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Attitudes in Healthcare Students Towards Mental Illness - A Pre- and Post Multicenter University Program Survey

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ABSTRACT

Purpose: The aim of the study was to investigate the effects of naturalistic educational interventions on attitudes towards persons with mental illness**. Methods**: In a pre-post test design, 456 students in vocational University programmes to become nurses, social workers, occupational therapists, physiotherapists, psychologists, and public health workers were studied after a course in mental illness, using questionnaires focusing on familiarity with mental illness and attitudes towards the mentally ill in general and towards schizophrenia in particular**. Results**: The results revealed a significant improvement for the total group in their being afraid of people with mental illness in general and being more positive towards having mentally ill people living in their neighbourhood. Differences between the student groups were found. Some educational features positively influencing stigmatizing attitudes were identified. **Conclusion:** Education has some effect on attitudes towards patients with mental illness, mostly on fear. To understand the effective educational ingredients for change, further research is needed.

INTRODUCTION

Stigma is seen as a construct consisting of lack of knowledge, negative attitudes, and avoiding behaviour towards a certain group of people.[1] The classical labelling theory focuses on the stereotyping and rejection of others which leads to demoralization and social exclusion.[2] Stereotypes in the context of mental disorders are described as knowledge structures that represent a social group, e.g., the collective social notions of a certain group of people.[3] Cognitive, emotional, and behavioural aspects of

stigma have been identified. Examples of the cognitive aspect can be stereotype attitudes such as people with schizophrenia are dangerous, unpredictable, irresponsible, incompetent, have character weakness or cannot take care of themselves or fully recover from illness.[2] The emotional aspect of stigma necessitates that one agrees with the stereotype and develops a reaction, showing a prejudice: "Yes people with schizophrenia are dangerous and I am afraid of them." When one also acts on this prejudice discrimination is demonstrated.[2]

Four domains of stigma have been identified by Angermeyer et al.: interpersonal interactions, structural discrimination, the public image of mental illness and access to social roles.[4] In the domain interpersonal interaction, the major discriminating experience, as reported by the mentally ill, was the contact with mental health professionals. Furthermore, the family members of the mentally ill claimed that the professionals did not acknowledge their competence or experience, and that they often experienced health professionals as intolerant, with a lack of understanding or knowledge in dealing with patients. In the second domain, structural discrimination, the authors point to the relatives perceiving the poor quality of mental health care as the strongest form of structural discrimination. This included lack of support by the community psychiatric services, lack of co-ordination, and no clear allocation of responsibilities within mental health care as well as exclusion from the treatment process. The relatives' most frequent suggestion for remedy was education and information to reduce the main causes of stigmatisation.[4] Some anti-stigma programmes have focused on emphasizing mental illness as an illness of the central nervous system. The theoretical background was that attributing the cause of illness to factors outside the control of the individual would influence people's rejection of persons with schizophrenia in a positive way, "the attribution theory."[5] The biogenetic cause of mental illness was also thought to reduce self-stigma and courtesy stigma (stigma perceived and experienced by those caring for people with mental illness).[6,7] Research, however, found that contrary to expectations, the more respondents believed in the biogenetic cause of mental illness, the more they believed that people with schizophrenia were dangerous. The researchers also found a strong relationship between dangerousness and fear and between fear and social distance.[4] They conclude that stigma is a serious problem because it interferes with empowerment of persons with mental illness and with service use.

Lack of knowledge seems to be associated with negative attitudes in the community according to Wolff et al., and the authors conclude that educational interventions might improve attitudes towards persons with a mental disorder.[8] Mental health professionals ought to question their own possibly stigmatising attitudes towards their patients, and teachers and students ought to establish educational and other anti-stigma initiatives in their schools or universities, all which may be of help to reduce stigma.[7] Research into attitude-change in medical students after a training programme on attitudes towards the mentally ill revealed no change of attitude,[9] while other studies found some positive changes in health care students in connection with a clinical placement in health care education.[1,9]

Courses focusing on mental illness within the Swedish university undergraduate system are included in vocational study programmes for various health care professions. Attitudes toward patients with psychiatric disorders are only part of the total curriculum and stigma is not especially addressed in the curricula in any of the programmes preparing for work in the mental health field. We know from previous studies that attitudes, knowledge and behaviour are related to stigma and discrimination.[10] To be able to combat stigma, we need to know more about the existing course content and its effects on stigma.

