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Student nurses and the general population in Sweden: Trends in attitudes towards mental illness

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Ewalds-Kvist B, Högborg T, Lützén K. Student nurses and the general population in Sweden: Trends in attitudes towards mental illness. *Nord J Psychiatry* 2013;67:164–170.

Objective: To evaluate attitudes towards mental illness displayed by student nurses' with previous contact with mentally disordered persons prior to education in psychiatric nursing and to evaluate trends in attitudes towards mental illness exhibited by student nurses and the public in Sweden. **Methods:** Altogether 246 student nurses enrolled in three universities in Sweden (mean age = 27.9 ± 7.5 years) out of which 210 were females and 36 males, completed prior to their obligatory course in psychiatric nursing a shortened version of 11 internally reliable (Cronbach's alpha 0.84) items from the Swedish version of the Community Attitudes towards Mental Illness questionnaire. The selected items were named the Student Nurse Attitude Index (SNAI) and formed the basis for an evaluation of trends exhibited by student nurses and the attitudes of the general population towards mental illness by means of Jonkheere's trend test. By linear regression analysis, the impact of previous contact with mental illness on student nurses' attitudes towards mental illness prior to education in psychiatric nursing was assessed. **Results:** Student nurses did not demonstrate, in contrast to the public in Sweden, a trend of positive attitudes toward persons with mental illness. Even so, it was revealed that student nurses who had experienced some type of contact with mental illness prior to education in psychiatric nursing exhibited a positive attitude, more so than those lacking contact, toward mental illness. **Conclusions:** The findings corroborated the "contact hypothesis", implying that direct contact with persons with mental illness will encourage acceptance and enhance a positive attitude towards mental illness in general.

• *Attitude, Contact hypothesis, Mental illness, Psychiatric nursing, Student nurses in Sweden.*

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The aim of this study was to examine whether student nurses with previous contact with persons subject to mental illness exhibited positive attitudes towards mental-health consumers prior to education in psychiatric nursing, more so than those lacking contact experience. Also, student nurses' trend in attitudes towards mental illness was compared with that of the general Swedish population.

Research indicates that student nurses feel unprepared, anxious and stressed before the start of their mental health care practice (1,2). However, student nurses' initial prejudices and negative attitudes towards mental illnesses and psychiatric settings gradually changed when they were exposed to demanding and complicated care situations as well as to patient encounters wherein they

faced their own emotions and tested their own coping skills (1). This conclusion seems to agree with the "contact hypothesis" (3) because the attitudes towards mental illness exhibited by student nurses who had experienced contact with patients subject to mental disorders differed in a positive way from those who lacked such contact. The contact hypothesis (3) originated from Allport in the early 1950s and implied that contact under certain conditions creates a positive intergroup coalescence, which will improve intergroup relations (4). Later on, the contact hypothesis simply conveyed the idea that direct contact between "hostile groups" will reduce prejudices (5). Then again, it was pointed out that the contact hypothesis was weakened by practicality because contact

often involves overcoming obstacles or anxiety may cause the contact to fail. Moreover, a contact is often limited to the meeting and to the participants, which complicates generalization (5). As a final point, Callaghan and colleagues (6) used the contact hypothesis as a base for their study and stated that previous contact with mental illness had no effect on the students' attitudes toward this kind of ill health and their findings did not bear out the contact hypothesis. Furthermore, it is evidenced that mental-health professionals can in their behaviors and attitudes stigmatize more or de-stigmatize their patients (7). However, mental-health professionals can also work towards de-stigmatization by, for example, demythologizing mental illness by rejecting fatalistic thinking relative to prognosis and treatment (8). If some myths about psychiatric disorders are corrected and if student nurses are brought into contact with persons subject to mental illness, their attitudes towards psychiatric disorders are claimed to change for the better (4).

Nursing staff's attitudes are claimed time and again to be comparable with those of the general public regarding psychiatric disorders (8, 9), although also the nurse-patient relationship covers unmet needs, frustrations, conflicts and angst contributing to the mentally disordered patient's internal dissonance (10). Students may as well endure, due to ambiguous environmental signals, internal dissonance manifesting itself in defensive behavior and negative attitudes relative to mental-health care (11, 12). Gateshill and colleagues (13) compared mental-health professional attitudes with those of non-mental health staff. Generally positive attitudes towards people with psychiatric disorders were found in both groups but non-mental health-care professionals regarded more so than the other group, people with a mental disorder as unpredictable and dangerous. Until now, mental-health professional beliefs about prognosis and long-term outcomes of schizophrenia and depression were less optimistic and less positive, based on their own experience, than those of the general population (8, 9, 14, 15). If the attitudes toward mental illness were found to change during the course of nursing education to a more negative and pessimistic approach (14), could the attitudes of student nurses prior to psychiatric nursing be the same as those of the general population?

