Original Article

Differences in perceptions of medical undergraduates of a military medical school on organizational culture

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Abstract

Objective: This study aimed to determine the differences in medical students' perceptions on the organizational culture at a Military Medical School and to reveal possible explanations of them. **Method:** A total of 205 1st, 2nd, and 6th grade military medical students were invited and 185 of them (coverage rate 90%) participated in the study in 2008. The organizational culture measurement tool previously developed by Turkish researchers was used to determine the perceptions of the students. Reliability analysis, Factor analysis of the scale items and statistical comparisons between groups based on age, grade and certain other characteristics were performed. **Results:** The average age of participants was 20.2±2.5. The Cronbach's Alpha Value was 0.90 after dropping two items of the original 31-item scale. The symbol dimension of the scale was scored at the lowest level indicating that the symbol is the strongest part of the organizational culture. The scale becomes more reliable when dropping two items, since the Cronbach's Alpha value has been increased from 0.89 to 0.90. The total scale and all its dimensions were stronger among 1st grade students than the older ones. **Conclusion:** Age, medical education and future concerns of students can be the possible explanations of the given difference.

Key Words: Students, Medical, Organizational Culture, Education, Medical, Perception

Bir askeri tıp fakültesi öğrencilerinin örgüt kültürü algılamalarındaki farklılıkları

Özet

Amaç: Bu çalışma bir askeri tıp fakültesindeki örgüt kültürü ile ilgili olarak tıp fakültesi öğrencilerinin algılamalarındaki farklılıkları belirlemeyi ve bunların muhtemel açıklamalarını ortaya koymayı amaçlamıştır. **Yöntem:** Toplamı 205 olan 1,2ve 6. sınıf askeri tıp fakültesi öğrencileri 2008 yılı içerisinde çalışmaya davet edilmiş ve 185 öğrenci (katılım oranı %90) çalışmaya katılmıştır. Türk araştırmacılar tarafından daha önce geliştirilmiş olan örgüt kültürü ölçeği öğrencilerin algılamalarını belirlemek üzere kullanılmıştır. Ölçeğin güvenirlik analizleri, faktör analizi ve başta sınıf, yaş olmak üzere belli değişkenlere göre gruplar arası karşılaştırmalar yapılmıştır. **Bulgular:** Katılımcıların yaş ortalaması 20.2±2.5 dir. Orijinal 31 maddelik ölçekten 2 madde atıldıktan sonra ölçeğin Cronbach Alpha değeri 0.90 olarak bulunmuştur. Ölçeğin sembol boyutu en düşük puanı almıştır ve örgüt kültürünün en kuvvetli öğesi olduğu anlaşılmıştır. Ölçek iki madde atıldıktan sonra Cronbach Alpha değeri 0.89 dan 0.90'a yükseldiğinden daha güçlü hale gelmiştir.

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Toplam ölçek ve diğer tüm boyutlar birinci sınıf öğrencilerinde diğer öğrencilerden daha kuvvetli bulunmuştur. **Sonuç:** Yaş, tıp eğitimi ve öğrencilerin gelecek kaygılarının bulunan bu farkın olası açıklamaları olabileceği düşünülmektedir.

Anahtar Kelimeler: Öğrenciler, Tıp, Kurum kültürü, Eğitim, Tıbbi, Algı

Introduction

There are numerous studies highlighting the importance of the organizational culture in the effectiveness of academic settings.[1–6] Some studies stress that organizational culture is an important satisfaction matter.[7,8] Thus, many organizations have attempted to change cultural and relational patterns to build a stronger organizational culture.[9]

In Turkey there have been some studies. In one of these studies in 2004 an Organizational culture measurement tool was developed and used to examine the perceptions of students at Akdeniz University.[10] This was a 31-item scale and had 5 subscales: symbol, cohesion, organizational structure and efficiency, communications and relations, and power distance.

