HJISIP

ATTITUDES OF HOSPITAL STAFF TOWARD MENTALLY ILL PATIENTS IN A TEACHING HOSPITAL, TURKEY

NAZAN AYDIN, ARZU YIGIT, TACETTIN INANDI & ISMET KIRPINAR

ABSTRACT

The aim of this study was to examine the attitudes of hospital staff towards to major mental diseases: schizophrenia and depression. Negative attitudes were common among all of the hospital staff, and were more common among academicians, resident physicians and nurses. Causes of attitude variations were discussed.

Background: Attitudes of hospital staff are important for admission, early diagnosis and treatment, and the rehabilitation process of mentally ill patients.

Aims: The main objective of this study was to investigate and compare hospital workers' attitudes toward and knowledge of schizophrenia and depression.

Methods: In 2001, a total of 160 hospital staff (40 academicians, 40 resident physicians, 40 nurses and 40 hospital employees) in a teaching hospital were interviewed with a questionnaire. The questionnaire included items about background information, a one-paragraph vignette, questions on social distance and expected burden, recognition of mental illness, hospitalization, prognostic outcome, and to whom and where the patient should be admitted.

Results: Although academicians, resident physicians, and nurses have sufficient knowledge about schizophrenia and depression, the frequency of their negative attitudes towards mentally ill subjects was more than that for uneducated hospital employees.

Conclusions: It was commented that this difference might be as a result of negative effects of the medical education system.

INTRODUCTION

Attitude is readiness to react to an object in a certain way (Allport, 1935). Attitudes are learned throughout one's life, and may include emotions and knowledge. They may be conscious or unconscious. The difference between an opinion and an attitude is blurred. It is commonly assumed that attitudes have an effect on behavior, but the relationship is complex (Weigel & Newman, 1976). Attitudes have been assumed to be very stable. If one is given new knowledge it may change one's opinion but not one's attitude. It has been claimed that attitudes are closely associated with the culture (Wiio, 1974).

The traditional methods of medical teaching have emphasized knowledge and skills, but ethical and social values and attitudes have received less attention. (Virtala *et al.*, 1998) However, many authors indicate that there is a close relationship between admission to hospital units and attitudes of health personnel (Eker, 1985; Eker & Arkar, 1991; Fryer & Cohen, 1988; Rabkin, 1979). Attitudes of health managers and officials who have authority for staffing and budgeting of psychiatric services are also important (Bhugra, 1989). Negative attitudes of health personnel toward a patient with a psychiatric disorder are the important factors that create difficulties with regard to seeking help and admission to medical units. These negative attitudes may lead to delay in diagnosis, which in turn, produces more damage to patients. Attitudes of physicians, and nurses have key roles in public health education and are important factors for secondary prevention in psychiatric disorders. It is possible to spread these to others by communication with patients and their families, bureaucrats, press, and education efforts.

Inability to use a correct psychiatric label and lack of knowledge of symptomatology are also important. On the other hand, the failures of mental health literacy may cause problems of communication among health practitioners. It is well known that patients with mental disorders are often missed by medical practitioners. The most obvious reason is that negative beliefs about psychotropic medication may lead to failure to seek psychiatric treatment and lack of compliance with any medication recommended by a psychiatrist. There is a stigma associated with mental disorders and this may hinder seeking help. Stigmatizing attitudes also extend to approaching professionals.

The purpose of this study is to compare the attitudes of academicians, resident physicians, nurses (hospital professionals) and hospital employees (aids and cleaners) towards the mentally ill patients at a university hospital in Erzurum, Turkey.

METHOD

Subjects

The sample of the study consisted of the staff from the various non-psychiatric clinics of Atatürk University Hospital in Erzurum, Turkey, in 2001. A random sample method was used for selection. These respondents were 40 of 190 academicians, 40 of 254 resident physicians, 40 of 292 nurses and 40 of 246 hospital employees. Seven academicians, 4 resident physicians, and two nurses refused to respond. None of the hospital employees refused. New subjects were randomly selected to replace the subjects who refused.

