

Effect of Psychiatry Internship on Schizophrenia Attitudes and Knowledge and its Relationship With Interpersonal Reactivity

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ABSTRACT

The attitudes and knowledge of medical students about psychotic disorders may change throughout their psychiatry training, but the literature presents inconsistent findings. This study aimed to evaluate the attitudes and knowledge of 6th-year medical students toward psychotic disorders before and after a psychiatry internship and examine the associations between these changes and the students' interpersonal reactivity and sociodemographic characteristics. The Attitudes toward Schizophrenia Questionnaire (ASQ) and the Interpersonal Reactivity Index (IRI) were administered to participants before the internship. The ASQ was re-administered after the internship. A total of 498 medical students from 6th year participated in this study. There was no significant difference in the overall ASQ scores applied to the participants before and after the psychiatry internship. A significant relationship was observed between the change in the ASQ remedy-seeking subscale and the IRI personal distress subscale, the ASQ treatment subscale and the IRI personal distress subscale, and the ASQ community-life subscale and the IRI perspective-taking subscale. The findings suggest that although the psychiatry internship alone may not lead to a significant overall change in students' attitudes, its impact may be observed in relation to specific aspects of interpersonal reactivity. This underlines that internships may have a limited impact on the attitudes of students unless they are supported by adequate empathy and interpersonal skills. The results highlight the importance of empathizing with and addressing personal distress in medical education programs.

Keywords: Attitude, psychotic disorders, interpersonal reactivity, psychiatry internship.

ÖZ

Psikiyatri Stajının Şizofreniye Yönelik Tutum ve Bilgiye Etkisi ve Kişiler Arası Reaktivite ile İlişkisi

Tıp fakültesi öğrencilerinin psikotik bozukluklara ilişkin tutum ve bilgi düzeyleri psikiyatri stajı süresince değişiklik gösterebilir; ancak literatürde bu konuda tutarsız bulgular bulunmaktadır. Bu çalışmada, altıncı sınıf tıp öğrencilerinin psikotik bozukluklara yönelik tutum ve bilgi düzeylerinin psikiyatri stajı öncesi ve sonrası değerlendirilmesi ve bu değişimlerin öğrencilerin kişiler arası tepki verebilirlik düzeyleri ile sosyodemografik özellikleriyle ilişkilerinin incelenmesi amaçlandı. Katılımcılara, araştırmacılar tarafından geliştirilen bir sosyodemografik bilgi formu, Şizofreniye Yönelik Tutumlar Ölçeği (ŞYTÖ) ve Kişiler Arası Tepkisellik İndeksi (KTI) psikiyatri stajı öncesinde uygulandı. ŞYTÖ, staj sonrasında tekrar uygulandı. Toplam 498 altıncı

sınıf tıp öğrencisi çalışmaya katıldı. Psikiyatri stajı öncesi ve sonrası uygulanan ŞYTÖ toplam puanları arasında anlamlı bir fark bulunmadı. Ancak, ŞYTÖ'nün "yardım arama" alt ölçeği ile KTİ'nin "kişisel sıkıntı" alt ölçeği, ŞYTÖ'nün "tedaviye yönelik tutum" alt ölçeği ile KTİ'nin "kişisel sıkıntı" alt ölçeği ve ŞYTÖ'nün "toplumsal yaşama katılım" alt ölçeği ile KTİ'nin "bakış açısı alma" alt ölçeği arasında anlamlı ilişkiler bulundu. Bulgular, psikiyatri stajının tek başına öğrencilerin genel tutumlarında anlamlı bir değişim yaratmasa da kişiler arası tepkiselliğin belirli boyutlarıyla ilişkili olarak etkisinin gözlemlenebileceğini göstermektedir. Bu durum, psikiyatri stajının öğrencilerin tutumlarında anlamlı bir değişim yaratabilmesi için uygun empati ve kişiler arası becerilerle desteklenmesi gerektiğini vurgulamaktadır. Sonuçlar, tıp eğitimi programlarında empatinin güçlendirilmesinin ve kişisel sıkıntının ele alınmasının önemini ortaya koymaktadır.

