

# Comparison of Empathy Skills and Conflict Tendency in Preclinical and Clinical Phase Turkish Medical Students: a Cross-Sectional Study

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## ABSTRACT

Comparison of empathy skills and conflict tendency in preclinical and clinical phase Turkish medical students: a cross-sectional study

**Objective:** Empathy skills and personal conflicts which may change over time by social, environmental and educational factors, are both important components for a succesful patient-physician relationship. We sought to investigate the empathy levels and conflict tendencies in medical students considering the phase of medical education

**Method:** One hundred and eighty six students were included from first, fourth and sixth year medical students. A sociodemographic data form, Emphatic Skills Scale-B-Form and Conflict Tendency Scale were administered to all participants.

**Results:** The mean scores of empathy skills did not differ across males and females. Passive antithetical conflict was higher in females, active conflict score was higher in year one students. A significant increase was found in empathy in last year. Total conflict tendency was higher in students who were not satisfied with their medical education. Existantial conflict was found to be decreased with increasing empathic skills.

**Conclusion:** There is a significant difference between year one and year six in medical students for active conflict tendency, and better empathy skills are present in year six students.

**Key words:** Conflict tendency, empathy, medical education, medical student



## ÖZET

Preklinik ve klinik dönemdeki Türk tıp öğrencilerinde empati becerileri ve çatışma eğiliminin karşılaştırılması: Kesitsel bir çalışma

**Amaç:** Zaman içerisinde sosyal, çevresel ve eğitim gibi etkenlerle değişebilen empati becerileri ve kişisel çatışmalar, başarılı bir hasta-doktor ilişkisinde önemli komponentlerdir. Bu çalışmanın amacı tıp eğitiminin farklı dönemlerindeki öğrencilerde empati becerilerini ve çatışma eğilimini incelemektir.

**Yöntem:** Çalışmaya birinci, dördüncü ve altıncı yıldan toplam 186 tıp öğrencisi dâhil edilmiştir. Öğrencilere sosyodemografik veri formu, Empatik Beceri-Ölçeği-B formu ve Çatışma Eğilimi Ölçeği uygulanmıştır.

**Bulgular:** Kızlar ve erkekler arasında empatik beceri puanları açısından anlamlı fark saptanmamıştır. Pasif tünden reddetme puanı ise kız öğrencilerde erkek öğrencilerden daha yüksek bulunmuştur. Aktif çatışma puanı birinci yıl tıp öğrencilerinde diğer dönemdekilere göre daha yüksek bulunmuştur. Toplam çatışma eğilimi puanının tıp eğitiminden memnun olmayan öğrencilerde, memnun olanlardan daha fazla olduğu belirlenmiştir. Varoluşçu çatışma puanının ise empatik beceri puanının artışı ile azaldığı saptanmıştır.

**Sonuç:** Aktif çatışma eğilimi açısından tıp öğrencilerinde birinci ve altıncı yıllar arasında anlamlı fark vardır, empatik becerilerin de altıncı yıl öğrencilerinde daha iyi olduğu belirlenmiştir.

**Anahtar kelimeler:** Çatışma eğilimi, empati, tıp eğitimi, tıp öğrencisi

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## INTRODUCTION

A good patient-physician relation is a kind of complex art including empathy abilities, behavioural components and affects of different personal traits. Empathy is defined as “the ability to intellectually and emotionally sense the emotions, feelings, and reactions that another person is experiencing”; and can be simply defined as an appropriate “understanding of the patient” in medicine (1,2). It has been shown that empathy improves a better patient- doctor communication and increases patients’ satisfaction (3-5). It’s highlighted in a recent study by Ogle et al. (6) that, empathy is strongly associated with clinical competence in patient relation that, it seems essential to examine empathy and related factors for better treatment approaches.

In recent studies that have investigated the differences of empathy skills for gender and different medical years in United Kingdom have indicated that empathy is not a stable pattern and can change over time or with education (7,8). Besides, in a study conducted in Turkey, Dereboy et al. (9) have shown that 75% of the first grade medical students have low empathy scores which may be increased with appropriate education methods. In United States (US), Chen et al. (10) have revealed that empathy scores of students in the preclinical years are higher than in the clinical years. Although it is not clear why the levels of empathy scores are changing, an extensive amount of literature is emphasizing about the decline of empathy scores during medical education and even during residency (10-12).