AIMS AND METHODOLOGY

This study is part of a research project aiming at investigating how education affects attitudes towards mental illness among different categories of university students in Sweden. The aim of the present study was to examine the changes in attitudes towards mental illness among university students after the completion of a theoretical course in mental illness in order to gain greater insight into its effects.

The specific research questions were:

- To what extent do attitudes (both in general and towards patients with schizophrenia in particular) change after a theoretical course?
- Is it possible to identify specific aspects in the curriculum that are important in generating a change of attitude?
- Is the students' gender, age, future profession, or previous familiarity with mental illness associated with any of the changes in attitudes towards mental illness?

Data Collection and Procedure

The collection of data was founded on a strategic reasoning to include student categories that form the majority of professionals working within the field of health care and support for people with mental illness. A broad heterogeneous sample was sought, consisting of students from different future health professions, from universities geographically distributed in Sweden, and representing different ages and sizes of university. Six universities were originally selected, four agreed to participate and two

declined due to bad timing. A further two universities were approached and both were willing to participate. Students from programmes for the following professions were approached in this study: nurses, occupational therapists, physiotherapists, psychologists, public health workers, and social workers. Data were collected prior to the course in mental health care or its equivalent, and after its completion. The design was naturalistic and no intervention was added to what each programme offered.

The same procedure for inclusion of subjects was used at all universities. A member from the research team established communication with a teacher working with the targeted student group. The teacher asked for the students' consent and explained that participation was voluntary. All students that volunteered to participate in the targeted groups were included. We had no exclusion criteria. The contact teacher scheduled the data collection. The time point was chosen in relation to the course in mental health care, and the first occasion for data collection took place immediately prior to the course. The teacher distributed the questionnaires to the class at the beginning of an ordinary lesson. They were completed immediately, and then the students placed their responses in a box, which was subsequently collected and sent to the research team. The same procedure was carried out at the end of the course. In order to be able to match the respective students' answers after the course to those completed prior to it, the students printed their name on an envelope. The envelopes were discarded by the teacher who numbered the respective questionnaires.

SUBJECTS

A total of 456 students participated in the present study from the educational programmes for nurses (N=126), social workers (N=102), occupational therapists (N=78), physiotherapists (N=74), psychologists (N=48), and public health workers (N=28).

The group consisted of 74 male and 382 female students. Of these, 229 were married or co-habiting, and 224 were single (missing data = 3). The mean age was 27 years (SD 6.8) and the median age was 24 years.

MEASURES

The students completed three questionnaires. The level of intimacy with people with mental illness was elicited using a slightly modified translated version of the *"Level of Familiarity Questionnaire"* developed by Corrigan et al.[3] The questionnaire contains 11 statements about familiarity with mental illness. The items have an inherent ranking order based on the degree of intimacy that the items express. Each statement can be answered by yes or no. A score of 11 corresponds to the most intimate contact with a person with mental illness, 7 is regarded as indicating medium intimacy, and 1 indicates little intimacy. If more than one statement is affirmative, the item ranked as expressing the highest level of intimacy is used. For example, a participant who marked three situations affirmatively; "A friend of the family has a serious mental illness" (rank order score, 9), "I have observed, in passing, a person I believe may have had a severe mental illness" (rank order score, 2), and "My job includes providing services to persons with mental illness" (rank order score, 7) - would have a score of 9, because it is the most intimate situation indicated by the student. Reliability and validity of this instrument have been found to be adequate by Corrigan et al.[3]

The self-report inventory *"Fear and behavioural intentions towards the mentally ill (FABI*") developed by Wolff and colleagues was also used.[8] The questionnaire consists of 10 items:

"I am afraid of people with mental illness"
"Would you object to having mentally ill people living in your neighbourhood?"
"Would you be willing to work with somebody with a mental illness?"
"Would you work with people severe mental illness?"
"Would you invite people with severe mental illness to your home?"
"Would you worry regarding visiting someone with severe mental illness?"
"Would you have someone with severe mental illness as a friend?"
"Would you say hello to someone with severe mental illness if they moved into the neighbourhood?"
"Would you talk to neighbours with severe mental illness?"
"Would you visit a former psychiatric patient who moved into the neighbourhood?"