Procedure

A questionnaire with a section on background information, a one-paragraph vignette, and questions on social distance and expected burden, recognition of mental illness, prognostic outcome, necessity of hospitalization, and to whom and where the patient should be admitted was utilized to collect data.

The subjects were also divided into two subgroups by using two vignettes, and each subject was included in only one group. The vignettes for paranoid schizophrenia and anxiety neurosis/depression were selected from the well-known Star vignettes (Star, 1955) and they

were also used by Eker and Arkar in Turkey (1991). This procedure resulted in a 2 (vignette type) 4 (profession) design.

Each vignette was followed by 25 questions to be answered in a yes/no format. The questions from 1 to 14 obtained from a social distance scale developed by Arkar (1991) in order to measure distance between oneself and the person described in the vignette. The number of choices for each question was limited to two because of the group heterogeneity due to socio-economic and education levels.

Questions from 15 to 17 were aimed at assessing the possible burden expected of a mentally ill person. These questions were developed by Eker (1989). Questions 18–22 were about whether the person in the vignette was ill, normal or with mental problems, recognition of disease, hospitalization, prognostic outcome, and to whom and where the patient should be admitted.

The distributions of responses to each question by the vignette and profession were analyzed using a Chi square test with Statistical Packages for Social Sciences version 10.1. All *p* values were calculated in two sides.

RESULTS

In general, the distributions of attitudes toward mentally ill patients in terms of profession type were similar. Results are shown in Table 1, and significant differences are presented below.

Schizophrenia vignette

For (Assume that you have a sister . . .), all groups had great negative attitudes on this item. It was interesting that the nurses had the most negative attitude whereas the hospital employees had the most positive attitude (p = .031).

For (Would your friendship with him have a negative influence . . .), academicians and resident physicians had more positive attitudes than nurses and hospital employees (p = .015). The ratio of hospital professionals who described the person on the schizophrenia vignette as ill was significantly high, whereas hospital employees mostly reported this as a person with some problems (p = .209). Physicians and nurses recognized more truly the person on the schizophrenia vignette than hospital employees (p = .000).

All groups were consistent about prognosis, and discharging of the patient. They responded mostly that the person in the schizophrenia vignette might partly recover (p = .489) and should be discharged from hospital after recovery (p = .926). Although most of the subjects thought that the person should be seen by a psychiatrist, a few subjects proposed admission to a mental hospital (p = .485).

Depression vignette

For (Would you be disturbed shopping...), nurses and hospital employees had more positive attitudes than academicians and resident physicians (p = .030); for (Assume that both of you work at same place . . .), the hospital employees had the highest positive attitudes (p = .003); for (Would you be an emotional burden . . .), the hospital employees had the highest positive attitude (p = .003); and for (Would your friendship with him have a negative

Table 1 Questions of social distance and expected burden and answers of health workers in terms of illnesses

