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The role of social climate in Nursing and Health Care Professions degree programs

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Abstract

The social climate in educational settings has received increasing attention, but it has been rarely investigated with reference to the health professions educational environments. The study was conducted on first year baccalaureate Nursing and Allied Health Professional students. The results point out some significant differences among the health professions contexts, especially with regard to the dimensions of relationships with teachers, structural aspects, future employments, and learning outcomes. A scientific evaluation of the academic climate allows the universities to identify problematic areas, promote concrete changes, and support services and community partnerships that may be crucial to outstanding teaching and learning activities.

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*Keywords:*Social climate, Academic performance, Health professional student, Learning environment

1. Introduction

During the last decades, researchers and educators have been working to identify how the social climate involves within the educational process and which specific elements contribute in order to make it up. Notwithstanding the fact that a list including those elements in a very satisfactory way does not exist, the researchers' majority agree on the fact that four main areas are essential to pay attention to safety, relationships, teaching & learning and environment. The social environment has

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a strong positive correlation with teaching, students' self-esteem, learning, assessment, students' grades of their overall academic satisfaction, and academic success (Adekola, 2012; Tope, 2012). According to Loukas & Murphy (2007), the academic social climate perception is a multidimensional and complex construct that may influence several individuals, including students, parents, administration, and teachers, up to an entire community (Tope, 2012). Cohen & Geier, (2010) highlight that a positive school social or emotional climate exists when all students, teachers, parents and the community in general feel comfortable and secure in an environment that support people and make them feel socially, emotionally and physically safe. Brand (2006) also suggests that the concept of school social climate usually includes variables of the perceived social environment that have a related influence on the students learning and development, and remain constant over time. A starting point for authentic community building, understanding and change could be represented by a careful evaluation of the academic social climate. Moreover, evaluating and improving the academic climate perception in an educational process could be a procedure encouraging skills (Cohen, Pickeral & McCloskey , 2008). According to Freiberg (1998) the climate perception may significantly impact on educational environments and be a barrier to learning if it is negative. Previous researchers expressed their conviction that many factors contribute to build up this complex concept. According to Marshall (2004) these factors can be adhered as follows: relationships between students and teachers (Kuperminc, Leadbeater & Blatt, 2001); students' and teachers' perception of their educational environment (Adekola, 2012); environmental factors (buildings, classrooms, materials, etc.); academic performance (Tope, 2012). Different researches have shown that within an educational context, the academic climate perception can influence many areas and people: a negative school climate has been linked to some behavioral and emotional students' problems. According to Taylor & Tashakkori (1995), a positive climate is linked to teachers and administrators increased job satisfaction. Moreover, students' perspectives are especially important during the transition from one school level to another: changing to a new educational context may be distressing for students while this anxiety may have a conflicting effect on students' perception of their school climate and learning outcomes. Kim (2012) suggest that, in particular, teacher-student relationship was found to shape students' satisfaction with school life both at individual and school level. In fact, it has been shown (Freiberg, 1998) that the existence of a positive and supportive academic climate perception is crucial to a smooth and easy students' transition to a new environment. Many areas including academic achievements (Clifton, Perry, Stubbs & Roberts, 2004), motivation for learning (Cleave-Hogg & Rothman, 1991), self-confidence (Ferguson, 1996), capacity for critical thinking (Myrick & Yonge, 2001) and overall morale (Cardall, Rowan & Bay, 2008) may affect the learning climate. Consequently, it is important to gain an overall understanding of this atmosphere. A certain number of survey-based instruments has been developed during the 1970s in order to assess students' perception of their learning experiences and the overall environment within a given program. Research on learning climate became a major line of inquiry in higher education as health educators developed interest in exploring students' opinions about their learning experiences (Henzi, Davis, Jasinevicius, Hendricson, Cintron, & Isaacs, 2005). As one of the most important factors affecting students' adaptation, the academic climate perception possesses a strongly predictive significance with respect to students' academic success (Siri & Rania,2014). The academic social climate can prognosticate students' performances and their attrition rates (Flook, Repetti & Ullman, 2005; Rania, Siri, Bagnasco, Aleo & Sasso, 2013). A positive campus climate, good academic support services, financial, family supports, and a positive self-perception appear to impact on the academic success (Freeman, Anderman & Jensen, 2007). According to Gloria & Ho (2003), the three important factors concerning academic success prediction are campus comfort perception, social support, and academic self-efficacy. Many researchers, presently active in the field, found out that academic performance, self-efficacy, self-esteem, outcome of motivational undertaking and sense of management in learning situations can be modified by climate perception (Gilman & Anderman, 2006). A positive climate can enhance the learning process and the construction of shared knowledge between the different actors involved affecting academic performance, self-efficacy and self-esteem. In order to maintain a high degree of motivation to learning and acquiring skills, students' relationships during the learning process are of great consequence: in fact, the sense of belonging to a study group is a particularly significant element for students' evolution of social competence and well-being in an educational context (Siri, Rania, Bagnasco & Sasso, 2009). The need to belong is universal and pervasive, exerting a powerful influence on thought processes, emotions, behavior, health and happiness: people deprived of belongingness are more likely to experience diminished self-esteem, increased stress and anxiety, depression and a decrease of general well-being (Levett-Jones, Lathlean, Higgins & McMillan, 2009). Especially interesting is the Mellor's study (Mellor, 2008) that provides support for Baumeister & Leary's "belongingness hypothesis" (1995) to the extent that the discrepancy between need to belong and satisfaction with personal relationships is associated with loneliness. The definition and description of well-being are anchored to two clear-cut paradigms; the first one is hedonism that is the view that well-being consists of pleasure and happiness, while the second is eudaemonist which is based