Empathy may be influenced by social, environmental and educational factors. Personal conflicts and conflict resolutions may be an other affecting factor to empathy and understanding the patient. Social behaviors such as communication and social style like warmth, sensitivity, positive outlook, and even temper are all important factors for a successful patient- physician relationship (13). Some researchers have shown that conflict resolution approaches are necessary to emphasise a patient (14-16). Empathic processes and intrapersonal outcomes increase helping behavior and reduce aggressive behavior, encourage conflict avoidance,

improve conflict management and promote good communication (17). Thus, determining empathy and conflict styles together is essential to understand the changing behaviors especially at the beginning point, during ‘medical education’.

In the present cross-sectional study, we aimed to compare the differences and relations of empathy and conflict tendencies of medical students in preclinical and clinical phase. We also determined the effects of willing to be a doctor, having a chronic disease and satisfaction with their medical education, those might alter the empathy skills and conflict tendency among first, fourth and sixth year Turkish medical students.

## METHOD

### Sample

Of the 335 students from first, fourth and sixth year in 2010-2011 years period, 186 students (55%) (72 from first, 59 from fourth and 55 from sixth year) were included in the study as three groups in preclinical and clinical phase.

In Turkey medical schools have adopted system-based programs with themes in the first three years. In this phase involves preclinical lessons and they have no clinical experience. The clinical phase (years 4-6) are commonly not system-based; instead, a “department-based” education program is used. Fourth and fifth year involves some clinical components and finally sixth year medical students mostly experience patient relationship.

A sociodemographic form, Empathic Skills Scale- B Form and Conflict Tendency Scale was administered to all students. A written informed consent was obtained from all medical students, and the study protocol was approved by the local ethics committee.

### Measures

#### Sociodemographic Data Form

Data forms including age, gender, marital and socioeconomic status and the questions mentioned

below were applied to all participants: "Was medical education your first choice?", "Are you satisfied with your education?", and "Do you have a chronic disease?"

### **Empathetic Skills Scale – B Form**

Empathetic Skills Scale- B Form developed by Dokmen (18), was used to determine the empathetic skill levels of students. The Empathetic Skill Scale is a Likert type scale which includes six separate psychological problems regarding the daily life and twelve types of empathetic reactions to each problem. The highest score that can be received from the scale is 219 and the lowest score is 64. The total points received from the Empathetic Skills Scale – B Form show an individual's empathetic skill level: higher grades represent the higher level of empathetic skills. The Empathetic Skills Scale- B Form has been applied to 60 first year students at Ankara University, Faculty of Education and 24 psychologists working in different institutions, with the aim of testing its reliability and validity. For reliability, the Empathetic Skills Scale-B Form has been applied to sixty subjects with an interval of a fortnight and the "r" value has been found to be 0.83 with  $p < 0.001$ . In the validity study, it has been anticipated that there is a meaningful difference between the students and the psychologists ( $t = 8.15$ ,  $p < 0.001$ ) (18).

### **Conflict Tendency Scale**

Harry and Batell's (19) communication conflict model was adopted by Dokmen (18) through the theoretical model in accordance with the Summative Ordering Technique. The Likert type scale was developed for the purpose of revealing the communication abilities of adults and the characteristics of their conflicts. It is made up of 10 subscales as active conflict, passive conflict, existential conflict, antithetical conflict, labelled (biased) conflict, intensity conflict, active-labelled (biased) conflict, passive-antithetical conflict, and humanist approach and conflict characteristics. The scale has 53 items, 31 of which are positive and 22 negative. Positive items

