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Nursing Students' Attitudes toward People with Mental Illness: Do they change after instruction and clinical exposure?

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Abstract

People with mental illness are among the most stigmatized groups of patients in the healthcare

setting (Putnam, 2008). Nurses comprise roughly 15.3 percent of the healthcare team (U.S.

Bureau of Labor Statistics, 2010) and have frequent direct interactions with patients. As one of

the larger groups of healthcare providers, nurses can potentially influence this stigma, either by

contributing to the prevalent negative attitudes, or by confronting expressions of stigma. A

requirement for licensure is to take a course in Mental Health. One of the goals of this course is

to decrease stigma toward people with mental illness (American Association of Colleges of

Nursing [AACN], 2008). To measure whether or not this course is effective in reducing stigma,

the Community Attitudes toward Mental Illness (CAMI) scale created by Taylor and Dear

(1981) was utilized to measure nursing students attitudes before and after taking the required

Mental Health course at the University of South Florida (USF). The results of this study support

that there was a decrease in authoritarian and socially restrictive attitudes towards people with

mental illness after completion of the course, with the results being a close to significant. The

recommendations include repeating the study over another semester in order to test validity of

results, as well as to then utilize the results to assess the need for changes in course delivery or

content.

Nursing Students' Attitudes toward People with Mental Illness:

Do they change after instruction and clinical exposure?

The word "stigma" originated in ancient Greece as the marking or 'branding" of slaves (Falk, 2001, p. 32). It has come to mean the labeling, discrimination and rejection of people who are socially and behaviorally different (Phelan & Basow, 2007). People with mental illness fall into the category of 'different,' because the symptoms of the various mental illnesses may interfere with their ability to fulfill society's expectations. Society expects us to "think and act rationally and in a meaningful fashion" as well as to be actively and adequately involved in our family, community, work, and other social relationships (Falk, 2001, p. 40).

People with mental illness as a whole are portrayed as violent and dangerous people that have severely disturbed thought processes and therefore have unpredictable behavior and should be feared (Ross & Goldner, 2009). The media and cinema have facilitated this portrayal of the mentally ill by depicting them in various distasteful ways. Horror movies about 'psycho' killers that have escaped from mental institutions are a prime example. The public, including many nurses, believe that mental illness is related to the persons own failings, such as weakness of character and morals, laziness, and lack of discipline and self-control (Ross & Goldner). These beliefs and portrayals cause discrimination leading to adverse effects on employment, income, and housing and in effect, self-esteem and self-concept (Markowitz, 1998).

The stigma towards people with mental illness by healthcare providers results in disparities in access, treatment, and outcomes (Birch, Lavender, & Cupitt, 2005; De Hert et al., 2011; Phelan & Basow, 2007). People with mental illness have a higher incidence of lifetime disease and a shorter lifespan than the general population. Illnesses that are more prevalent within the population of people with mental illness include metabolic syndrome, diabetes,

cardiovascular disease, infectious diseases, and sexual dysfunction (De Hert et al.). Women with

psychiatric illness face stigmatization in the area of reproductive care, including decreased

instruction regarding parenting skills, breastfeeding, and increased feelings of powerlessness and

depersonalized care. (Birch et al., 2005). Healthcare providers may hesitate to fully assess the

physical status of a patient with a mental illness due to discomfort with the patient's

symptomology or diagnosis (Phelan, Stradins, & Morrison, 2001).

Nurses, comprising approximately 15.3 percent of the healthcare team, can have a

significant impact on decreasing or contributing to the multiple healthcare disparities

experienced by mental health patients (U.S. Bureau of Labor Statistics, 2010). Nurses need to be

self-aware of their own stigma in order to avoid inadvertently discriminating against their

patients through inappropriate distancing, inadequate teaching, or other nursing actions based in

fear. Fear is a major cause of discrimination and stigma (Allport, 1954). Instruction and direct

clinical exposure may help to decrease or eliminate fear. Napoletano (1981) found that

instruction positively changed nursing students' attitudes toward mental illness, especially, the

etiology of mental illness.

Direct contact with people who are stigmatized is an effective method of decreasing fear,

increasing tolerance, and changing negative attitudes. (Allport, 1954). Being acquainted with

someone with mental illness has also been shown to positively influence attitudes (Song, Chang,

Shih, Lin, & Yang, 2005). In a study by Alexander & Link (2003) it was shown that participants

with more overall contact with the mentally ill, "regardless of type", viewed the mentally ill as

less dangerous and "reported less desired social distance" (p. 284-285). A different study done

in the social work setting found that incorporation of people with mental health issues into the

classroom setting was effective in decreasing the negative attitudes held by the students toward

the mental health population (Shor & Sykes, 2002). Surgenor, Dunn, and Horn (2005) showed

significantly more positive attitudes toward people with mental illness in "final year students"

than those in their first year of schooling. It was hypothesized that this was resulted from the

greater likelihood of exposure to and contact with mental health patients in the final year of

training. The results of a different study done in Greece suggests that practicum and clinical

psychiatric exposure for a "substantial time period" can change the stereotyped and

discriminating beliefs of undergraduate nurses toward those with mental illness (Madianos,

Priami, Alevisopoulos, Koukia, & Rogakou, 2005).

Educational programs that prepare student nurses for the professional nursing role have

the obligation to foster positive attitudes towards people with mental illness (American Nurses

Association [ANA], 2011). Students in baccalaureate programs are required to take a course in

Psychiatric/Mental health nursing which includes objectives that focus on decreasing healthcare

disparities and stigma towards people with psychiatric diagnosis (American Association of

Colleges of Nursing [AACN], 2008).