on the idea that "well-being consists of fulfilling or realizing one's daimon or true nature" (Ryan & Deci, 2001, p. 143). Well-being does not only depend on physical health or risk behavior but also on personal life, satisfaction associated with social relationships, self-vision and general well-being (Santinello, Bonsuan, Dallago, Noventa & Salvan, 2005). In particular, self-esteem is commonly considered a well-being index (Benjet & Hernandez-Guzman, 2001). Understanding well-being in university students identifies more about their college experiences, including how they are affected by specific stimuli on campus. How college students progress through their educational experience, understanding the elements that determine their well-being, contributes to the literature about the multitude of ways by which college impacts students. The academic climate has been studied for many years and keeps being analyzed and redefined like a consequence of its significant impact on educational outcomes. However, as far as the health professions settings are concerned, it has been rarely investigated.

2. Aims

The present study is focused on gaining a better understanding of health professions students' perception of their learning environment, particularly investigating the interactions between social climate, self-esteem, well-being and health professions students' academic performance with reference to degrees in nursing, midwifery, physiotherapy and radiologic technology. One of its main interests is represented by the development of an implementing intervention aimed at supporting the learning environment and preventing the students' dropout phenomenon. Based on the objectives outlined above, two questions were formulated. These were:

1. What are the interactions between social climate, self-esteem, well-being and academic performance?
2. Are there significant differences in the perceived social climate among students enrolled in the four different degree program?

3. Methods

The information has been collected by means of two sources: a specific questionnaire for health professions students and records stored in the university database. Four hundred-ninety-seven students (339 from nursing courses; 109 from physiotherapy courses; 26 from midwifery courses and 23 from radiologic technology courses), enrolled in the first year at the University of Genoa (2008 – 2009), participated voluntarily in the study. The degree courses were chosen in accordance with two criteria: the large students' number in each course and the various structural features of the courses. More specifically, the nursing degree courses were structured in eight regional classrooms where students attended all educational lectures and practical training sitting on assigned seats. The students' number per classroom varied from 40 to a maximum of 80. The physiotherapy courses were structured in five classrooms throughout the region while the students' number varied from a minimum of 15 to a maximum of 40. The radiologic technology degree courses were structured in three lecture halls, but only one of them has been taken into account in the present study. The midwifery degree courses occupied one classroom only. Consistently with the gender gap, more female students (69%) than males (31%) attended the courses. Taking into account the individual programs examined a certain number of differences between females' and males' choices appears that seems useful to highlight: only female students chose midwifery; in the nursing courses girls prevail (73.7%) over boys (26.3%); in physiotherapy, female (55%) and male (45%) students' numbers are very close to each other. As for radiologic technology courses, the percentages are reversed (30.4% females, 69.6% males). Gender data suggest that men currently represent a relatively small percentage of the health professions students, confirming the stereotype that some professions, like midwifery and nursing, are traditionally female professions. Therefore, we can speculate that these degree courses might be still linked to gender. The average students' age was 23.39 years ($\sigma = \pm 6.66$), with a minimum of 16 years and a maximum of 58 years. The self-reporting questionnaire included the following topics:

- Social and demographic data (school, gender, age),
- Academic Social Climate Scale: this scale was composed of 49 items organized into nine dimensions including relationships with schoolmates (Cronbach's α.93), relationships with teachers (Cronbach's α.67), academic interests (Cronbach's α.77) and academic self-esteem (Cronbach's α.72), method of studying (Cronbach's α.78), parents' expectations (Cronbach's α.74), structural aspects (Cronbach's α.57), future employment (Cronbach's α.70). A 4-point Likert-type agreement scale was used (version modified by Santinello, Bertarelli, 2002).