A recent study using this tool developed by researchers from Akdeniz University conducted among Turkish military medical graduates to examine their perceptions of the organizational culture was published in 2007.[11] This study showed that the symbol was the strongest among 5 components of organizational culture according to the Turkish military medical graduates. The study also suggested that a modified version of this tool with 29 items was more reliable than the original 31-item scale by dropping two items. However, since the participants of this study were all of the medical graduates who were all at the same age the following questions were open to be explored. If there were an opportunity, would it be possible to improve the weak points of the perceptions? Did the medical education itself influence the perceptions of the graduates? Is there any age effect on these perceptions? Actually, it is important to know the perceptions of medical students on culture, since medical education requires a long time and there might be some opportunities to improve possible weaknesses with proper interventions. In this study we aimed to examine the perceptions of the Turkish military medical students on the organizational culture in order to reveal the weaknesses and strengths of the cultural components at Gulhane Military medical School to determine the effect of medical education on these perceptions. We decided to use the 31 item measurement tool that already included the modified 29item tool in order to determine the more reliable one. We also aimed to compare the findings of the present study with findings of the study carried by Ozer et al.[11]

Methods

Measurement tool

As outlined in the previous study, Erdem and Isbası developed a measurement of organizational culture perception.[10] This was a 31-item rating scale. The items are scored on a 5-point scale based on 1: strongly agree and 5: strongly disagree. They originally defined five dimensions of the measurement, namely “communication and relation with faculty”, “symbols”, “power range”, “cohesion”, “organizational structure and efficiency.” Those items, which receive high scores, tend to be perceived negatively, while the items, which were scored low, tend to be perceived positively. The total scale score and the subtotal scores of dimensions are also estimated in a range of 1 to 5.

Participants

The study involved all 1st, 2nd, and 6th grade students of Gulhane Military Medical School (GMMS) in order to determine the effect of the shortest and longest period of military medical education on newcomers. A questionnaire including the measurement and some socio-demographic questions had previously been applied to these students in

a self- reported form in 2008. Of the total 205 students, 185 agreed to participate and were reached for applying the measurement with a coverage rate of 90%. More detailed information on Turkish military Medical students has been published in some previous studies.[12-14]

School environment

Gulhane Military Medical School (GMMS), the only military medical school among more than 50 medical schools in Turkey, is attached to Gülhane Military Medical Academy (GMMA), which is the highest consultative organ of T.C. Genelkurmay Başkanlığı (Turkish General Staff) on Health issues. GMMA, founded as the Gülhane Military Application School and Hospital in 1898 in Istanbul as the first modern Turkish medical school, is a famous and prestigious organization as outlined in the previous study.[11]

Data analyses

Data analysis was carried by using the SPSS package version 15.0 by choosing proper statistical methods as recommended in the literature.[15] Descriptive analyses have been used to demonstrate the distribution of participants according certain variables like age, mother's education, father's education, Region of residence, sex, grade, place of residence. For internal consistency of the measurement tool, the Cronbach's Alpha value has been estimated. A factor analysis has been performed to measure construct validity. The mean scores of the entire scale and all of its 5 dimensions have been estimated. An ANOVA test has been used to compare the mean scores of groups based on grades and the Bonferroni test was used as a post hoc test. Student's t test was used for comparisons based on age groups. The Pearson correlation analysis was done to find out any association between age and all scores.

Results

All participants were between 17 and 26 years of age.. The average age of participants was 20.2±2.5. Only 7 (3.8 %) students were female. Certain other characteristics of the students have been presented in Table 1.

We found Cronbach's Alpha Value for the scores of the measurement tool items as (0.89) to besufficiently above the recommended cut off value (0.70) of reliability. This finding was also consistent with the results of the previous two studies using this measurement.[10,11] Corrected item-total correlation of items varied from 0.21 to 0.70 with the exception of items 5 and 17 with item-total correlations of -0.18 and -0.19. After removing these two items from the measurement tool, the Cronbach's alpha Value was raised to 0.90 and the Corrected Item-total correlation of items varied from 0.20 to 0.70.

A factor analysis was done for validity of this suggested 29 item scale. The Kaiser- Meyer-Olkin (KMO) test result was 0.85 at the limit of "meritorious" according to the Kaiser Criteria.[16] This has indicated 29 item correlation matrix was not identity matrices. The significance level of Bartlett's Test of Sphericity (2118.46) for the 29 item correlation matrix was highly significant ($p<0.001$) and indicated that we had a sufficient sample size regarding the number of items in the scale. The Measures of Sampling Adequacy (MSA)s ranged from 0.582 for item 18 to 0.919 for item 19.

Table 2 presents the distribution of participants' choices for each individual item with the consideration of 5 main dimensions.

Table 3 presents the mean scores estimated for each item in an ascending order. The first item with the lowest score of 1.88±0.9 is "Ceremonies such as opening and closing ceremonies are taken seriously in the school" and belongs to the symbol dimension as shown in table 2. The second item with the second lowest score of 2.26±1.0 is "Residents and research assistants heartily help the students" belonged to the Communication and relations dimension. While the third item with third lowest score of 2.28±1.2 comes from the cohesion dimension, the fourth item that has almost the same score as the third item belonged again to the symbol dimension. These two items are "I will see myself as a member of this school even after I graduate" and "Memories, stories and

events are transmitted to new students by the old ones" respectively.