Anahtar Kelimeler: Tutum, psikotik bozukluklar, kişiler arası tepkisellik, psikiyatri stajı.

INTRODUCTION

The stigmatization of mental illnesses constitutes one of the main problems in the field of mental health. Despite the increase in general knowledge about the nature and etiology of mental illnesses, negative attitudes, prejudices, and stigma surrounding severe mental illnesses, such as schizophrenia, tend to continue in academic circles and the public (Corrigan & Watson, 2002). Stigmatization causes people with mental illnesses to be excluded from society and social life by restricting their opportunities such as getting married, renting a house, finding a job and working, socializing, and having close relationships with other people (World Health Organization, 2002). This situation increases the gap between people with mental illnesses and society, prevents them from receiving social support, which is very important for them, and causes them to detach even more from social relations, resulting in a decrease in their ability to cope with their illnesses and the development of resistance to treatment.

Therefore, the study of stigmatization and attitudes toward mental illness has recently become an important area of study in the field of mental health. In the study by Dickerson et al. (2002), the rates of negative attitudes of different groups toward individuals with schizophrenia were examined, and it was found that 61% of the society, 36% of their employers, 20% of mental health workers, 19% of family members, 14% of their friends, and 11% of their partners have negative attitudes toward people with schizophrenia. The exclusionary and stigmatizing approach of healthcare professionals, who provide healthcare services and act as consultants and models in the field of health, stands out as one of the most important factors affecting the negative attitude of the society toward people with mental illness (Yüksel & Taşkın, 2005). Patients with mental health problems are sensitive to the attitudes of healthcare professionals. The negative attitudes of healthcare professionals may make patients with mental illnesses less inclined to seek necessary help. For all these reasons, recent attitudes studies have mostly focused on determining the attitudes of healthcare workers (Eşsizoglu & Arısoy, 2008).

Negative attitudes toward schizophrenia were found to be common in studies evaluating the judgments and beliefs of medical faculty and nursing school students, general practitioners, psychiatry nurses, psychiatrists, and other specialists. Furthermore, the majority of medical professionals seem to perceive patients with schizophrenia as aggressive and dangerous (Arkan et al, 2011; Dickerson et al, 2002; Ergün, 2005; Özyiğit et al, 2004; Taşkın et al, 2003). A recent study conducted on the attitudes of medical faculty students toward psychotic disorders found that negative attitudes are common among students (Kong et al, 2020). In most studies investigating the attitudes of medical faculty students toward mental illnesses, evaluations were made before and after the psychiatry internship, and the effect of the psychiatry internship on attitudes and knowledge toward mental illnesses was investigated. The results of these studies were contradictory. Studies have reported that psychiatry internship has led to significant changes in attitudes toward mental illnesses (Keane, 1990; Mino et al, 2001; Singh et al, 1998), and studies have reported that it has not (Arkar & Eker, 1997; Özmen et al, 2003). In their study investigating the attitudes of medical students toward schizophrenia, Yanik et al. (2003) found that a history of psychiatry education did not change the negative attitudes about patients with schizophrenia regarding social life; accordingly, special education programs are needed to change attitudes toward schizophrenia.

This study aimed to evaluate the knowledge and attitudes of 6th-year medical faculty students toward psychotic disorders before and after the psychiatry internship and examine the relationship between the changes in students' knowledge and attitudes with their interpersonal reactivity, as measured by the Interpersonal Reactivity Index (IRI), and various demographic features. Unlike previous studies that have often focused solely on the impact of education, this research uniquely investigates how IRI-assessed individual differences in empathy and personal discomfort mediate the effect of the psychiatry internship on attitudes toward psychotic disorders.

Understanding this relationship can inform more targeted educational interventions to effectively reduce stigmatization among future healthcare professionals. This study hypothesizes that students with higher levels of empathic abilities (specifically in the empathic concern subscale), lower perception of personal distress in interpersonal relationships, and students who report spending more time with patients in the clinic will exhibit more prominent positive changes in their attitudes compared to others.