The responses are rated on a five-point scale from 1=strongly agree to 5=strongly disagree. Validity and reliability has been found to be adequate.[8] A Swedish version has been developed with permission from the authors of the scale. The test-retest reliability and internal consistency of the Swedish version reached acceptable levels [Svensson et al., submitted for publication].

The third questionnaire was a Swedish version of the ***"****Changing minds: Every family in the Land questionnaire"* developed by Crisp et al.[11] The questionnaire elicits attitudes towards seven different mental disorders: severe depression, panic attacks, schizophrenia, dementia, eating disorders, alcohol addiction, and drug addiction. Each mental illness is rated by responses on a

five-point scale to eight statements where the endpoints are given. For example 1= dangerous to others and 5= not dangerous to others. The subscale includes eight statements: People with schizophrenia are dangerous to others, unpredictable, hard to talk to, have themselves to blame, can improve with treatment, feel just like everybody else, can pull one-self together, and potential for recovered. Validity and reliability has been found to be adequate.[11] A study of the psychometric properties in the Swedish version revealed that test-retest reliability for some of the disorder subscales did not reach the level of acceptable reliability. In this study we focused on the attitudes towards people with schizophrenia, where the test-retest reliability reached acceptable levels [Svensson et al., submitted for publication].

Educational Programmes

Data on the specific educational curricula at the six different universities for the various professional educations were collected from each university's website. The details about the educational content were collected from the teachers involved in the programmes. The psychiatric healthcare education varied from 3-10 weeks. There was sometimes a variation between the same professional programmes at different universities. Most of the undergraduate programmes used a combination of lectures and problem-based learning. All student groups used cases (written patient stories) or real patient encounters to create a meaningful understanding of the experience of mental illness. Most of the students followed a curriculum that also included social psychiatry and vocational training modules relevant for the future profession.

Ethics

The study complied with the stipulations in the Swedish Act Ethical Review of Research involving Humans (SFS, 2003) and the principle of informed consent was applied.

Statistics

Paired samples T-tests were used in order to examine the changes of attitudes after the theoretical course. In order to examine the impact of age and future profession on the outcome, a multi-comparisons MANOVA was used with the change-scores for attitudes towards mental illness in general and specific attitudes towards patients with schizophrenia as dependent variables. Gender and educational programmes were included as co-variants. The impact of familiarity on both the general attitude towards mental illness as well as the specific attitudes towards people with schizophrenia were addressed using independent samples T-test with familiarity dichotomised into no familiarity (score 0-4) and familiarity (score 5-11).

In order to examine the influence of the different naturalistic components in the educational programmes, a forward stepwise logistic regression analysis of the FABI change-scores and the change-scores for the Changing Mind item "People with schizophrenia are dangerous" were performed. The educational features of length of education, lectures on mental health issues, lessons on attitudes, case methodology, problem-based learning, visits to the hospitals, professionally related practical skills training, and patient participation were included as independent variables. The statistical software package used was SPSS 15.0. The significance level was set to <0.05.

RESULTS

Attitudes and behavioural intentions towards people with mental illness (FABI). The attitudes and behavioural intentions towards mental illness in general (FABI) were on the first occasion generally at a low level, indicating a low level of stigmatization, see Table 1.

Table 1. Fear and behavioural Intentions (FABI) total score before and after a theoretical psychiatry course, for the total sample and the different groups of health care professionals; Nurses, Social Workers, Occupational Therapists, Physiotherapists, Psychologists and Public Health workers (N= 456; missing data for 7 persons).