Table1. Distribution of sociodemographic characteristics of military medical students

Characteristics	Groups	n*	%
Age	Adolescent (19 and younger)	111	60.0
	Young adult (20 and older)	74	40.0
	Total	185	100.0
Mother's Educational status	Less than primary school	10	5.4
	Primary school	82	44.3
	Secondary school	14	7.6
	High school	47	25.4
	Some College/College	31	16.8
	Total	184	100.0
Father's Educational status	Less than primary school	1	0.5
	Primary school	50	27.0
	Secondary school	8	4.3
	High school	54	29.2
	Some College/College	71	38.4
	Total	184	100.0
Region of residence	Marmara	27	14.6
	Ege	28	15.1
	Central	63	34.1
	East	5	2.7
	Southeast	13	7.0
	Akdeniz	28	15.1
	Karadeniz	16	8.6
	Total	185	100.0
Gender	Male	178	96.2
	Female	7	3.8
	Total	185	100.0
Grade	1	61	33.0
	2	57	30.8
	6	67	36.2
	Total	185	100.0
Place of living area	Village	13	7.0
	Town	9	4.9
	City	50	27.0
	Metropolis	112	60.5
	Total	184	100.0
Economic status	Low	21	11.6
	Middle	150	82.9
	High	10	5.5
	Total	181	100.0

*: The total numbers are not equal for different variables because of some unknown answers

Table 2: The distribution of participants' choices according to options for each item of the 31-item measurement tool that was presented (n=185) (2008 Ankara)

Q. No	Items	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree
	Organizational structure and efficiency	%				
1	There is strong coherence between major science and science branches in the school in terms of activities.	7.0	24.3	47.6	16.8	4.3
3	Medical School Student Group Command is successful in solving problems.	-	16.8	35.3	31.5	16.3
4	School management protects the faculty from outside influence and pressures.	9.2	32.1	26.1	19.0	13.6
5	There is competition among departments of the Medical school	4.9	21.7	43.5	25.0	4.9
10	The courses are taught in a manner that develops reasoning and skills rather than mere information transfer.	2.7	21.6	25.9	34.6	15.1
12	Members of the faculty are in coordination with each other and in solidarity.	4.9	32.4	41.6	14.6	6.5
13	School management duly and correctly informs the students about the code, regulations and their applications.	7.6	39.5	26.5	20.5	5.9
23	Managerial staff have positive attitudes in handling demands from the students.	6.5	44.6	26.1	14.7	8.2
24	There is coordination and solidarity among students-faculty-staff.	5.9	33.0	31.9	22.7	6.5
26	School meets the expectations of the family, society and business.	3.8	21.1	26.5	25.9	22.7
	Communication and relations					
2	Students are well informed about the administration and operation of the major science and science branches.	1.1	20.5	24.9	44.9	8.6
6	The faculty is always open for communication.	11.9	55.7	16.7	13.0	3.2
7	We are well informed about the educational objectives of the school.	3.2	34.1	33.0	20.0	9.7
8	Communication is strong between different year students.	19.5	49.2	12.4	15.7	3.2
15	Students see the faculty close enough to share their different problems.	3.8	28.3	32.6	23.9	11.4
16	Students can communicate their problems and thoughts concerning school regulations with the management.	4.9	30.8	33.0	18.4	13.0
20	New students easily blend with the existing students.	17.4	49.5	13.6	15.2	4.3
22	Residents and research assistants heartily help the students.	18.9	54.1	13.0	9.7	4.3
	Cohesion					
11	The school is known to be prestigious (in the campus, in the city)	13.5	33.5	27.0	13.5	12.4
21	It is a privilege to be a med student in the faculty of medicine of this academy/university.	26.8	33.9	18.6	8.7	12.0
25	I recommend college candidates around me to choose this school.	9.2	16.3	20.7	25.0	28.8
27	I will see myself as a member of this school even after I graduate.	24.9	45.9	10.3	10.3	8.6
31	I see myself lucky in competition with the medical schools of other universities.	14.1	29.7	30.3	11.4	14.6

Table 2 contunue:

	Power distance					
9	The members of the faculty are caring in their relations with the students.	11.4	54.6	17.3	14.1	2.7
14	The members of the faculty are tolerant of mistakes.	5.4	43.5	33.2	13.6	4.3
17	The members of the faculty are authoritarian in terms of relations between professors and students.	3.8	30.8	29.2	34.6	1.6
18	All the members of the faculty treat students similarly.	3.8	30.4	19.6	33.2	13.0
	Symbols					
19	The faculty is identical with the school.	5.4	38.9	29.2	24.3	2.2
28	The physical places of your school are unique and distinct compared with other schools or colleges.	16.3	37.5	19.0	16.8	10.3
29	Ceremonies such as opening and closing ceremonies are taken seriously in the school.	34.6	50.8	8.1	4.3	2.2
30	Memories, stories and events are transmitted to new students by the old ones.	18.9	51.4	12.4	13.5	3.8

The dimension of the symbol received the lowest mean score as 2.42±0.7 while the Organizational structure and efficiency dimension has received the highest one as 3.05±0.6 (Table 4).

Table 5 demonstrates the mean scores of the scale and all of its 5 dimensions according grades. The comparisons of these scores by using the ANOVA test have revealed significant differences between classes for the total scale and all of its dimensions. Sixth grade students got significantly higher scores without any exception, while first grade students got the lowest scores. Similar comparisons of the scores have been performed between categories of other sociodemographic variables, no significant difference was found for mother's educational status, father's educational status, and region of residence except age, that confirms the significant difference between scores of students at different grades

Discussion

After Erdem & Isbası published their study in 2004, their scale of organizational culture was used in another study by Ozer et al.(reference) They determined that the 31-item measurement was reliable after dropping items 5 and 17[10,11]. We also revealed that the mentioned scale has a sufficient reliability level by dropping the same two items in this study. Item # 29 "Ceremonies are considered important at the opening, closing and anniversaries" belonging to the symbol dimension received the lowest score (2.42±0.7 as seen in table IV) for this study. Ozer et al. also found this item was scored with lowest score of 2.58±0.7 in their study[11]. The dimension of symbol was scored at lowest level in both studies also. Interestingly, the ascending order of dimensions presented in Table IV was completely the same in both studies. These findings might suggest that the organizational culture at the Military medical school remains constant over the years.

To check whether there are any significant differences between scores in this study and scores the previous study by Ozer et al.[11], we conducted one sample test regarding scores of the total scale and all of its 5 dimensions. No significant difference was found for the total scale mean score (mean values; 2.82±0.6 for the present study, 2.88±0.6 for the previous study). However, we found a significant difference for the dimension of organizational structure and efficiency (mean values; 3.05±0.7 for present study, 3.16±0.6 for previous study, p=0.031) and a strong significant difference for the symbol dimension (mean values; 2.42±0.7 for present study, 2.58±0.7 for previous study, p=0.002). This indicates that the military medical graduates had significantly weaker perception of these dimensions compared to military medical students.

Table 3: The mean scores of the items included in the organizational culture measurement tool with 31 items used in the study have been presented (n=185) (2008 Ankara).

Question No	Items	Mean ± sd
29	Ceremonies such as opening and closing ceremonies are taken seriously in the school.	1.9 ± 0.9
22	Residents and research assistants heartily help the students.	2.3 ± 1.0
27	I will see myself as a member of this school even after I graduate.	2.3 ± 1.2
30	Memories, stories and events are transmitted to new students by the old ones.	2.3 ± 1.0
8	Communication is strong between different year students.	2.3 ± 1.1
20	New students easily blend with the existing students.	2.4 ± 1.1
6	The faculty is always open for communication.	2.4 ± 1.0
9	The members of the faculty are caring in their relations with the students.	2.4 ± 1.0
21	It is a privilege to be a med student in the faculty of medicine of this academy/university.	2.5 ± 1.3
28	The physical places of your school are unique and distinct compared with the places of other schools or colleges.	2.7 ± 1.2
14	The members of the faculty are tolerant of mistakes.	2.7 ± 0.9
23	Managerial staff have positive attitudes in handling demands from the students.	2.7 ± 1.1
13	School management duly and correctly informs the students about the code, regulations and their applications.	2.8 ± 1.0
11	The school is known to be prestigious (in the campus, in the city)	2.8 ± 1.2
19	The faculty is identical with the school.	2.8 ± 0.9
31	I see myself lucky in competition with the medical schools of other universities.	2.8 ± 1.2
12	Members of the faculty are in coordination with each other and in solidarity.	2.9 ± 0.9
1	There is strong coherence between major science and science branches in the school in terms of activities.	2.9 ± 0.9
24	There is coordination and solidarity among students-faculty-staff.	2.9 ± 1.0
4	School management protects the faculty from outside influence and pressures.	3.0 ± 1.2
7	We are well informed about the educational objectives of the school.	3.0 ± 1.0
17	The members of the faculty are authoritarian in terms of relations between professors and students.	3.0 ± 0.9
5	There is competition among departments of the Medical school	3.0 ± 0.9
16	Students can communicate their problems and thoughts concerning school regulations with the management.	3.0 ± 1.1
15	Students see the faculty as close enough to share their different problems.	3.1 ± 1.1
18	All the members of the faculty treat students similarly.	3.2 ± 1.1
10	The courses are taught in a manner that develops reasoning and skills rather than mere information transfer.	3.4 ± 1.1
2	Students are well informed about the administration and operation of the major science and science branches.	3.4 ± 0.9
26	The School meets the expectations in the family, society and business.	3.4 ± 1.2
3	Medical School Student Group Command is successful in solving problems.	3.5 ± 1.0
25	I recommend college candidates around me to choose this school.	3.5 ± 1.3