METHOD

Sample

The study included 498 medical students from 6th year attending Eskişehir Osmangazi University Medical School between July 2018 and July 2022. Before starting the 1-month psychiatry internship, the researchers created a sociodemographic information form, IRI, and Attitudes toward Schizophrenia Questionnaire (ASQ) were administered to all students. After the internship, the ASQ was again administered to the students, and a questionnaire regarding a general evaluation of the psychiatry internship was also administered. All questionnaires were administered by impartial observers.

The psychiatry internship of 6th-year medical students at Eskişehir Osmangazi University Medical School lasted 30 days, 15 of which were spent in the inpatient clinic and 15 in the outpatient clinic. Our inpatient psychiatric ward is a locked unit with a capacity of 23 beds accommodating both male and female patients. The patient population mostly consisted of patients with psychotic disorders and those with bipolar disorder. During their time in the inpatient unit, students interact with patients, observe diagnostic interviews, and participate in group processes such as morning meetings and various activities. In addition, students have two-night shifts during the internship and participate in 8 hours of internship lessons and 8 hours of literature review lessons.

Forms and Questionnaires Used in This Study

The sociodemographic information form: This form is created by the researchers. It contains items questioning the age and gender of participants and any history of psychiatric diagnosis or treatment in participants and their relatives.

Interpersonal Reactivity Index (IRI): Mark H developed IRI. Davis for a multi-dimensional evaluation of empathy (Davis, 1980). The validity and reliability study of the Turkish version was conducted by Engeler and Yargıç (2007). This self-report scale is a five-point Likert-type scale comprising 28 items. The IRI is divided into four subscales, each consisting of seven items, and each subscale evaluates a different aspect of empathy. These subscales consist of prospective taking (PT), empathic thinking (ET), PD, and fantasy scale (FS).

The PT subscale measures a person's tendency to put themselves in the shoes of others, to look at events and situations from other people's perspectives, and to accept others' perspectives. PT corresponds to empathy's cognitive dimension.

The ET subscale measures emotional responses, such as closeness and warmth, to other people's experiences and evaluates the emotional dimension of empathy. The PD subscale refers to the severity of feelings, such as distress and discomfort, felt by the person when faced with negative experiences of other people, during tense interpersonal relationships, and in situations that may cause negative emotions in the majority of people. The FS subscale measures a person's ability to put themselves in the shoes of characters in movies, games, or novels and to perceive their feelings and behaviors. This subscale is also highly correlated with emotional empathy.

Attitudes Toward Schizophrenia Questionnaire (ASQ): The Psychiatric Research and Education Association prepared the ASQ to evaluate attitudes toward psychiatric disorders. It is commonly used in attitude and stigmatization studies in Turkey (Aker et al, 2002; Yuksel et al, 2019). It is a five-point Likert-type self-report survey. In our study, questions of this scale were applied, except for the first part of the schizophrenia section (28 items). The ASQ consists of four subscales, each consisting of seven items. The overview subscale evaluates a person's degree of general knowledge about schizophrenia ("schizophrenia is a state of extreme sadness" and "schizophrenia is a disease"). The community-life subscale questions stigmatizing and marginalizing behaviors toward patients with schizophrenia seen in social life ("I can work with a person who has schizophrenia" and "If I had a house I wouldn't rent it to a person with schizophrenia"). The treatment subscale measures a person's general knowledge about schizophrenia treatment ("schizophrenia is a disease that can be treated with psychotherapy" and "drugs used in the treatment of schizophrenia cause serious side effects"). The remedy-seeking subscale questions opinions about the extent of recovery for a person with schizophrenia and what he or she should do to recover ("she has to go to a doctor first" and "she can overcome this situation if she wishes").