Questions	Medical staff		phrenia No (%)		ression No (%)
Would you be disturbed sitting close to him in a city bus? $\chi^2 = 0.920 \text{ df} = 3 p = 0.821 \text{ (sch)}$	Academicians Resident physicians Nurses	50 61.1 47.6	50 38.9 52.4	9.5 20.8 11.8	90.5 80 88.2
$\chi^2 = 0.920 \text{ df} = 3 p = 0.821 \text{ (sch)}$ $\chi^2 = 2.471 \text{ df} = 3 p = 0.481 \text{ (dep)}$	Hospital employees	57.1	42.9	26.3	73.7
Would you be disturbed sitting close to	Academicians	70	30	57.1	42.9
him in an intercity bus on a long journey? $\chi^2 = 0.324 \text{ df} = 3 p = 3.475 \text{ (sch)}$	Resident physicians Nurses	94.1 81	5.9 19	60 41.2	40 58.8
$\chi^2 = 0.524 \text{ df} = 3 p = 5.475 \text{ (sch)}$ $\chi^2 = 2.219 \text{ df} = 3 p = 0.528 \text{ (dep)}$	Hospital employees	81	19	42.1	57.9
Would you be disturbed shopping from a	Academicians	47.4	52.6	42.9	57.1
market which he runs?	Resident physicians	55.6	44.4	52.6	47.4
$\chi^2 = 2.349 \text{ df} = 3 p = 0.503 \text{ (sch)}$ $\chi^2 = 8.943 \text{ df} = 3 p = 0.030 \text{ (dep)}$	Nurses	33.3	55.7	11.8	88.2
$\chi = 8.943 \text{ di} = 3 p = 0.030 \text{ (dep)}$	Hospital employees	52.4	47.6	21.1	78.9
Assume that you live an apartment.	Academicians	70	30	71.4	28.6
Would you be disturbed by his working	Resident physicians	88.9	11.1	55	45
as a door-keeper in the building?	Nurses	70	30	56.3	43.8
$\chi^2 = 3.699 \text{ df} = 3 p = 0.296 \text{ (sch)}$ $\chi^2 = 3.526 \text{ df} = 3 p = 0.317 \text{ (dep)}$	Hospital employees	61.9	38.1	42.1	57.9
Assume that you have a house for rent?	Academicians	25	75	42.9	57.1
Would you rent your house to him?	Resident physicians	22.2	77.8	30	70
$\chi_2^2 = 0.233 \text{ df} = 3 p = 0.972 \text{ (sch)}$	Nurses	23.8	76.2	23.5	76.5
$\chi^2 = 1.780 \text{ df} = 3 p = 0.619 \text{ (dep)}$	Hospital employees	28.6	71.4	36.8	63.2
Would you be disturbed participating in	Academicians	52.6	47.4	23.8	76.2
a social gathering to which you know that	Resident physicians	61.1	38.9	40	60
he would also come?	Nurses	47.6	52.4	11.8	88.2
$\chi^2 = 0.924 \text{ df} = 3 p = 0.820 \text{ (sch)}$ $\chi^2 = 4.503 \text{ df} = 3 p = 0.212 \text{ (dep)}$	Hospital employees	47.6	52.4	36.8	63.2
Would you play cards, etc. with him if	Academicians	36.8	63.2	47.6	52.4
you saw him in a social gathering?	Resident physicians	44.4	55.6	55	45
$\chi^2 = 1.490 \text{ df} = 3 p = 0.685 \text{ (sch)}$	Nurses	28.6	71.4	52.9	47.1
$\chi^2 = 1.490 \text{ df} = 3 p = 0.685 \text{ (sch)}$ $\chi^2 = 1.508 \text{ df} = 3 p = 0.681 \text{ (dep)}$	Hospital employees	28.6	71.4	36.8	63.2
Would you have a chat with him about	Academicians	35	65	61.9	38.1
political matters, etc. when you saw him	Resident physicians	33.3	66.7	45	55
in a social gathering?	Nurses	35	65	58.8	41.2
$\chi^2 = 1.144 \text{ df} = 3 p = 0.766 \text{ (sch)}$ $\chi^2 = 2.758 \text{ df} = 3 p = 0.430 \text{ (dep)}$	Hospital employees	47.6	52.4	38.9	61.1
If you knew him, would you tell him	Academicians	15	85	38.1	61.9
about your own private problems?	Resident physicians	11.1	88.9	30.1	70
$\chi^2 = 5.167 \text{ df} = 3 p = 0.160 \text{ (sch)}$	Nurses	9.5	90.5	25	75
$\chi^2 = 2.264 \text{ df} = 3 p = 0.519 \text{ (dep)}$	Hospital employees	33.3	66.7	47.4	52.6