		Mean	±SD	Mean	±SD	p-value [1]
Total group	449	21.2	5.5	20.5	5.1	0.001**
Nurses	125	22.6	6.0	22.5	6.0	0.737
Social Workers	98	20.9	5.0	19.9	4.5	0.018*
Occupational Therapists	78	21.8	5.4	20.6	4.9	0.022*
Physiotherapists	73	19.8	5.4	18.5	4.5	0.025*
Psychologists	48	19.0	4.5	19.5	4.0	0.301
Public Health workers	27	21.4	5.5	20.3	4.7	0.264

[1] Paired samples t-test

The FABI total score improved significantly (p<0.001) for the total group (N=456) after the university course, indicating less stigmatising attitudes. Further analysis revealed, however, that the change could be attributed to some of the student groups; social workers (p>0018), occupational therapists (p<0.022) and physiotherapists (p<0.025). No significant change of attitudes were seen after the education for the remaining groups, see Table 1.

Significantly less stigmatising attitudes for the total group were found for two of the items "I am afraid of people with mental illness" (item 1), p<0.001 and "Would you object to having mentally ill people living in your neighbourhood?" (item 2), p<0.001. Multiple analyses of the change-scores for FABI revealed no influence of student group, age or gender on the FABI total change-score.

Attitudes towards people with schizophrenia (Changing minds: Every family in the Land questionnaire). Significantly less stigmatising attitudes towards people with schizophrenia were found after the course concerning the questions "people with schizophrenia are dangerous to others, have themselves to blame, can be fully recovered", in the nurses, social workers and physiotherapy student groups (p<0.05). There were no changes in the attitude towards people with schizophrenia for the other student groups for any of the items, see Table 2.

Table 2. Changing minds: Every family in the Land questionnaire; Changes of attitudes (p-values) towards patients with Schizophrenia before and after a theoretical psychiatry course included in the educational programs for Nurses, Social Workers (SWs), Occupational Therapists (OTs), Physiotherapists (PTs), Psychologists (Ps) and Public Health workers (PHWs) p – value [1] for the respective group.

Attitudes to Schizophrenia	Nurses	SWs	OTs	PTs	Ps	PHWs
A. Danger to others	0.1	0.001**	0.3	0.001**	0.4	0.2
B.						
C.						
D. Feel different from us	0.8	0.8	0.9	0.2	0.2	1.0
E. Selves to blame	0.9	0.02*	0.5	0.04*	0.3	0.3
F. Could pull self together	0.2	0.3	0.3	0.02*	0.8	0.7
G. Not improved if treated	0.03*	0.3	0.9	0.5	0.4	0.6
H. Never fully recover	0.03*	0.001**	0.2	0.2	0.4	0.3

[1] Paired samples t-test

Note. Questions B and C did not meet the test-retest criteria of a weighted kappa corresponding to fair agreement and above and were therefore not analysed.

Multiple analyses of the change-scores concerning attitudes towards people with schizophrenia did not reveal any differences between the student groups on the items; having oneself to blame, potential for improvement, feeling just as everyone else, pulling one-self together, or potential for recovery. However, the item about patients with schizophrenia being dangerous to others revealed significant differences between the groups, where the physiotherapy students showed less stigmatising attitudes (p<0.001) compared to the other student groups. Gender or age did not influence the results in any way.

Specific aspects in the curriculum of the naturalistic theoretical education. The results revealed a lower level of stigmatising attitudes towards persons with mental illness (FABI total change score) if patient participation was included in their education programme Exp (B) of 1.6 (p<0.05), see Table 3.

Table 3. Forward Stepwise Logistic regression analysis of the change scores for FABI total and the educational features.

	B	S.E.	df	Sig.	Exp(B)
Patient participation	.468	.192	1	.015	1.596

The independent variables in the calculations were length of education, lectures, lessons on attitudes, case seminars, problem based learning, visits to the hospitals, professionally related practical skills training, and patient participation.

The results also revealed a less stigmatizing attitude on the Changing Mind item "People with Schizophrenia are dangerous" if the students had a longer course in mental health: Exp (B) of 5, 23 (p<0.001), working with case seminars Exp (B) of 2,175 (p<0.001), lectures Exp (B) of 1,820 (p<0.037), see Table 4.