Aim of the study

The aim of the present study was twofold: First, to evaluate whether student nurses recognizing previous contact with persons with mental illness had an effect on their attitudes to mental disorders prior to education in psychiatric nursing. Contact leads to reduced fear, which leads to more positive attitudes toward mental illness (4). The second aim was to compare trends in attitudes toward mental illness between student nurses prior to education in psychiatric nursing and the Swedish population. It could be expected that students who have chosen nursing would be more

empathetic towards persons with mental illness than the general population as would be revealed in their attitudes.

Methods

Participants

Student nurses ($n=421$) constituted a convenient sample based on easy accessibility. Altogether 246 Swedish student nurses (aged mean $\pm$ standard deviation = 27.9 ± 7.5 , range 18–50 years) out of which 210 were females and 36 males participated in this study. The participants were studying nursing at three different universities located in urban areas in Sweden. They were in the beginning of their second semester of nursing education prior to an obligatory course in psychiatric nursing. The Swedish population comprised a sampling frame that was produced out of the Register of Total Population that consisted of all registered residents of Sweden aged 18–85 years, i.e. 7,055,235 people. An independent random sample consisting of 5000 people was drawn from the sampling frame, and out of 4985 persons a total of 2391 (47.9%) agreed to participate. A total of 1354 (56.6%) females and 1037 males (43.4%) completed the same questionnaire as the student nurses; 55.7% of the respondents had no experience of mental illness as opposed to 4.7% that had different kinds of that experience, 23.5% had relatives or friends subject to mental illness and 3.0% had suffered themselves from mental illness. The study conforms to the provisions of the Declaration of Helsinki in 1995 and was approved by the Regional Ethical Review Board in Stockholm at Karolinska Institute. The participants' characteristics are presented in Table 2.

Questionnaire

The Swedish version of the Community Attitudes towards Mental Illness questionnaire consists of 20 statements regarding mental illness (16), as shown in Table 1, from which a computed total score of 11 items (Cronbach's $\alpha=0.84$) formed a shortened internally consistent index for the comparison of trends in attitudes toward mental illness between student nurses and the general Swedish public, presently named Student Nurse Attitude Index (SNAI). Also, the question "What personal experience of mental illness do you have?" with seven response alternatives: "no experience", "own mental illness", "relative's mental illness", "close friend's mental illness", "education in mental-health care", "professional activities in psychiatric care" or "other experience of mental illness: please describe" was included in the survey.

Procedure

The questionnaire was sent by mail together with a covering letter explaining the purpose of the study and the procedure for completing the form together with information about voluntary participation and anonymity to each

Table 1. Community Attitudes towards Mental Illness index items marked.*

Items
*1. Residents should accept the location of mental health facilities in their neighborhood to serve the needs of the local community.
*2. Most persons who were once patients in a mental hospital can be trusted as babysitters.
*3. Locating mental health services in residential neighborhoods does not endanger local residents
4. Mental health facilities should be kept out of residential neighborhoods.
5. Having mental patients living within residential neighborhoods might be a good therapy, but the risks to the residents are too great.
6. Local residents have good reason to resist the location of mental health services in their neighborhood.
*7. Mental illness is an illness like any other.
*8. We need to adopt a far more tolerant attitude towards the mentally ill in our society
*9. The mentally ill are far less of a danger than most people suppose.
10. It is best to avoid anyone who has mental problems.
11. I would not want to live next door to someone who has been mentally ill.
12. It is frightening to think of people with mental problems living in residential neighborhoods.
13. The best way to handle the mentally ill is to keep them behind locked doors.
*14. Residents have nothing to fear from people coming into their neighborhood to obtain mental health services
*15. Less emphasis should be placed on protecting the public from the mentally ill.
*16. The best therapy for many mental patients is to be part of a normal community.
17. The mentally ill should not be treated as outcasts of society.
*18. As far as possible, mental health services should be provided through community-based facilities.
*19. No one has the right to exclude the mentally ill from their neighborhood.
20. The mentally ill should be isolated from the rest of the community.