continued on facing page

Table 1 continued

	Table I Continued				
Questions	Medical staff	Schizophrenia Yes (%) No (%)		Depression Yes (%) No (%)	
Would you be disturbed by his becoming your next door neighbor? $\chi^2 = 0.679 \text{ df} = 3 p = 0.878 \text{ (sch)}$ $\chi^2 = 1.880 \text{ df} = 3 p = 0.598 \text{ (dep)}$	Academicians Resident physicians Nurses Hospital employees	52.6 61.1 65 57.1	47.4 38.9 35 42.9	30 45 47.1 31.6	70 55 52.9 68.4
If he was a barber/hairdresser, would you have your hair cut/done by him? $\chi^2 = 0.317 \text{ df} = 3 p = 0.957 \text{ (sch)}$ $\chi^2 = 3.079 \text{ df} = 3 p = 0.380 \text{ (dep)}$	Academicians	26.3	73.7	42.9	57.1
	Resident physicians	22.2	77.8	20	80
	Nurses	23.8	76.2	23.5	76.5
	Hospital employees	19.2	81	26.3	73.7
Assume that both of you work at same place. Would you be disturbed sharing a room with him? $\chi^2 = 3.720 \text{ df} = 3 p = 0.293 \text{ (sch)}$ $\chi^2 = 13.717 \text{ df} = 3 p = 0.003 \text{ (dep)}$	Academicians	90	10	85.7	14.3
	Resident physicians	83.3	16.7	80	20
	Nurses	81	19	88.2	11.8
	Hospital employees	66.7	33.3	42.1	57.9
Assume that both of you work at same place but in different rooms. Would you be disturbed working with him at the same place? $\chi^2 = 0.965 \text{ df} = 3 p = 0.810 \text{ (sch)} $ $\chi^2 = 1.173 \text{ df} = 3 p = 0.760 \text{ (dep)}$	Academicians	25	75	9.5	90.5
	Resident physicians	27.8	72.2	15	85
	Nurses	38.1	61.9	5.9	94.1
	Hospital employees	33.3	66.7	15.8	84.2
Assume that you have a sister. Would you be disturbed by your sister wanting to marry him? $\chi^2 = 8.867 \text{ df} = 3 p = 0.031 \text{ (sch)}$ $\chi^2 = 5.688 \text{ df} = 3 p = 0.128 \text{ (dep)}$	Academicians Resident physicians Nurses Hospital employees	85 94.4 100 71.4	15 5.6 - 28.6	85 90 100 73.7	15 10 26.3
Questions on expected burden Would he be an emotional burden on you in your friendship with him? That is, would he wear you out emotionally? $\chi^2 = 0.079 \text{ df} = 3 p = 0.994 \text{ (sch)}$ $\chi^2 = 13.983 \text{ df} = 3 p = 0.003 \text{ (dep)}$	Academicians Resident physicians Nurses Hospital employees	80 77.8 81 81	20 22.2 19 19	76.2 90 94.1 47.4	23.8 10 5.9 52.6
Would he exhaust your physical energy in your friendship with him? That is, would your friendship tire you physically? $\chi^2 = 0.112 \text{ df} = 3 p = 0.990 \text{ (sch)}$ $\chi^2 = 5.514 \text{ df} = 3 p = 0.138 \text{ (dep)}$	Academicians	60	40	55	45
	Resident physicians	61.1	38.9	70	30
	Nurses	57.1	42.9	76.5	23.5
	Hospital employees	61.9	38.1	42.1	57.9
Would your friendship with him have a negative influence on your mental health? $\chi^2 = 10.441 \text{ df} = 3 p = 0.015 \text{ (sch)}$ $\chi^2 = 8.721 \text{ df} = 3 p = 0.033 \text{ (dep)}$	Academicians	30	70	42.9	57.1
	Resident physicians	44.4	55.6	75	25
	Nurses	71.4	28.6	76.5	23.5
	Hospital employees	71.4	28.6	42.1	57.9

 $sch = paranoid\ schizophrenia\ case;\ dep = anxiety\ neurosis/depression\ case$

influence . . .), the attitudes of resident physicians and nurses were more negative than those academicians and hospital employees (p = .033).

Although the ratio of resident physicians who described the person on the depression vignette as ill was 70.0%, this ratio was lower than 50.0% in other groups (p = .064). The person on the depression vignette was mostly recognized as suffering from depression by the hospital professionals (p = .000). Most of the resident physicians believed that the person on the depression vignette might recover completely, while most of the hospital employees believed he might recover partially (p = .013). All groups were consistent about discharging of a patient. They responded mostly that the person should be discharged from hospital after recovery (p = .331). Most of the subjects thought that the person should admit be seen by a psychiatrist (p = .098).