show a communication conflict or conflict tendency. Negative items, on the other hand, show abilities and tendencies with no conflict reason that also enable the communication to last in a healthy way. In the reliability study of the scale, the test-retest reliability coefficient was calculated to be  $r = 0.89$  over a 14-day period. In the reality study, a group of university students had a group discussion that lasted for 2 hours and then the conflict tendency scale was applied. The correlations between the points, which the subjects of the experiments had received in the course of the group discussion with the evaluation of the researcher and the points they had got from the conflict tendency scale are as follows in relation to each conflict type: Active conflict ( $r = 0.74$ ); existential conflict ( $r = 0.88$ ); antithetical ( $r = 0.73$ ); labelled (biased) conflict ( $r = 0.82$ ); intensity conflict ( $r = 0.69$ ); active-labelled (biased) conflict ( $r = 0.64$ ). The correlation values obtained were as reasonable in the  $p < 0.01$  level. The range of scores varies between 53-265 where higher scores meant more tendency of conflicts in an interpersonal relationship (20).

### **Statistical Analysis**

All analyses were performed using SPSS version 15.0 (SPSS Inc., Chicago, IL). Data are expressed as mean  $\pm$  standard deviations or frequencies. Independent t-test was used to compare the mean scores of conflict tendency scale and empathy skill scale. The effects of satisfaction of education, first choice to be a doctor and having a chronic disease were analyzed by Kruskal-Wallis and Mann-Whitney U-tests. For determining the correlations between conflict tendency subscales and empathy skill scores, Pearson correlation test was used. In all analyses, significance was set at a probability  $p < 0.05$  at 95% confidence intervals.

### **RESULTS**

Of the 186 medical students, 72 (38.7%) were first-year, 59 (31.7%) were fourth year and 55 (29.6%) were last year students. No differences were found between three groups in gender and socioeconomic status

**Table 1: Comparison of Conflict Tendency scores in first and fourth year medical students**

	Year One (n=72)	Year Four (n=59)	t	p
	Mean±SD	Mean±SD		
<b>Total Conflict Tendency</b>	154.00±18.80	148.70±23.30	0.499	0.151
<b>Active conflict</b>	21.10±5.00	19.80±4.20	2.681	0.112
<b>Passive conflict</b>	27.90±4.60	26.90±5.90	2.227	0.284
<b>Existential conflict</b>	16.20±2.90	15.00±3.10	0.238	0.031*
<b>Antithetical conflict</b>	17.70±3.70	17.50±3.90	0.055	0.763
<b>Labelled (biased) conflict</b>	4.10±3.80	3.60±0.80	0.833	0.289
<b>Intensity conflict</b>	5.90±1.50	5.40±1.30	0.062	0.049*
<b>Active labelled (biased) conflict</b>	5.80±2.10	5.80±1.90	0.369	0.903
<b>Passive-antithetical conflict</b>	11.70±2.80	13.30±13.70	2.000	0.356
<b>Humanist approach</b>	21.30±3.90	22.00±5.30	0.358	0.372
<b>Conflict characteristics</b>	23.90±5.27	21.90±5.50	0.034	0.035*
<b>Empathy Skill</b>	112.30±45.20	101.30±50.90	2.557	0.194

\*p<0.05 was considered significant, t: Independent-t test

**Table 2: Comparison of Conflict Tendency scores in first and sixth year medical students**

	Year One (n=72)	Year Six (n=55)	t	p
	Mean±SD	Mean±SD		
<b>Total Conflict Tendency</b>	154.00±18.80	148.90±21.10	2.264	0.149
<b>Active conflict</b>	21.10±5.00	18.80±4.50	0.344	0.007*
<b>Passive conflict</b>	27.90±4.60	26.70±7.00	5.386	0.235
<b>Existential conflict</b>	16.20±2.90	15.20±2.90	0.038	0.082
<b>Antithetical conflict</b>	17.70±3.70	17.60±3.90	0.197	0.932
<b>Labelled (biased) conflict</b>	4.10±3.80	3.60±0.80	0.650	0.294
<b>Intensity conflict</b>	5.90±1.50	5.60±2.40	0.362	0.462
<b>Active labelled (biased) conflict</b>	5.80±2.10	5.30±1.60	3.327	0.132
<b>Passive-antithetical conflict</b>	11.70±2.80	11.70±2.70	0.003	0.927
<b>Humanist approach</b>	21.30±3.90	20.30±4.90	1.370	0.238
<b>Conflict characteristics</b>	23.90±5.30	23.50±4.80	0.090	0.644
<b>Empathy Skill</b>	112.30±45.20	125.60±26.30	18.95	0.002*