Cf. Högberg et al. (16).

of the participants. The covering letter clarified that the Swedish reform of psychiatric care opened the way for “persons with serious mental illness” to live in society as anybody else, hinting at people with long-term mental illness requiring long-term treatment and care (16). The completed questionnaires were returned in a coded and sealed envelope to a research assistant. Two reminders were sent out. Demographic data and experience of mental illness were collected for every participant. The participants were asked to rate each statement about persons with mental illness, e.g. “No one has the right to exclude the mentally ill from their neighborhood”, “Most persons who were once patients in a mental hospital can be trusted as babysitters,” on a 6-point Likert-type scale with the anchors “totally disagree” and “totally agree”. Thereafter, points 1–2 were coded as “totally disagree”, 3–4 as “neutral” and 5–6 as “totally agree”, because participants’ answers were put side by side with those of the regular Swedish population for a comparison between groups with the internally consistent SNAI (Tables 3–6). The comparison was calculated by means of χ^2 for significance between negative, neutral and positive attitudes toward mental illness both for student nurses and Swedish population, respectively. Data from the general Swedish population were at hand from our previous study (17). By Jonckheere’s trend test, student nurses’ and the Swedish population’s trends in attitudes toward persons with mental illness were tested for significance.

Statistical analysis

Linear regression analysis, Cronbach’s alpha coefficient and χ^2 were computed. In addition, Jonckheere’s trend

test (*J*) test, which can be applied for data for *k* independent samples when measurement is at least ordinal, and when it is possible to specify *a priori* the ordering of the groups, was calculated; the test is one-tailed. In Jonckheere’s trend test, the alternative hypothesis is tested against a null hypothesis of no systematic trend across responses in groups (18).

Results

Table 2 shows student nurses’ data.

Table 3 shows 11 items and item-total statistics for the SNAI reflecting their total scores adding up to Cronbach’s alpha of 0.843. The grand mean was 4.07 ± 0.41 . The lowest mean for any item was given in response to the statement, “Most persons who were once patients in a mental hospital can be trusted as babysitters” (mean = 3.12 ± 1.53) differs from the highest mean “No one has the right to exclude the mentally ill from their neighborhood” significantly (mean = 4.67 ± 1.33 ; $t(232) = 3.167$, $P = 0.002$).

A mean difference (4.69, standard error, SE = 1.28) in the SNAI between student nurses lacking experience (mean = 41.93, SE = 0.99) and those having experience of mental illness ($M = 46.62$, SE = 0.80, $t[215] = 3.670$, $P < 0.000$) as well as a mean difference (4.91, SE = 1.54), in the SNAI between student nurses lacking relatives with mental illness (mean = 43.74, SE = 0.73) and those having relatives with mental illness (mean = 48.65, SE = 1.23); $t[215] = 3.670$, $P < 0.000$) were observed, and hinted at the possibility that contact creates a more positive attitudes towards persons subject to mental illness by means of the SNAI. Therefore, the aim was to find out whether

Table 2. Student nurses' demographic variables.

Demographic variables	Range	n	Mean	s	Sex	n	Mean	S	t (df)	Sig. (Two-tailed)
Age (years)	18–50	246	27.89	7.54	♂	36	27.00	6.80	0.769 (244)	n.s.
					♀	210	28.05	7.67		
Age groups	18–28	153	22.86	2.70						
	29–39	69	33.81	3.60						
	40–50	24	43.00	2.75						
Student nurse attitude index (snai)	20–64	221	44.81	9.51	♂	34	43.79	8.56	0.645 (218)	n.s.
					♀	186	44.94	9.69		

s, standard deviation.

experience of mental illness before education in psychiatric nursing affects a person's attitude towards mental illness; a linear regression analysis was computed with the SNAI as dependent variable (Tables 4 and 5) by "experience of mental illness", "relative's mental illness", "close friend's mental illness" and "own mental illness" as explanatory variables. Altogether 88% (adjusted R^2) of the variance of the SNAI was explained by "experience of mental illness", "relative's mental illness", "close friend's mental illness" and "own mental illness" (Table 4). Of these three interpreters, "experience of mental illness", "relative's mental illness", "close friend's mental illness" made a statistically significant contribution to the equation. Based on the part correlation column (Table 5) "experience of mental illness" contributed with 56%, "relative's mental illness"

with 2% and "close friend's mental illness" with less than 1% of the unique variance to the total R^2 . Altogether 29% constituted shared variance.