DISCUSSION

The attitudes toward the mentally ill subjects are generally negative (Nunnally, 1981), even when the respondents are educated about the 'facts' of mental illness (Freeman & Kassebaum, 1960). Negative attitudes towards mental illness were also dominant among hospital staff in this study.

Schizophrenia vignette

Generally, the most negative attitudes were toward the schizophrenia case, and similar findings have been reported by many authors (Malta & Shaw, 1987; Eker, 1989; Arkar & Eker, 1992, 1994, 1996). There was agreement about the prognosis of the patient among the hospital staff, and they thought the person in the vignette might recover partially.

The person in the vignette was frequently reported as ill by hospital professionals, whereas the hospital employees reported him mostly as a person with some problems. This was an expected result because medical education had been given to the hospital professionals. At same time, most of the hospital professionals diagnosed the person as suffering from schizophrenia. This is a reflection of their level of clinical knowledge on schizophrenia.

Attitudes on hospitalization, and admission place and person were pleasant because they did not suggest isolation from the population.

Depression vignette

In general, subjects had more positive attitudes to depression when compared to schizophrenia. Especially, the resident physicians performed well on the questions evaluating psychiatric knowledge. This may be as a result of recent education programs about depression in Turkey. For example, in the 1990s, a depression awareness, recognition and treatment program was instituted, which aimed to inform general practitioners (GPs) that depressive disorders are common, serious and treatable. This campaign was aimed to educate the GP about depression and its treatment, to encourage earlier treatment and reduce the stigma of depression. Significant changes were observed in the percentage of GPs who believed that antidepressants were effective and who would be willing to seek professional help after the campaign (Anaç *et al.*, 1997).

Attitudes by professionals

The hospital employees showed the highest positive attitudes toward patients with schizophrenia or depression despite low education levels, and no medical training.

In western societies, researchers have generally reported that hospital employees (e.g. general employees and kitchen workers) are more authoritarian and restrictive in their attitudes to mental patients than hospital professionals such as doctors, psychiatrists, social workers, and nurses (Cohen & Struening, 1962, 1965; Oyefeso *et al.*, 1989). However, when doctors and nurses were compared in the United States (Cohen & Struening, 1962), Great Britain (Levine, 1972), Czechoslavakia (Levine, 1972) and Canada (Cote *et al.*, 1993), data showed that within each country they shared similar attitudes towards mentally ill individuals. Cote *et al.* (1993) found no difference between psychiatrists and nurses, although Roskin *et al.* (1988) indicated significant differences between psychiatrists and nurses: psychiatrists having a more authoritarian controlling attitude towards patients, and nurses a more nurturing empathic attitude.

It is an interesting result that the highest positive attitudes were among the hospital employees. May this be a negative effect of psychiatric, medical and/or general education? The issue is controversial. Studies based on the community generally reported that education had positive effects toward mentally ill people (Dohrenwend & Chin-Shong, 1967; Ojanen, 1992; Rabkin, 1974, 1984). If this is true, then negative attitudes may occur as a result of medical education. Kumakura et al. (1992-93) demonstrated there was a seemingly negative and pessimistic attitude towards psychiatric disorders among senior student nurses after mental health education. In another study carried out in Turkey, no significant difference was detected with respect to knowledge in students' attitudes before and after psychiatry training in the fifth grade of medicine (Arkar & Eker, 1998). In Japan, Malta and Shaw (1987) found no difference in attitudes between nurses who received psychiatry training and nurses who did not. There is also evidence that medical students experience a positive change of attitude towards psychiatry following their undergraduate psychiatric attachment (Augustinos et al., 1985). However, the evidence is conflicting as to whether such change persists (Singh et al., 1998) or decays over time (Creed & Goldberg, 1987). Baxter et al. (2001) reported that the positive attitudinal changes following exposure to psychiatry may be short lived and entirely a function of the proximity to the attachment, but why should these decay to levels below pre-attachment attitudes? Medical students spent most of their education time in general medicine and surgery training. This may have affirmed their selfimage as 'disease-oriented' doctors and hardened attitudes away from a specialty such a psychiatry that emphasizes both a biological and a psychological approach. It is possible that attitudes towards other specialties also decay during the course of the final year at medical school.