Statistical Analysis

Continuous data are presented as mean±standard deviation. Categorical data are expressed as frequency and percentage. The normal dispersion fitness was tested using the Shapiro-Wilk test. The paired samples t-test was used for normally distributed data, and the Wilcoxon signed-rank test was used for unevenly distributed data when comparing the

Table 1. Distribution of participants' demographic characteristics and their relationship to changes in ASQ scores

| Demographic variable | Percentage (%) (female/male, yes/no) | Relationship with the change in ASQ scores |
|--|---|---|
| Gender | 49.4/50.6 | p=0.027* |
| History of psychiatric application | 19.9/80.1 | |
| History of psychiatric diagnosis | 12.8/87.2 | |
| History of psychiatric treatment | 12.6/87.4 | |
| Current psychiatric treatment options | 4.8/95.2 | p=0.044** |
| Psychiatric application in the family | 34/66 | |
| Family psychiatric diagnosis | 22.9/77.1 | |
| Schizophrenia in the family | 2.7/97.3 | |
| Schizophrenia in acquaintances | 8/92 | |
| Are you satisfied with your psychiatric internship? | 48.5/50.4 | p=0.032*** |
| Do you think that you have spent enough time with your patients? | 57.2/42.8 | |

*: P-value regarding the change in ASQ community-life subscale scores in female students. **: P-value regarding the change in ASQ treatment subscale scores in the group of students receiving current psychiatric treatment. ***: P-value regarding the change in total ASQ scores in the group of students who stated they were satisfied with the psychiatry internship. ASQ: Attitudes toward schizophrenia.

changes in ASQ scores before and after the internship. A two-way repeated measures analysis of variance (ANOVA) was conducted to examine the relationship between the changes in the scores of the ASQ and IRI subscales. This approach allowed us to simultaneously assess the main effects of time (pre- vs. post-internship) and specific IRI subscales, as well as their interaction effect on ASQ subscale scores. Analyses were conducted using IBM SPSS Statistics 21.0 program. For the statistical significance level, a $p < 0.05$ criterion value was set.

Ethics

The Clinical Research Ethics Committee of Eskişehir Osmangazi University approved this study. This study was conducted in accordance with the principles of the Declaration of Helsinki.

RESULTS

A total of 498 medical students from 6th year participated in this study. Of the participants, 49.4% were women and 50.6% were men. Among the participants, the rate of participants with a previous history of psychiatric admission was 19.9%, the rate of participants with a history of previous psychiatric treatment was 12.6%, the rate of participants with a current history of psychiatric treatment was 4.8%, the rate of participants with a family history of psychiatric admission was 34%, the rate of participants with a family history of psychiatric disease was 22.9%, and the rate of participants with a family history of schizophrenia was 2.7%. The percentage of participants who had an acquaintance with the diagnosis of schizophrenia was 8%. Moreover, 48.5% of the participants stated that they were

satisfied with the psychiatry internship, and 57.2% stated that they spent enough time with their patients during their psychiatry internship.

There was no significant difference between the ASQ scores applied to the participants before and after the psychiatry internship ($p > 0.05$). The change in the ASQ scores of the participants who stated that they were satisfied with the psychiatry internship was statistically significantly higher ($p = 0.032$). The change in the ASQ community-life subscale scores of female students was statistically significantly higher ($p = 0.027$). The change in the ASQ treatment subscale scores of students who are currently receiving psychiatric treatment was statistically significantly higher ($p = 0.044$). Previous psychiatric treatment had no significant effect on the change in the ASQ score ($p > 0.05$) (Table 1).

A two-way ANOVA was conducted to examine the relationship between the change in the ASQ scores before and after the internship and the IRI scores. The results revealed a significant relationship between the change in the ASQ remedy-seeking subscale score and the IRI personal discomfort subscale score ($p = 0.006$). A significant correlation was found between the change in the ASQ treatment subscale score and the IRI personal discomfort subscale score ($p = 0.012$). There was a significant relationship between the change in the ASQ community-life subscale score and the IRI perspective-taking subscale score ($p = 0.006$). The association of change in the ASQ treatment subscale score and the IRI fantasy subscale score was borderline statistically significant ($p = 0.052$) (Table 2).

