your relationship with Fellow teachers?	237	8.22	1.28
How good is your relationship with your students?	235	8.51	0.87
How good is your relationship with the staff?	237	8.56	1.20

The teachers are mostly female (73.2%). 43.9% work in the Elementary school, 20.9% in Middle school and 35.3% in High school. Approximately 27.6% work less than 10 years, 28.3% for a number of years between 10 to 19 and the majority (32.2%) 20 years and more. Teachers seem to be quite satisfied in particular of relationship with students (8.5) and staff (8.6). Overall satisfaction is discrete (7.6). There were not important and significant differences between the school levels.

3.2. Multivariate results of the teachers questionnaires

We examined the internal reliability of the scales used in this study. For the 4 dimensions, the values of Cronbach's Alpha among teachers were found good:

- 0.893 for the Student Personal Support by Teachers;
- 0.881 for the Students' Aggressiveness;
- 0.804 for the Rules;
- 0.853 for the Professional Satisfaction, Integration and Collaboration in and out the school.

Because the variables were thought to be correlated with one another, we rotated the results with an Oblique Rotation (Direct Oblimin with $\delta=0$).

A Four – Factor solution was chosen which accounted for 54.25% of the Total Variance.

Table 4. Eigenvalues and Total Variance explained by the four selected factors

Factor	Eigenvalues	Pct of Var	Cum Pct
1	9.052	37.717	37.717
2	3.021	12.589	50.305
3	1.356	5.650	55.956
4	1.007	4.196	60.151

The overall reliability, after eliminating the confusing items using Cronbach's Alpha was 0.856. The factors obtained are shown in the Table 5: (item's number is reported in parenthesis)

Table 5. Factor loadings

Factor 1	Factor 2	Factor 3	Factor 4
0.853 (28)	0.859 (18)	-0.854 (16)	-0.921 (23)
0.762 (06)	0.853 (17)	-0.818 (15)	-0.728 (22)
0.622 (29)	0.826 (10)	-0.782 (14)	-0.540 (24)
0.527 (31)	0.767 (09)	-0.523 (20)	
0.506 (32)		-0.517 (26)	
0.434 (08)		-0.424 (21)	
0.422 (11)			

The four factors obtained show statistically significant differences between school levels. In particular, the importance of the Student's Personal Support from Teachers decreases from Elementary to High School. The Aggressiveness of students is perceived as a problem in High schools. The Elementary teachers consider the Professional Satisfaction, the Collaboration and the Integration In and Out of schools very important and the importance decreases from Elementary to High School. Finally, Elementary teachers consider the rules for a good governance of the class organisation less important than Middle and High School teachers.

3. Conclusion

We believe that our research – of which we only present the results about the perception of the school climate by teachers and parents - is innovative for two reasons:

1. The same questionnaire - although duly modified in the formulation of some items - was proposed to all "actors" of the "school system": teachers, students, parents, and staff.

2. It is the first time that a questionnaire on school climate is validated in Italy.

Our research aims to have a relevant impact on the school of the Bolzano province, giving data aggregated at the "school system" and individual data for each school, for a reflection that allows developing improvement plans.

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