The findings of this study indicate that giving information on any subject may not positively influence the attitudes every time. Some factors, such as the content and presentation of education, may have an influence on the results. The World Psychiatric Association launched a broad program, namely 'Open the Doors', to reduce stigma and many countries are involved with local or nationwide projects. Regarding the effects of education on behavior, it will be useful to evaluate the outcomes of these programs (Rosen *et al.*, 2000). In the light of these findings, we claim that before nationwide use of anti-stigma programs, small pilot studies will be useful in terms of predicting the results. Our other suggestion is

that the efficacy of the education programs should be re-evaluated and, if necessary, the program re-designed.

Given the current status of the Turkish health care system, primary care practitioners should have an even greater role in the future delivery of psychiatric services. The idea that a person with depression or schizophrenia should be seen by a psychiatrist was common among the subjects. That they were paid little attention by GPs is an attitude to be changed, and noteworthy. In surveys in Finland and other western countries it has, however, been found that 20–40% of patients in primary health care have psychiatric problems (Boardman, 1987; Lehtinen *et al.*, 1990), but they are insufficiently diagnosed (Shahabudin *et al.*, 1994) Therefore, in addition to knowledge and skills mainly taught during psychiatric and child psychiatric clinical courses, attitudes should be given attention. It is well known that patients with mental disorders are often missed by GPs. Clinicians in other specialties must learn about the importance of primary care for psychiatric disorders. Also, GPs must be informed about new diagnostic and treatment methods, and campaigns must continue.

Differences between hospital staffs' attitudes can affect the treatment and rehabilitation process of some patients. These differences, especially concerning community mental health ideology, can negatively influence the general population's perception of ex-patients.

Health professionals, especially, have to revise our psychiatric and medical education systems. There is a need for collegial support for the improvement of attitudes. The findings of this study have shown that knowledge of mental illness is not a major determinant of attitude towards mental patients. In medical education we should develop methods that help the students to become more aware of their own emotions and attitudes. Also we must do a good job of incorporating mental health concepts into medical-surgical courses – caring for the 'worried well' – they sometimes overlook emphasis on the chronic disease end of the continuum. Methods of direct contact with patients can be used for improving attitudes, and the World Health Organization has also suggested that an interactive education method under supervision is useful in order to change attitudes (Murthy & Wig, 1983) Similarly, Jaffe *et al.* (1979) found that education in the classroom was not effective, while practical education, which involved direct contact with patients, was effective. Individual experience with mental patients was found to be associated with permanent positive attitudes 10 years later (Trute & Loewen, 1978; Trute *et al.*, 1989).

Since the present study has been conducted in one center, it may have some limitations. In conclusion, negative attitudes are common among all members of the hospital staff, and are more common in hospital professionals despite their greater knowledge about the diseases. These negative attitudes may cause certain problems which damage the care of persons with mental illness.

REFERENCES

ALLPORT, G.W. (1935) Attitudes. A Handbook of Social Psychology. London: Oxford University Press. ANAÇ, Ş., COŞKUN,I., ÇAYKÖYLÜ, A. & KIRPINAR, I. (1997) The effects of 'depression education programme' on the knowledge and attitudes of general practitioners. Proceedings of 33rd National Psychiatry Congress, Antalya, Turkey, 231–236.

ARKAR, H. (1991) The social refusing of mental patients. *Journal of Psychiatry and Neurological Sciences*, **4**, 6–9.