Table 2. Relationship between changes in the ASQ and IRI subscale scores

| ASQ subscale | IRI subscale | p | Time | Mean | SD | F | η_p^2 |
|----------------|---------------------|--------------|------|-------|-------|-------|------------|
| Remedy-seeking | Personal discomfort | 0.006 | t1 | 28.45 | 0.324 | 1558 | 0.07 |
| | | | t2 | 29.29 | 0.238 | 7.9 | |
| Treatment | Personal discomfort | 0.012 | t1 | 15.51 | 0.313 | 370.9 | 0.05 |
| | | | t2 | 15.38 | 0.263 | 6.4 | |
| Community-life | Perspective-taking | 0.006 | t1 | 22.72 | 0.376 | 192.3 | 0.06 |
| | | | t2 | 23.21 | 0.357 | 7.7 | |

SD: Standard deviation; ASQ: Attitudes Toward Schizophrenia Questionnaire; IRI: Interpersonal Reactivity Index.

DISCUSSION

The findings of the studies conducted to date on whether attitudes toward mental illnesses can be improved with education are contradictory. In addition to studies that found that psychiatric education improves attitudes toward mental illnesses, some studies found no change. Yanik et al. (2003) examined the attitudes of 4th-year students who had no psychiatric education, 5th-year students who received only theoretical education, and 6th-year students who received both theoretical and applied education. No difference was found between the groups in most cases, and more negative attitudes were observed in the educated subjects in some items. In İkişik's (2008) study, stigmatization toward mental illness was qualitatively examined with 62 medical faculty students from the 1st and 6th years, and it was determined that the psychiatry internship during the education process did not provide more positive attitudes toward schizophrenia. The conflicting data on the effects of education on attitudes may be due to methodological differences between studies. The results of this study are consistent with those of other studies that found that education alone has no effect on attitudes toward mental illnesses. In addition, although the amount of knowledge about the etiology and treatment of mental illnesses has increased significantly in the last 50 years, attitudes toward mental illness have remained unchanged, which may support the opinion that the stigma on mental illnesses is too complex to be explained solely by lack of education or knowledge (Dickerson et al, 2002). A recent study examined various approaches for reducing stigmatization of mental illnesses, and the results were found to be inconsistent (Heim et al, 2020). This may be due to the fact that while education has been emphasized in attitude studies conducted so far, personal factors such as interpersonal reactivity that may cause stigmatization have not been adequately examined.

Considering the sociodemographic characteristics that may affect attitudes toward schizophrenia, the significantly higher change in the ASQ community-life subscale scores of female participants may be a result of the fact that women

are living in a patriarchal society and therefore can easily identify with the problems that patients with schizophrenia may experience in their social lives. In a study comparing the IRI scores of female and male medical school students, the scores of female students in empathy were higher than those of male students (Worly et al, 2019). Therefore, the difference observed in our study between genders in terms of attitude change may be due to women having better emphatic skills in general. While there was a significant change in the treatment subscale scores in the group currently receiving psychiatric treatment, the absence of a significant change in the group that received diagnosis or treatment in the past can be interpreted as the effect of receiving treatment on attitudes is only temporary. The positive relationship between students' satisfaction levels with the psychiatry internship and total attitude score change may be explained by the possibility that students who generally had positive feelings about the internship had more opportunities to interact with patients and thus improved their attitudes. The subjective perception of spending enough time with patients does not seem to be related to the change in attitude.

One of the important reasons for stigmatizing attitudes toward patients with schizophrenia is that these patients are perceived as dangerous and unpredictable individuals (Arkan et al, 2011; Link & Phelan, 2001). Stigmatization results in social distancing, which increases the group's marginalization by decreasing the interaction between the person and the stigmatized group, leading to a vicious cycle that perpetuates the stigma (Angermeyer & Dietrich, 2006). In situations that require establishing personal closeness, the need to maintain social distance and the tendency to decrease interaction with the stigmatized person increase (Arkan et al, 2011; Sari et al, 2005). Contact and social interaction with individuals with severe mental illness improve attitudes toward these patients (Altındag et al, 2006; İkişik, 2008). In contrast, the findings of this study indicate that contact with individuals with mental diseases is not sufficient by itself for decreasing stigmatizing attitudes, but it is a necessary prerequisite.