- Global self-esteem scale (GSES): this scale provided a measurement of self-esteem, defined as the emotional value perceived by an individual; it consisted of 10 items that could be answered according to a 4-point scale, from "strongly agree" to "strongly disagree". A higher score indicated a higher-level self-esteem (Rosenberg, 1965). Previous studies have reported a 0.88 Cronbach's α for global self-esteem.
- Psychological Well-Being (PWB) the psychological well-being was measured using the shortened (18-item) version of the Scales for Psychological Well-Being (Ryff & Keyes, 1995; Italian version of Ruini, Belaise, Ottolini, Tomba, Caffo, Fava, 2007). This instrument assesses the dimensions of psychological well-being identified by Ryff (1989): autonomy (Cronbach's α.86), environmental mastery (Cronbach's α.90), personal growth (Cronbach's α.97), positive relations with others (Cronbach's α.91), purpose in life (Cronbach's α.90), and self-acceptance (Cronbach's α.93). A 6-point Likert-type scale is used, ranging from one (strongly disagree) to six (strongly agree). Ten items are worded in a positive direction, and eight are worded in a negative direction. A composite score for psychological well-being is created by recoding the negatively worded items and summing across the 18 items.

The academic performance was measured by obtaining students' academic records (number of exams, university credits, average ratings).

4. Results

As for the academic climate construct, the scores were all above average (see Table 1). The dimensions with an important meaning for students were the future employment (3.59), the relationship with schoolmates (3.17), that looked good, and the parents' expectations (3.13), that were partly congruent with theirs. The lowest score, which was slightly lower than the average theoretical value, was related to structural aspects (2.68). These findings indicate that the students were not particularly satisfied.

Table 1 Academic Climate dimension in the four courses

	TOTAL		Physiotherapy		Nursing		Midwifery		Radiologic technology	
Dimension	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
future employment	3.59	0.39	3.51	0.40	3.63	0.38	3.49	0.34	3.49	0.51
relationships with schoolmates	3.17	0.37	3.22	0.36	3.15	0.38	3.18	0.37	3.23	0.36
parents' expectations	3.13	0.46	3.05	0.45	3.17	0.45	3.16	0.48	2.91	0.47
method of study	2.99	0.46	2.92	0.45	3.02	0.47	3.01	0.47	2.97	0.39
relationships with teachers	2.96	0.42	2.92	0.45	2.99	0.41	2.79	0.33	2.87	0.39
academic self-esteem	2.91	0.56	2.93	0.54	2.91	0.58	2.78	0.47	3.06	0.46
academic interest	2.90	0.41	2.84	0.38	2.94	0.42	2.85	0.29	2.74	0.41
structural aspects	2.68	0.60	2.51	0.50	2.80	0.59	2.03	0.27	2.60	0.66

Nevertheless, an extremely positive assessment of the university context did not emerge. In particular, some significant differences among students in the various courses emerged with reference to the dimensions of the relationship with teachers, the structural aspects and the future employment. The dimension of the relationship with teachers revealed significant differences (F= 2.74**) between the nurses' group (2.99) and the midwives' one (2.79). As for the structural dimension, the nurses got the highest scores (2.80), followed by the radiological technicians (2.60), the physiotherapists (2.51) and the midwives (2.03). This showed significant differences in the students' perception concerning the organization and was linked to the context too. In particular, significant differences existed between physiotherapists and nurses (F=4.83**), between physiotherapists and midwives (F=6.47**) and between midwives and radiological technicians (F=3.77). As for the future employment dimension significant differences emerged (F=2.84**) between physiotherapists (3.51) and nurses (3.63).