- ARKAR, H. & EKER, D. (1992) Influence of having a hospitalized mentally ill member in the family on attitudes toward mental patients in Turkey. *Social Psychiatry Psychiatric Epidemiology*, **27**, 151–155.
- ARKAR, H. & EKER, D. (1994) Effect of psychiatric labels on attitudes toward mental illness in a Turkish sample. *International Journal of Social Psychiatry*, **40**, 205–213.
- ARKAR, H. & EKER, D. (1996) Attitudes to mental disorders: the effect of the type of a given cause. *Turkish Journal of Psychiatry*, **7**, 191–197.
- ARKAR, H. & EKER, D. (1998) Attitudes to mental disorders: the effects of psychiatry education. *Journal of Psychiatry Psychology Psychopharmacology*, 4, 263–270.
- AUGUSTINOS, M., SCHRADER, G., CHYNOWERTH, R. & REID, M. (1985) Medical students' attitudes towards psychiatry: a conceptual shift. *Psychological Medicine*, **15**, 671–8.
- BAXTER, H., SINGH, S.P., STANDEN, P. & DUGGAN, C. (2001) The attitudes of 'tomorrow's doctors' towards mental illness and psychiatry: changes during the final undergraduate year. *Medical Education*, **35**, 381–383.
- BHUGRA, D. (1989) Attitudes towards mental illness: a review of the literature. *Acta Psychiatrica Scandinavica*, 82, 1–12.
- BOARDMAN, A.P. (1987) The general health questionnaire and the detection of emotional disorder by general practitioners, *British Journal of Psychiatry*, **151**, 373–381.
- COHEN, J. & STRUENING, E.L. (1962) Opinions about mental illness in the personnel of two large mental health hospitals. *Journal of Abnormal and Social Psychology*, **64**, 349–360.
- COHEN, J. & STRUENING, E.L. (1965) Opinions about mental illness: hospital differences in attitudes for eight occupational groups. *Psychological Reports*, 17, 25–26.
- COTE, J., OUELLET, L. & CARON, M. (1993) Maladie mentale et r-insertion sociale: Attitudes et opinions des membres et intervanants du reseau hospitalier psychiatrique. Rapport de recherche. Module de recherche psychosociale, centre de recherche Universite Robert-Giffard, Quebec.
- CREED, F. & GOLDBERG, D. (1987) Student's attitude to psychiatry. Medical Education, 21, 227-34.
- DOHRENWEND, B.P. & CHIN-SHONG, E. (1967) Social status and attitudes towards psychological disorder: the problem of tolerance of deviance. *American Sociological Review*, **32**, 417–433.
- EKER, D. (1985) Attitudes of Turkish and American clinicians and Turkish psychology students toward mental patients. *International Journal of Social Psychiatry*, **31**, 223–229.
- EKER, D. (1989) Attitudes toward mental illness: recognition, desired social distance, expected burden and negative influence on mental health among Turkish freshmen. *Social Psychiatry Psychiatric Epidemiology*, **24**, 146–150.
- EKER, D. & ARKAR, H. (1991) Experienced Turkish nurses attitudes towards mental illness and predictor variables of their attitudes. *International Journal of Social Psychiatry*, **37**, 214–222.
- FREEMAN, H. & KASSEBAUM, G. (1960) Relationship of education and knowledge to opinions about mental illness. *Mental Hygiene*, **44**, 43–47.
- FRYER, J.H. & COHEN, L. (1988) Effects of labeling patients 'psychiatric' or 'medical': favorability of traits ascribed by hospital staff. *Psychological Reports*, **62**, 779–793
- JAFFE, Y., MAOZ, B. & AVRAM, L. (1979) Mental hospital experience, classroom instruction and change in conceptions and attitudes towards mental illness. *British Journal of Medical Psychology*, 52, 253–258.
- KUMAKURA, N., ITO, H., MORI, T., SAITO, T., KURISU, E., ASAKA, A. & SASAKI, Y. (1992–93) Attitude change towards psychiatric illness during nursing education-a cross-cultural study of student nurses in Korea, Republic of Chinea and Japan, Asia-Pacific. *Journal of Public Health*, 6, 120–125.
- LEHTINEN, V., JOUKAMAA, M., LAHTELA, K., RAITASALO, O.R., JYRKINEN, E., MAATELA, J. & AROMAA, A. (1990) Prevalence of mental disorders among adults in Finland: basic results from the Mini Finland Health Survey, *Acta Psychiatrica Scandinavica*, **81**, 418–425.
- LEVINE, D. (1972) A cross-national study of attitudes toward mental illness . *Journal of Abnormal Psychology*, **80**, 111–114.
- MALTA, A. & SHAW, T. (1987) Attitudes towards mental illness: the influence of education and experience. *International Journal of Social Psychiatry*, **33**, 33–41.
- MURTHY, R.S. & WIG, N.N. (1983) The WHO collaborative study on strategies for extending mental health care, IV. A training approach to enhancing the availability of mental health manpower in a developing country. *American Journal of Psychiatry*, **140**, 1486–1490.
- NUNNALLY, J. (1981) Popular Conceptions of Mental Health: Their Development and Change. New York: Holt, Rinehart and Winston.
- OJANEN, M. (1992) Attitudes towards mental patients . The International Journal of Social Psychiatry, 38, 120–130.