In general, no change was found in the attitudes of students before and after the psychiatry internship. However, when the relationship between the difference in attitude scores and the IRI subscale scores was examined, students who scored higher in the IRI emphatical thinking subscale and those who scored lower in the IRI discomfort subscale had higher changes in their ASQ scores after the psychiatry internship. The negative correlation between the changes in the ASQ treatment and remedy-seeking subscales and the IRI personal discomfort scores may be interpreted as students with low interpersonal discomfort levels being more comfortable spending time and interacting with psychotic patients during the internship, thus having more positive experiences that improve their beliefs about the treatability of psychotic illnesses. This finding may also mean that students with higher levels of discomfort in interpersonal relations tend to avoid actively interacting with patients with psychosis during their internships and are therefore unable to have experiences that will change their attitudes.

The correlation between the change in the ASQ community-life subscale and the IRI perspective-taking subscale scores may indicate that students who have higher cognitive empathy skills can more easily identify with the social problems that psychotic patients may experience during their internships. In various attitude studies examining stigmatization against patients with AIDS, patients with alcohol and substance use disorders, homeless people, and ethnic minorities, empathizing with the stigmatized group is emphasized as one of the basic conditions necessary to decrease stigmatization (Batson, 2014; Eisenberg & Miller, 1987; Batson et al, 2002). In this respect, the findings of our study align with those of other studies that examine the relationship between empathic listening and the improvement of attitudes toward stigmatized groups, as well as the increase in helping behavior. Batson et al. (2002) conducted a study on the stigmatization of patients with alcohol and substance use disorder and found that those who listen to patients empathically can better put themselves in the patient's shoes, understand the difficulties they experience or may experience, and their attitudes toward the patient change positively. The change in their attitudes was not only for the individual they interacted with but also for the whole group of patients with the same diagnosis (Batson et al, 2002).

These findings underline the importance of not only the lack of knowledge but also personal factors, especially the lack of empathic listening skills, in the development and persistence of negative attitudes. In a recent study, narratives in the form of stories were incorporated in undergraduate

teaching, and it was found that they increase the knowledge of medical students about psychotic disorders, but do not cause a permanent change in their attitudes (Tsoi et al, 2021). Although use of narratives facilitates learning, a model beyond education aiming to enhance knowledge is necessary to affect a change in attitudes. To combat the stigmatizing attitudes of healthcare professionals toward individuals with mental illnesses, enabling students to interact more with patients during internships and adding empathic skills training to education programs may be beneficial. A study examining the relationship between IRI and burnout syndrome among medical students found that students with low empathy scores and high personal discomfort scores were more likely to experience burnout (Von Harscher et al, 2018). These findings are important in showing the effects of interpersonal reactivity in different areas, especially the importance of empathy skills and personal discomfort interventions in medical education programs.

Despite its contributions, this study has several limitations. First, the data were collected from students at a single medical school, which may limit the generalizability of the findings to other institutions or cultural contexts. Second, while the study broadly assessed attitudes toward psychotic disorders, the ASQ primarily focuses on schizophrenia, which might limit the representativeness of the attitudinal assessment for the broader category of psychotic disorders. Additionally, the reliance on self-report questionnaires (ASQ and IRI) introduces the potential for response bias, where participants might provide socially desirable answers rather than their true attitudes or feelings. Future research could benefit from incorporating objective measures or qualitative methods to complement self-reported data. Furthermore, although significant correlations were found, the study's design does not permit drawing causal conclusions between interpersonal reactivity and attitude change. Longitudinal studies with larger and more diverse samples are needed to further explore these relationships and the long-term impact of PT.

CONCLUSION

To the best of our knowledge, this is the first study to examine the relationship between stigmatization and IRI. The findings of this study are significant in explaining the conflicting results found in previous studies regarding the effect of psychiatry internship on attitudes. The effect of the psychiatry internship on students' attitudes appears to occur only when there is a capacity to empathize and interact with patients easily. Additional studies are needed to better examine the relationship between stigmatization and empathy.

Ethics Committee Approval: The Eskişehir Osmangazi University Ethics Committee granted approval for this study (date: 18.04.2017, number: 13).

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