As for the self-esteem construct, no significant differences were observed among the four students' groups (mean score 3.28) Even with regard to the academic self-esteem, although significant differences are not noticeable, the radiological technicians obtain the highest score (3.06 against an average of 2.91) unlike the group of midwives who get the lowest one

(2.78). Furthermore, as can be seen from the data, the scores earned by students' academic self-esteem (2.91) are lower than global self-esteem (3.28). Regarding the psychological well-being, construct no significant differences exist between the degree courses Table 2). As can be observed from the data, the measurement of purpose in life obtained the highest average score.

Table 2 Mean and standard deviation of the dimensions of psychological well-being scale (PWB)

	autonomy	environmental mastery	personal growth	positive relationships with others	purpose in life	self-acceptance
Mean	14.37	14.59	13.38	13.98	15.52	12.62
Standard Deviation	2.89	2.22	2.72	3.04	2.69	2.62

The first semester academic performance is shown in Table 3. Considering the data shown in the table, most students, regardless of the degree course, had passed none or very few exams at the end of the first useful session. In particular, the radiologists group performed poorly.

Table 3 Academic performance in the four courses

N. exams	Physiotherapy	Nursing	Midwifery	Radiologic technology
0	20.2%	9.1%	11.5%	69.6%
1	29.4%	31.9%	19.2%	30.4%
2	49.5%	42.5%	30.8%	0.0
3	0.9	13.6%	30.8%	0.0
4	0.0	2.9%	7.7%	0.0
Total	100%	100%	100%	100%

In Table 4 and 5, the correlations among constructs in the different courses that have been obtained taking into account courses with a similar students' numbers on the one hand for nurses and physiotherapists, on the other hand for midwives and radiological technicians.

Table 4 Correlation among constructs for Nurses and Physiotherapist

	Academic Performance	Climate	Psychological well-being	Self-esteem
Academic Performance	1	.080	.114*	.206**
Climate	-.150	1	.552**	.328**
Psychological well-being	-.067	.568**	1	.543**
Self-esteem	.091	.443**	.609*	1

* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)
Legend: Correlation for Nurses are located on the upper quadrant, while Physiotherapist are located on the down quadrant.

The strongest correlation in nurses and physiotherapists groups was between social climate and well-being and among well-being and self-esteem. In the midwifery group, the strongest correlation was found among academic performance and well-being, academic performance and self-esteem, social climate and well-being, well-being and self-esteem. In particular, these students revealed significant correlations among the different constructs analysed and the specific positive relationships among academic performance, wellness and self-esteem.

Table 5 Correlation among constructs for Midwife and Radiologist Technology

	Academic Performance	Climate	Psychological well-being	Self-esteem
Academic Performance	1	.353	.495*	.444*
Climate	-.513*	1	.444*	.412

Psychological well-being	-.092	.499*	1	.813**
Self-esteem	-.493*	.304	.347	1

* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)
Legend: Correlation for Midwife are located on the upper quadrant, while Radiologist Technology are located on the down quadrant.

In the radiological technology group, a negative correlation emerges between academic performance and social climate and between academic performance and self-esteem, while there is a positive correlation between social climate and well-being. Relatively few studies found no significant correlations (and even a negative correlation) between self- esteem and academic achievements.

5. Discussion

The low score in the dimension of relationships with teachers given by the small group of midwifery students could be justified by the fact that during the first year midwifery students had to attend the pre-clinical teaching by sharing space with many other students. In fact the teaching activities organization provided that students in nursing degree courses had to attend one of the eight regional training centers, in classes composed of 45 to a maximum of 85 students. The students of the other health professions degree courses attended all together (300 units) almost every the first year lesson (anatomy, histology, chemistry, physiology, etc.). Student participating in educational activities in the most crowded classes mostly felt structural problems such as crowded classrooms, shortage of visual media, etc. and other environmental difficulties. More specifically concerns emerged in the dimension relating to the student-teacher relationships. As for the future employment dimension, the significant differences emerged between physiotherapists and nurses could be explained by the occupational difficulties for health professions existing in our country. In fact, in Italy there were approximately 40,000 nurses. The physiological turnover between those entering the working world and those retiring from it needs many more Italian graduates per year than the now available 7,000. In recent years an increase in registration by 31% has been allowed but the effects will be visible in a few years. Therefore, the nursing profession is the only one that, now, can give access to employment without downtime. It is therefore justified why the future employment perception is higher in students attending nursing degree courses, who have greater certainty of finding work at the end of training. As for the self-esteem construct, no significant differences were observed among the four students' groups but a little lower level than radiological technology and midwifery is observed. Such data may be related to the fact that students entering any health profession must pass an entrance test equal for everyone. Having passed the access test has increased students' self-esteem level that is perceived as the result of comparison between the practical successes achieved and the corresponding expectations.