Table 4. Forward Stepwise Logistic regression analysis of the change scores for Changing minds questionnaire, schizophrenia "People with schizophrenia are dangerous to others" and the educational features.

	B	S.E.	df	Sig.	Exp(B)
Lectures	.599	.288	1	.037	1.820
Case methodology	.777	.216	1	.001	2.175
Educational length	1.655	.383	1	.001	5.231

The independent variables in the calculations were length of education, lectures, lessons on attitudes, case seminars, problem based learning, visits to the hospitals, professionally related practical skills training, and patient participation.

Approximately one third of the students had *previous familiarity* with persons with mental illnesses, registering scores from 8 (a friend of the family has a severe mental illness), to 11 (I have a severe mental illness).There were however no significant relationships between familiarity and the change-scores, the attitudes and behavioural intentions towards people with mental illness in general and the change-scores concerning attitudes to people with schizophrenia. There was no significant difference in the change-scores for the behavioural intentions or attitudes towards persons with schizophrenia between the groups with high familiarity and the group with low familiarity in this study.

There was no significant relationship between gender or age and the change-scores neither concerning attitudes and behavioural intentions towards persons with mental illness in general nor the change-scores concerning attitudes towards persons with schizophrenia.

DISCUSSION

The aim of this study was to examine the effects of theoretical education on students' attitudes towards persons with mental illness. Students in the targeted areas are most likely to meet persons with mental illness, regardless of where in the health care system or social services they will work. Being as previous research indicated that knowledge and attitudes influenced stigmatisation, we were interested to find out if the attitudes had changed after a curriculum aiming at increasing the knowledge in the area of mental illness and mental health.[11] A change of attitudes in the whole student group was found in terms of less fear of persons with mental illness and an increased acceptance to allow them into their neighbourhood. It is also important to note that for many of the items, there was no change of attitudes for the group as a whole, and for some of the student groups, there was very little change in attitudes towards persons with mental illness. The findings in this study are similar to those found in previous research focusing change of attitudes in medical students.[9]

We found a positive change in the perceptions that people with schizophrenia are dangerous among the nursing, social worker, and physiotherapy student groups. This is important being as dangerousness is one of the most common stigmatising perceptions especially where people with schizophrenia, drug abuse, and alcoholism are concerned.[11] The subsequent fear is an emotional aspect of stigma that can become a prejudice according to previous research.[2,6] The results are, however, not easy to understand when it comes to the differences between the student groups, where the social worker students, the occupational therapy students, and the physiotherapy students revealed the greatest positive changes in attitudes towards patients with mental illness in general. The nursing, social worker, and physiotherapy student groups revealed a changed perception of persons with schizophrenia being dangerous. The physiotherapy students in particular revealed less stigmatising attitudes about persons' with schizophrenia being dangerousness compared to the other student groups. No other differences between the student groups were found.

In the debate about changing social attitudes, the issue is whether a positive change in attitudes also leads to an improvement in anti-stigmatizing behaviour. Theories about behavioural change and learning vary as to whether knowledge gained through extrinsic reinforcement, e.g., grades or positive remarks can be sustained in the long-term.[12] In social learning theories or cognitive theories, attitude-change is seen as dependent on personal factors, environmental factors, and attributes of the behaviour itself. The consequences of an attitude-change must be seen as valuable for the person.[13] In the ecological learning model, behaviour change is effective if it occurs on multiple levels: interpersonal factors, group factors, institutional factors, community factors, public policy, and includes the meaning of the human life in connection to the environment.[14] Long-lasting attitude change is thus a complicated matter. Previous results from research in the area of attitudes toward mental illness found somewhat divergent results. Some researchers claim that changing prejudicial attitudes towards persons with mental illness have a direct influence on discriminatory behaviour.[3] Other authors have found that lack of knowledge influences attitudes towards the mentally ill in a negative way.[8] Broad educational approaches aimed at changing inaccurate stereotypes about mental illness have shown to be effective in producing a short term improvement in attitudes.[15] Focus on the interpersonal contact with members of the stigmatized group was found to produce greater improvements in attitudes than protest and education.[7,13]