\*p<0.01 was considered significant, t: Independent-t test

(p=0.57, p=0.64, respectively). The mean ages for first year, fourth year and sixth year medical students were 19±1, 22±1 and 24±1 years respectively. In terms of gender, only the score of passive-antithetical conflict was significantly higher in female students than males for conflict tendency scale (p=0.023). However, the mean score of empathy skill scale was higher in males than in females among all students with borderline significance (p=0.051).

The scores of conflict tendency scale for the three grades are shown in Table 1 and Table 2. The total score for conflict scale was 154.0±18.8 in first year students, 148.7±23.3 in fourth year students and 148.9±21.1 in

sixth year students, and no significant difference was found between groups for total scores of conflict tendency scale (p=0.198). However, as shown in Table 1, scores of existential conflict, intensity conflict and conflict characteristics were significantly higher in first year students than fourth year students. The mean score of active conflict was also significantly higher in first year students than last year students (p=0.007).

The mean score of empathy skill scale for first year students was 112.3±45.2, and 101.3±50.9 for fourth year medical students with no significant differences (t=2.56, p=0.19). The mean score of empathy skill scale for sixth year students was 125.6±26.3 and was

**Table 3: Comparison of empathy skill and conflict tendency between the students whose first choices was being a doctor or not; and who has a chronic disease or not**

	Empathy Skill (Mean Rank)	Conflict Tendency (Mean Rank)
<b>Was being a doctor your first choice?</b>		
Yes (n=167)	92.2	94.9
No (n=19)	105.2	81.7
	z=-0.728	z=-1.012
	p=0.316*	p=0.312*
<b>Do you have a chronic disease?</b>		
Yes (n=20)	77.1	100.1
No (n=166)	95.5	92.7
	z=-1.448	z=0.576
	p=0.148*	p=0.565*
<b>Are you satisfied with your medical education?</b>		
Not satisfied (n=22)	93.9	126.8
Partially satisfied (n=79)	92.4	101.7
Satisfied (n=85)	94.4	77.3
	$\chi^2=0.061$	$\chi^2=17.941$
	p=0.970 **	p<0.001**

\*Mann Whitney-U test, \*\*Kruskal Wallis test

significantly higher than both first and fourth year scores (t=6.14, p=0.015; t=18.95, p=0.002, respectively). No differences were found between first, fourth and last year students for the empathy skill scores among male and female students (p=0.24, p=0.31, p=0.33, respectively).

Suggesting that the motivation to be a doctor would affect empathy and conflict styles, we asked all participants “Was being a doctor your first choice?”. Comparing the groups, no difference were found between the groups for the answers of “Yes” and “No” (p=0.32). Empathy skill and conflict tendency scores did not differ among students with or without chronic disease.

We also asked the students if they were satisfied with their medical education: 11.9% (n=22) answered “not satisfied”; 42.5% (n=79) “partially satisfied” and 45.7% (n=85) answered “satisfied”. As shown in Table 3, the total score of conflict tendency scale was higher in the “not satisfied” group than the “partially satisfied” and “satisfied” groups (p<0.001), but there were no difference across for the empathy scores (p=0.97).

Correlations of conflict subscales and empathy skill scores are shown in Table 4. There was a significant negative correlation between the scores of existential conflict and empathy skill. No significant differences were present between other conflict subscales and Empathetic Skills Scale- B Form scores.

**Table 4. Correlations (Pearson) of conflict tendency subscales and Empathy Skill Scale**

	Empathy Skill Scale	
	r	p
Active Conflict	-0.021	0.776
Passive Conflict	-0.111	0.131
Existential Conflict	-0.185	0.012*
Antithetical Conflict	-0.092	0.213
Labelled (biased) Conflict	0.080	0.276
Intensity Conflict	-0.021	0.778
Active labelled (biased) Conflict	-0.112	0.129
Passive-antithetical Conflict	-0.101	0.169
Humanist Approach	-0.101	0.172
Conflict Characteristics	-0.043	0.562
Total Conflict Tendency	-0.098	0.184

\*p<0.05

## DISCUSSION

In the present study, we found a significant increase in the score of empathy skills in last year medical students. Comparing the differences of gender for empathy scores, we found no significant difference between male and female medical students despite the studies indicating that female medical students have higher empathy scores than male students (7,8).