The nursing self-esteem level lower that other's is probably explained by the fact that the nursing degree courses involve a number of students slightly higher than the number of available places, while in other courses the selection process is more evident (1 out of 7 students can join physiotherapy and 1 out of 4 radiological technology). Even with regard to the academic self-esteem, although significant differences are not indicated, the radiological technicians are those who obtain the highest score, unlike the midwives' group who gets the lowest. The latter two data can be linked to the fact that the radiological technicians' group has a prevalence of males, while the midwifery group is entirely made up of women. This fact is confirmed in other studies carried out by our research group and in the gender studies. The female students, while obtaining good if not better results than males, tend to have higher levels of global self-esteem but also lower academic self-esteem than males. In fact, executing a specific analysis related to gender, significant gender differences emerge with higher levels of academic self-esteem for males (F = 9.419**; male: 3.03; female: 2.86), while for global self-esteem males achieved higher although not statistically significant scores (male: 3.31; female: 2.27). Furthermore, the scores earned by students' academic self-esteem are lower than global self-esteem. This average value seems to confirm other studies on university students (Martin- Albo, Núñez, Navarro & Grijalvo, 2007). The results obtained show that students' self-esteem in a university context is generally lower than students' self-esteem in their real life situations. The measurement of purpose in life obtained the highest average score, probably because the participants were in a phase of their life characterized by targets of a significant value. During adolescence and adulthood, in fact, young people spend time dreaming and making any sort plans for their future. The radiologists' poor academic performance could be caused by the fact that in the first semester these students have a greater number of subjects to attend to with respect to the other courses, preparatory training in the first place.

The first semester organization, which is so demanding, may have slowed down the students during the phase of exams preparation. This condition could be evaluated in the longitudinal study of which this work is a part. These data are in accordance with literature on climate, well-being and self-esteem, which highlights a close relationship among these components. Some authors, particularly Ryff & Keyes (1995), consider self-esteem as a part of well-being. Burnard, Hebden & Edwards (2001) studied self-esteem in nursing courses students and observed that younger students had a higher perception of the quality of their relationship with their peers. Age may have influenced their responses to other variables as well, as they may have different expectations of a learning environment. These data, which do not confirm what is stated in the literature, have to be further examined in the longitudinal study.

6. Conclusion

A positive academic social climate is indispensable to students' achievements, health and well-being. To organize correctly degree courses, academic social climate has to be evaluated with scientific rigor. In this way, universities can identify difficult areas and promote concrete changes in curricula and programs, support services and community partnerships that are fundamental to outstanding teaching and learning. The present study has been undertaken to provide a better understanding of the learning climate in some health professions programs and possibly offer a tool to improve the learning atmosphere. The study is unusual in its focus of assessing the common learning setting in health professions education by a longitudinal view. All students involved in this survey were interested in expressing their opinions about their learning climate with the aim of finding solutions to the issues that were raised. The dialogue generated between faculty, students and staff is the most important aspect of the present survey. However, a general tool to explore the learning climate could easily help in bringing about positive changes. This study has the potential to provide valuable feedback to emphasize the general dimensions of the learning atmosphere and constitutes an endeavor to understand students' perceptions of their learning climate at least in the case of degree courses programs. The students identified dimensions for advancing in their learning atmosphere, while the interventions developing from the dialogue surrounding the survey results seems to have had a positive impact on the learning climate. The tool is helpful in identifying general students' concerns in their learning environment and can be used to enforce student-centered interventions with the aim of sustaining a healthier learning climate. According to the findings in our survey, students should pay attention to both their self-esteem and welfare levels since these constructs have been shown to have a close relationship with their academic performances. In agreement with Adewole, Olawole, Akinwale, & Gbadebo (2010), the university should encourage forming study groups through exercises that include students of different ages to share ideas and knowledge with the implicit objective of increasing the students' social network which has an impact on their well- being and self-esteem. Specifically there could be actions from the support group to encourage participation and socialization in the university life. Moreover, the institutional bodies should organize recurrent seminars and workshops for students through which the influence of particular factors on their academic performances would be analyzed. Furthermore, the institution could arrange long distance learning sessions where adequate support services and facilities are provided in order to improve the perceived climate, well-being and self-esteem and further motivate the students on the programs.

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