- OYEFESO, A.O., OSINOWO, H. & IDEMUDIA, E. (1989) Sex and propinquity as predictors of attitude towards the mentally ill among Nigerians . *Indian Journal of Behavior*, 13, 27–32.
- RABKIN, J.G. (1974) Public attitude toward mental illness: a review of the literature. *Schizophrenia Bulletin*, **10**. 9–33.
- RABKIN, J.G. (1979) Who is called mentally ill: Public and professional views. *Journal of Community Psychology*, 7, 253–258.
- RABKIN, J.G. (1984) Community attitude and local facilities. In *The Chronic Mental Patient Five Years Later* (ed. J.A. Talbott). Orlando: Grune & Stratton.
- ROSEN, A., WALTER, G., CASEY, D. & HOCKING, B. (2000) Combating psychiatric stigma: an overview of contemporary initiatives. *Australian Psychiatry*, **8**, 19–26.
- ROSKIN, G., CARSEN, M.L., RABINER, C.J. & MARELL, S.K. (1988) Attitudes towards patients among different mental health professional groups. *Comprehensive Psychiatry*, **29**, 188–194.
- SHAHABUDIN, S.H., ALMASHOR, S.H., EDARIAH, A.B. & KHAIRUDDIN, Y. (1994) Assessing the competence of general practitioners in diagnosing generalized anxiety disorder using standardized patients. *Medical Education*, **28**, 432–440.
- SINGH, S.P., BAXTER, H., STANDEN, P. & DUGGAN, C. (1998) Changing the attitudes of 'tomorrow's doctor's towards mental illness and psychiatry: a comparison of two teaching methods. *Medical Education*, **32**, 115–20.
- STAR, S. (1955) The public's ideas about mental illness. Paper presented at the Annual Meeting of the National Association for Mental Health, 5 November, Indianapolis, IN.
- TRUTE, B. & LOEWEN, A. (1978) Public attitudes toward the mentally ill as a function of prior personal experience. *Social Psychiatry*, **13**, 79–84.
- TRUTE, B., TEFFT, B. & SEGALL, A. (1989) Social rejection of the mentally ill: a replication study of public attitude. *Social Psychiatry Psychiatric Epidemiology*, **21**, 69–76.
- VIRTALA, A., SALMEIN, T., TAMMINEN, T. & ANTTINEN, E. (1998) Change of attitudes towards psychiatric issues during medical education. *Medical Teacher*, **20**, 356–363.
- WEIGEL, R.H. & NEWMAN, L.S. (1976) Increasing attitude—behaviour correspondence by broadening the scope of the behavioural measure. *Journal of Personality and Social Psychology*, **33**, 793–802.
- WIIO, O. (1974) Viestinnan perustect. Basics of Information Communication. Porvo, Finland: Oy Weilin & Göös.

Nazan Aydin, Assistant Professor, Department of Psychiatry, The University of Atatürk, Erzurum, Turkey.

Arzu Yigit, Resident Physician, Department of Psychiatry, The University of Atatürk, Erzurum, Turkey.

Tacettin Inandi, Assistant Professor, Department of Public Health, The University of Atatürk, Erzurum, Turkey.

Ismet Kirpinar, Professor, Department of Psychiatry, The University of Atatürk, Erzurum, Turkey.

Correspondence to Dr Nazan Aydin, Atatürk University, Medical Faculty, Department of Psychiatry, 25240 Erzurum, Turkey.

Tel: 90 442 2361212 2035; Fax: 90 442 2361228; email: nmda21@hotmail.com or naydin@atauni.edu.tr