A trend in student nurses' attitudes towards mental illness was calculated side by side with a trend in attitudes exhibited by people in general by means of χ^2 for significance testing between three attitude groups ranging from "totally disagree" to "neutral" to "totally agree" both for student nurses and the Swedish population (Table 6). Jonckheere's trend test (J) test was applied for both student nurses' data for three independent samples as well as for the Swedish population's data, in which the measurements were ordinal and *a priori* specified from "totally disagree" to "neutral" to "totally agree". It was revealed that student nurses prior to education in

Table 3. Student nurses' attitude towards mental illness.

Item-total statistics; cronbach's alpha = 0.843	Mean	s	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation
The best therapy for many mental patients is to be part of a normal community	3.98	1.21	40.82	78.82	0.472
As far as possible, mental health services should be provided through community-based facilities	4.11	1.24	40.70	79.16	0.444
We need to adopt a far more tolerant attitude towards the mentally ill in our society	4.29	1.40	40.52	74.61	0.575
The mentally ill should not be treated as outcasts of society	4.34	1.25	40.46	75.86	0.597
No one has the right to exclude the mentally ill from their neighborhood	4.67	1.33	40.14	75.10	0.592
Most persons who were once patients in a mental hospital can be trusted as babysitters	3.12	1.53	41.68	76.23	0.445
Residents should accept the location of mental health facilities to serve the needs of the local community	4.11	1.38	40.69	73.68	0.629
The mentally ill are far less of danger than most people suppose	4.33	1.32	40.47	76.38	0.537
Locating mental health services in residential neighborhoods does not endanger local residents	3.65	1.39	41.15	73.42	0.635
Mental illness is an illness like any other	4.19	1.73	40.62	73.98	0.454
Less emphasis should be placed on protecting the public from the mentally ill	4.00	1.39	40.80	78.10	0.425

s, standard deviation.

Table 4. Linear regression analysis for the Student Nurse Attitude Index (SNAI): *R* and *R*².

Model	<i>R</i>	<i>R</i> ² *	Adjusted <i>R</i> ²	SE of the estimate	Model	Sum of squares	df	Mean square	<i>F</i>	Sig.
Enter	0.940 [†]	0.883	0.881	1.44	Regression	3321.30	4	830.33	401.51	0.000 [†]
					Residual	440.48	213	2.07		
					Total	3761.78*	217			

*Dependent variable: SNAI.

[†]Explained by: "experience of mental illness", "own mental illness", "relative's mental illness" and "close friend's mental illness".

psychiatric nursing did not display a significant trend to a positive attitude towards persons subject to mental illness in contrast to the people in general in Sweden (Table 5). On the other hand, both groups found the statement "Most persons who were once patients in a mental hospital can be trusted as babysitters" problematic more so than the assertion that "No one has the right to exclude the mentally ill from their neighborhood".

To sum up: experience of mental illness impacted student nurses attitudes towards mental illness significantly, although the public attitude in Sweden was more positive towards people subject to mental illness than student nurses relative to their trends in attitudes.

Discussion

Based on our results, we support the idea that student nurses who acknowledged prior contact with individuals subject to mental ill health exhibit positive attitudes towards mental illness (4, 19). The contact hypothesis (3) implies that contact will create a positive intergroup coalescence, which leads to an improvement in intergroup relations (4). However, contact interventions of longer duration have not been associated with a greater attitude change towards people subject to psychiatric illness (20). Student nurses in Hong Kong expressed positive attitudes to people with psychiatric disorders, but nurses' attitudes with a family history of mental illness did not differ from those who lacked such history (6).

Hence, if our goal is to bring about favorable attitudes in student nurses to mental illness, according to Gaertner et al. (21) this is done by stimulating student nurses' dual identities: first, by their cognitive appreciation to the human race and second by their emotional identification with vulnerability, i.e. to identify oneself as at risk for mental disorder. Japanese student nurses did not "think it is difficult to approach a person who is mentally ill" and realized after contact with persons subject to mental disorder, that they themselves might "become mentally ill", in contrast to student nurses lacking contact experience (19).

It has been noted by family members that during inpatient treatment, the patients were "craving for personal contacts with someone other than their fellow patients" but these needs were left unattended to by staff (8, 22). Attention to the patient's needs is thought to be facilitated by reduced anxiety (22). However, fear of people with mental disorders is not due to observed violent behavior, because a total of 52% of 260 second-year student nurses witnessed psychotic behavior or were involved in both actual and threatened violence and verbal abuse (23). Persons with more personal and impersonal contact perceived people with mental illness to be less dangerous (24) in agreement with our results. It has been indicated that student nurses' attitudes after clinical placement changed toward a less stigmatizing direction, but regarding schizophrenia no attitudinal change took place in Sweden in agreement with results from abroad (8, 9). Nevertheless, a high

Table 5. Student Nurse Attitude Index (SNAI): linear regression coefficients.