The most striking finding of the present study was the significant difference between scores of the total scale and its 5 dimensions across the grades as demonstrated in Table 5. According to the Bonferroni test results, regarding all kind of scores, the 6th grade students had significantly higher scores than 1st grade students, and they hadsignificantly higher scores than 2nd grade students regarding all scores with the exception of communication and relations and cohesion dimensions.

Interestingly, the 2nd grade students had significantly higher scores than the 1st grade students regarding almost all scores but not in the symbol dimension. This means that perceptions of 2nd grade students were weaker than 1st grade students on organizational culture with the exception of the symbol dimension. These findings may indicate that students have more positive feelings and thoughts before entering to medical school, but they loose these to some extent gradually over the years.

Table 4: The mean scores rated for the dimensions of the organizational culture 29-item measurement tool used in the study have been presented (Ankara 2008)

Dimensions		Mean ±sd
1.	Symbols	2,4 ± 0.7
2.	Communication and relations,	2,7 ± 0.6
3.	Cohesion	2,8 ± 0.9
4.	Power distance	2,8 ± 0.6
5.	Organizational structure and efficiency	3.1 ± 0.6
Total	The scale organizational culture	2.8 ± 0.6

Table 5: The comparisons of the mean scores rated by the groups based on the grade for the dimensions of 29–item measurement tool used in the study have been presented (Ankara 2008)

Dimensions	Grade	n	Mean ± sd	p
Organizational structure and efficiency (OSE)	1	58	2.6 ± 0.7[a]	<0.001
	2	57	3.1 ± 0.6[b]	
	6	67	3.4 ± 0.8[c]	
Communication and relations (CR)	1	59	2.4 ± 0.5[a]	<0.001
	2	57	2.8 ± 0.5[b]	
	6	67	3.0 ± 0.6[b]	
Cohesion (C)	1	61	2.3 ± 0.8[a]	<0.001
	2	54	2,8 ± 0.6[b]	
	6	67	3.2 ± 0.8[b]	
Power distance (PD)	1	61	2,4 ± 0.9[a]	<0.001
	2	56	2,7 ± 0.8[b]	
	6	67	3.2 ± 0.7[c]	
Symbols (S)	1	60	2,1 ± 0.7[a]	<0.001
	2	57	2,4 ± 0.6[a]	
	6	67	2.7 ± 0.7[b]	
Total (T)	1	56	2.4 ± 0.7[a]	<0.001
	2	54	2,9 ± 0.5[b]	
	6	67	3.1 ± 0.6[c]	

[a, b, c]: For each dimension, the grades not having the same letter are significantly different from each other

To recheck this relationship we have performed the Pearson correlation analysis between ages and all other mean scores by considering ageing as a reflection of increase in grade. We found the total score and scores of all 5 dimensions positively and significantly correlate with age at the 0.01 level. The negative change in the organizational culture over the years may be explained by some possible factors, which could not be confirmed within the limits of this study. But these are only our suggestions and they should be addressed fully future studies;

1. The perceptions of military medical students may be changed with the effect of military Medical education itself.
2. Increase in age in parallel to increase in grades alters their ideas. But it should be kept in mind that the age increase during medical education covers the transition from adolescent to young adult..
3. Future concerns (Conditional factors).of military medical students

However, we would like to discuss these three possibilities above with the help similar literature to some extent.