The results of studies for empathy changes during

medical school are variable. Many researchers found that empathy in medical students decrease toward the end of their undergraduate medical education experience. But most of the evidence for a decline in empathy originates from studies developed in medical schools in the USA (21-23). A cross-sectional study conducted in Iran did not find variations in empathy (24). In a recent study in UK, Tavacol et al. (7) also found no difference between empathy mean scores and the medical school year. In a longitudinal study characterized with a similar education style with Turkish Medical Schools comprising of two components (Core Science at years 1-3 and Clinical at years 4-6) researchers did not find a decline in empathetic abilities during their medical education (25). Another recent study conducted by Magelhaes et al. (8). indicated higher empathy scores in final year than first year medical students which is consistent with our findings. Based on those different results in different countries, different education styles and cultural factors may be considered as an important factor for empathy.

Interpersonal conflict is a situation in which one or both persons in a relationship are experiencing difficulty that may effect empathy abilities. In our study, the total conflict tendency scores were not different between first, fourth, and sixth year students. However scores of existential, intensity and conflict characteristics subscales were higher in the first year group than fourth year. Active conflict scores were also remarkably higher in first year students than last year medical students. We know that conflict is inevitable at all stages of life and is believed to increase until mid-adolescence and subside during late adolescence (26). Likewise, our results indicate a decline in the conflict scores especially for active conflict score from first year to sixth year and those may be related to younger ages which is characterized with active conflict styles. In our study, the increase of empathetic abilities and decrease of active conflict tendency in years four and six was remarkable, suggesting that clinical education comprising patient physician relationships may be a helpful period to be more empathetic and less active conflictually. Development and maturation process of the students over time may also have positive effects

on empathy skills and conflict tendency. In a study conducted in Turkish medical students, Dereboy et al. (9) have mentioned that empathic tendency is likely to be changed by an appropriate teaching technique. Based on our findings we suggest that appropriate education for both empathy and conflict tendency may provide better empathy skills and less conflict tendency.

Passive antithetical conflict score was higher in female students than males in our cohort. In passive antithetical conflict, both passive and active antithetical conflicts are seen together, and such conflict may include passive aggression with communication problems. In our culture, women may prefer not to exhibit active conflict styles in their relationships which may be presented as passive conflicts. Therefore in therapeutic approach and in education, strategies to increase communication skills and resolve passive aggression problems maybe helpful for better relationships in especially women. On the other side, it was interesting that other conflict styles in women were similar to men which might be related to women's more active role in occupational status. But, further research is needed to reveal the gender difference (27).

Having a chronic disease was not associated with empathy and conflicts in our study group. Besides, empathy and the conflicts of the students whose first choice was to be a doctor did not differ from other medical students, whose first choice was another occupation. However, we found that medical education satisfaction is important for less conflicts. Students who were satisfied with their medical education had less conflict, that may provide a better relationship, although empathy was not found related with the satisfaction of medical education. Total conflict scores and most of the conflict subscales were not associated with empathy except existential conflict. Since existential conflict represent an egocentric attitude that disturbs empathy skills, we found the ability of empathizing seems to increase with the decrease of existential conflict.

There were some limitations of our study. First, our study had a cross-sectional, not a longitudinal follow-up design. Second, the scores were obtained from self-report measurements without a structured interview.

Besides, this study was conducted in a medical school which would be inconvenient to generalize the results. However, the strength of our study was to examine both the empathy levels and conflicts in Turkish medical students, which were essential components for a better patient-physician relationship. In

conclusion empathy skills were better in final year medical students than first and fourth year medical students, with no gender differences. Active conflict tendency decreased over the years with last year medical students having the lowest scores for active conflict.

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