	Unstandardized coefficients		Standardized coefficients		Sig.	95.0% Confidence interval for B		Correlations			Collinearity Statistics*	
	B	SD	Beta	t		Lower bound	Upper bound	Zero-order	Partial	Part	Tolerance	Vif
Attitudes towards mental illness; model enter												
Experience of mental illness	2.308	0.07	0.808	31,953	0.000	2.166	2.450	0.907	0.910	0.749	0.860	1.16
Own mental illness	0.703	0.37	0.051	1922	0.056	-0.018	1.425	0.322	0.131	0.045	0.786	1.27
Relative's mental illness	1.548	0.24	0.174	6595	0.000	1.085	2.010	0.489	0.412	0.155	0.793	1.26
Close friend's mental illness	1.128	0.27	0.114	4198	0.000	0.598	1.658	0.430	0.276	0.098	0.746	1.34

*Tolerance and variance inflation factor (VIF) indicate that multicollinearity is not at hand.

Table 6. Trends in student nurses' attitudes (to the left) versus Swedish people's attitudes towards mental illness.

Items; cronbach's alpha = 0.843	Totally disagree	Neutral	Totally agree	χ^2 (18)	$P <$	Totally disagree	Neutral	Totally agree	χ^2 (18)	$P <$
The best therapy for many mental patients is to be part of a normal community	25	102	73	189.86 > 42.31	0.001	219	980	1097	2615.85 > 42.31	0.001
As far as possible, mental health services should be provided through community-based facilities	22	90	88	<i>J</i>	n.s.	280	496	1137	<i>J</i>	0.01
We need to adopt a far more tolerant attitude towards the mentally ill in our society	22	81	97			246	786	1367	407 > 124	
The mentally ill should not be treated as outcasts of society	19	76	105			166	378	1756		
No one has the right to exclude the mentally ill from their neighborhood	19	48	133			220	602	1573		
Most persons who were once patients in a mental hospital can be trusted as babysitters	70	89	41			922	895	434		
Residents should accept the location of mental health facilities in their neighborhood to serve the needs of the local community	19	95	86			373	866	1048		
The mentally ill are far less of danger than most people suppose	21	72	107			302	854	1025		
Locating mental health services in residential neighborhoods does not endanger local residents	44	86	70			461	846	981		
Mental illness is an illness like any other	43	46	111			519	581	1203		
Less emphasis should be placed on protecting the public from the mentally ill	34	103	101			427	911	918		
Mean	30.7	80.7	92.0			375.9	745.0	1139.9		

J, Jonkheere's trend test (18).

degree of contact with mental illness made female students change their belief in a positive direction about prognosis for persons suffering from schizophrenia (25). Yet, people subject to long-term mental illness expressed themselves concerns about their future and lacked hope. Viewing themselves as "odd" communicated the experience of existential and social alienation not only as a consequence of other people's reactions to them but also of their own negative attitudes towards mental illness and cognitive dysfunction (26, 27).

On the basis of our results, it was indicated that student nurses in Sweden prior to education in psychiatric nursing do not disclose an optimistic trend in attitudes toward mentally disordered persons in comparison with that of the general public. Even so, student nurses' contact with persons subject to mental illness or having a relative with mental ill health, were reflected in positive attitudes towards mental illness.

Limitations of the study

Altogether 210 female and 36 male student nurses participated in the present study. The study may have benefited from more male participants, since discrepancies between female and male student nurses were not at hand. It is possible that student nurses constitute a more homogenous group than the general population in certain aspects. A follow-up after the education in psychiatric nursing would be needed.

Conclusion

The experience of some type of contact with persons subject to mental illness was reflected in student nurses' more positive attitude towards psychiatric ill health prior to education in psychiatric nursing, when recorded by means of the SNAI. This finding corroborated the contact hypothesis implying that direct contact between

intimidating groups will reduce intolerance presently towards mental illness. Furthermore, trends in attitudes between student nurses prior to education in psychiatric nursing and the general population in Sweden were explored. It was revealed that student nurses were short of an optimistic trend in their attitudes to persons with mental illness in contrast to the trend of the general public. Whether the student nurses' trend can be altered by a change in clinical education in the psychiatric field needs to be followed up.

Declaration of interest The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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