1. The effect of medical education: The notion of an organisational culture is frequently invoked in the organisation and management literature.[4,5] Studies regarding organizational culture in the health area usually concern health care rather than medical education.[1,2,4-6] To our knowledge no study is available regarding the effect of medical education on organizational culture. However there are numerous studies showing some possible undesired effects of the long duration of medical education with many examinations and interviews in medical students' training. This was pointed out by several studies. As an example Eron's study in 1955 based on observations that medical students had tended to have certain attitudes, value systems and defences which did not seem to be consonant with the demands and gratifications of a service oriented profession.[17] In another study it was stated that as medical students enter the clinical years, their concerns change as they find themselves unable to apply what, for the examinations, they knew well enough. This study also underlines that medical education can be stressful and a health hazard.[18] As a matter of fact, Bakir et al. in 1997 revealed a high percentage of depressive symptoms among military medical students, which differed in frequency by grade and age.[19] Bakir et al. in 1996 also demonstrated a feeling of punishment that was the most frequent symptom among students in general, but while it was the most frequent symptom among students older than 20 years old, feeling like crying was rated at the highest level by students younger than 20 years.[20] This stressful life of medical education with shifting concerns by grades may also influence perceptions of the organizational culture of the students.

2. The development from adolescence to young adult; Generally, students begin medical school in their adolescent period as young as 17 years old but they graduate as young adults not younger than 23 years There are numerous studies demonstrating the difference between adolescents and young adults. Luna et al. (2001) found that adolescents utilize their cognitive-control neural networks to a lesser degree compared to adults.[21] Ryan claimed that adolescents are becoming less egocentric, developing better social skills and understanding of relationships, becoming less aggressive and developing better coping skills over time.[22] These facts above may explain the significant difference in the scores given to the symbol dimension between this study (2.42) and the previous one (2.58). Because, in the present study the mean age was 20.2 $\pm$ 2.5 including 1st grade students (n=61, mean age 18.1$\pm$0.7) and 2nd grade students (n=57, mean age 18.9$\pm$0.6), while it was 25.2$\pm$1.1. Moreover, in this study a positive correlation was determined between scores and age. Thus, we divided students into two groups based on their age as adolescent (19 and younger) and young adult (20 and older). Young adults scored all dimensions significantly higher ($p<0.001$). Since adolescents are

more egocentric and less developed cognitively they tend to value all their belongings including their schools. They might perceive themselves and everything that they have as more superior than others. This characteristic of the adolescent period may also explain the lower score given to the organizational structure and efficiency in this study.

3. Future concerns of military medical students: After implementing a performance based payment contribution system by the Turkish ministry of health in 2004[23], incomes of civilian health professionals especially physicians were increased remarkably. This implementation has not covered military physicians. Therefore, a serious gap in income level has occurred between military physicians and civilian ones in Turkey. Thus, to enroll in a specialization program at GMMA has become more competitive comparing civilian counterparts though being desired by almost all military physicians.[22] This kind of future concerns might affect perceptions' of older military medical students and graduates negatively. Actually the solutions of both problems are not matters foe the GMMA or faculty, but for higher authorities like the Turkish General Staff or army headquarters. Though, students possibly blame Faculty and the medical school administration. As seen in Table 6, the item titled as "School Student Group Command is successful in solving problems" was rated as the second highest score and the item titled as School meets the expectations in the family, society and business was rated as the third highest score. The higher scores of these items may confirm this claim of students' negative orientation toward the school administration. If these problems affect students' perceptions, it indicates a temporary reflection by them that could be improved by increasing the income level of military physicians and the number of positions for specialization programs.

As stated in a previous paper, not only the surrounding medical environment may influence the students' perceptions but also matters relating to the culture and individual family settings may affect it.[17] Therefore we also compared the scores of students by certain factors. However, no significant differences were found among students according to income level, mother's education, father's education, region of hometownor living place.

Conclusion

As a result there is a strong tendency among students to lose their positive perceptions between the beginning of medical school and graduation. Whatever the reason of this, certain prophylactic actions should be taken to strengthen the culture at GMMA. If this deterioration in culture by years is a result of natural development, achievement of a positive perception of the culture despite this fact would.

Limitations

The results relating to the organizational culture are limited to the perceptions of participants at the time of study and do not reflect the views of the civilian medical students. The limited number of female students does not permit us to make comparisons between sexes.

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