The educational content found in this study to influence the attitudes towards persons' with schizophrenia in a positive way was length of education. One of the student groups, the physiotherapy students, had a programme that was 10 weeks long and included psychosomatic and psychiatric issues, the importance of attitudes, and the creation of a meaningful alliance with the patient. This could be one of the reasons for less fear in this student group. Case seminars and patient participation were other educational features leading to attitude change. The emotional and personal involvement that can be the result of a personal encounter with somebody that has personal experience of mental illness or the involvement in a specific case seemed to be beneficial to an attitude change. This would then concur with the social learning theories.[14] The research into how to combat stigma may also help to explain some of the differences in the results in the various student groups.[13,15]

The students were young, and age is known to influence attitudes and desire for social distance towards persons with mental illness. According to Brockington et al., intolerant attitudes are associated with more advanced age, while more benevolent attitudes are associated with the ages between 25-44 years.[16] The mean age of the students in this study was 27 (SD 6.8 years), indicating that the group as such were young and rather homogeneous. This may account for the fact that age did not influence the attitude-change in any of the questionnaires. Familiarity has been associated with more positive attitudes towards stigma in community samples.[17] In this study, familiarity did not influence the results. Nor did gender influence the outcome in this study, although previous research has associated males in the community with having a more negative overall opinion towards persons with depression, panic attacks, schizophrenia, and eating disorders than females.[18] It is interesting that these gender differences found in the general public were not found in this sample of university students in healthcare educations. Female students were, however, 6 times as many as male students. It is not as common for male students to choose a health care profession. The choice of a caring profession may be a reason for no significant influence of gender on attitudes towards patients with mental illness.

Limitations

The limitations of the study are that we can not be certain if the change of attitudes found was a result of the education in mental health or due to other factors, being as the study was not randomised and controlled. The Changing Minds instrument used to assess attitudes to specific groups revealed some limitations in the Swedish version, but the reliability for the subscale Schizophrenia and the items (A, D, E, F, G) were adequate. The instruments chosen to measure stigmatizing attitudes in this study have previously been used in the research literature in the context of measuring stigma and mental disorders in community samples.[8,11] The same measures have also previously been used in research of attitudes in student populations.[1] This can be seen as an advantage when you want to compare the results found in this study to previous results. However there are many instruments available and perhaps other choices of instruments would also have been fruitful.

Other methodological limitations of this study were that nothing can be said about the way the students acquired their knowledge. We know that student learning can be achieved in many ways, and how students learn can vary greatly from being very superficial to being deep. Learning is dependent on the student's level of involvement, the degree of learning-related activity that the teaching method can stimulate, and the academic orientation of the student.[19] Learning is constructed as a result of the student's activities, and for good and deep learning to take place, the activities, the assessments, and the objectives should be aligned (so called constructive alignment).[19] To be able to study the constructive alignment and also to understand the experiences of the students leading to less fear, a qualitative research methodology is needed. This may lead to the possibility of gaining a greater understanding of some of the findings in this study.

CONCLUSION

In this study, most of the attitudes towards persons with mental illness did not change in the group of health care students as a whole after a theoretical course in a university education programme. The positive changes in attitudes found in the total group were a significant improvement of the attitude in terms of being afraid of people with mental illness in general and an improved attitude to have mentally ill people living in their neighbourhood. There were some differences in the student groups and significantly less stigmatising attitudes towards people with schizophrenia were found in the items "people with schizophrenia are dangerous to others, have themselves to blame, can be fully recovered", in the nurses, social workers, and physiotherapy student groups. Other attitudes revealed no change after the vocational education programme. Patient participation, the length of the programme, case seminars, and lectures were found to influence the attitudes towards mental illness in a positive way. Familiarity, age, and gender did not influence the results in this study.

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KEY TERMS

healthcare students, mental illness, stigmatizing attitudes, fear, education