Outcome measures regarding attitudinal change resulting from completion of the required

psychiatric course are sparse in the United States. The Community Attitudes Towards Mental

Illness (CAMI) scale is one reliable instrument utilized to measure attitudes towards people with

mental illness (Taylor & Dear, 1981), therefore making it a valid tool for measurement of

whether or not nursing student's attitudes towards people with mental illness change following

the completion of the psychiatric mental health course. It is hypothesized that after completion

of the psychiatric mental health nursing course, student attitudes will show a decrease in

authoritarianism, and social restrictiveness, and an increase in benevolence and community

mental health ideology and acceptance.

Methods

The CAMI scale (Taylor & Dear, 1981), a standardized tool which measures community attitudes toward the mentally ill, was integrated into a survey with additional demographic questions and given to two groups of Psychiatric/Mental Health Nursing classes in Spring 2011 at the University of South Florida (USF). The additional demographic questions included age, whether or not they have a previous college degree, gender, marital status, whether the student or a family member had utilized mental health services, subjective socioeconomic status, and the degree to which religion influenced their lives. There were also questions separate from the CAMI that measured items that were thought to be significant to the care of people with psychiatric illness in the clinical setting. These questions asked about the student's preconceived ideas about drug use, personal cleanliness, housing status, and the student's level of comfort in speaking to people with mental illness. The survey was administered in the beginning and at the end of the Spring 2011 semester to gauge the change in attitude toward people with mental illness after completing the required Psychiatric/Mental Health course. Statistical analysis was performed using IBM SPSS statistics version 19. (see Appendix A)

Participants

The participants were the students enrolled in the Psychiatric/Mental Health courses (both upper division and second degree) during the spring 2011 semester. There were $N = 90$ voluntary participants in the first administration of the survey and $N = 82$ in the second administration. 60 students were enrolled in the upper division course and 34 students were enrolled in the second degree course with one withdrawal, resulting in a total of 93 enrolled students.

The descriptive statistics for the background characteristics of the sample are presented in

the Table 1. The majority of participants were female (85.8%) and single (77.6%). Participants'

age ranged from 18 to over 50 with the largest number of participants falling between 18-20

(32.9%) years of age. The majority of participants did not have a Bachelors degree (65.1%). The

majority of participants attended church (51. 5%) and most did not use mental health services

(69.8%). The majority also reported that their family did not use mental health services (56.7%).

Table 1

Participants' Background Characteristics (Time 1)

Characteristic	*N*	*%*
Sex		
Female	77	85.6
Male	13	14.4
Total	90	100
Marital Status		
Married	15	16.9
Single	68	76.4
Divorced	5	5.6
Separated	1	1.1
Total	89	100
Age		
18-20	33	36.7
21-23	22	24.4
24-26	14	15.6
27-29	7	7.8
30-39	6	6.7
40-49	5	5.6
50+	3	3.3
Total	90	100

Table 1

Participants' Background Characteristics (Time 1) cont.

Characteristic	N	%
Bachelors Degree		
No	56	62.2
Yes	34	37.8
Total	90	100
Church attendance		
No	No	42
Yes	Yes	47
Total	89	100
Mental health utilization		
No	66	73.3
yes	24	26.7
Total	90	100
Mental health utilization (family)		
No	56	62.9
Yes	33	37.1
Total	89	100

Table 1

Participants' Background Characteristics (Time 2)

Characteristic	N	%
Sex		
Female	68	86.1
Male	11	13.9
Total	79	100
Marital Status		
Married	12	14.8
Single	64	79.0
Divorced	4	4.9
Separated	1	1.2
Total	81	100
Age		
18-20	23	28.8
21-23	30	37.5
24-26	11	13.8
27-29	4	5.0
30-39	5	6.3
40-49	5	6.3
50+	2	2.5
Total	80	100

Table 1

Participants' Background Characteristics (Time 2) cont.

Characteristic	*N*	*%*
Bachelors Degree		
No	56	68.3
Yes	26	31.7
Total	82	100
Church attendance		
No	42	47.2
Yes	47	52.8
Total	89	100
Mental health utilization		
No	54	65.9
yes	28	34.1
Total	82	100
Mental health utilization (family)		
No	41	50
Yes	41	50
Total	82	100

Procedure

Written permission was obtained from S. Martin Taylor and Michael Dear to utilize the CAMI scale in this study. IRB approval was obtained from the University of South Florida a week into the spring 2011 semester. The survey was then administered to the two classes. Informed consent was obtained from all students through an explanation to the group about the voluntary nature of the study and that the study was part of an Honor's Project for USF and

would result in a written document. The students were informed that completion of the survey

indicated consent to participate in the study. No identifying information such as names or

identification numbers was obtained. The survey was administered for the second time during

the last week of the spring 2011 semester and the consent process was repeated again at that

time. The data generated was then entered into SPSS version 19 and analyzed.

Results

RESULTS FOR TIME 1

The results are presented by time (time 1 and time 2). The results for time 1 are presented

first. The first *t*-test for independent samples was used to determine if authoritarian, benevolence,

social restriction and CMH ideology varied as a function of church attendance (time 1 and time

2). There were no statistically significant differences in authoritarian, benevolence, social

restriction and CMH ideology by church attendance (see Table 2).

Table 2

T- test for Church Attendance (Time 1)

Variable	Church Attendance	*n*	*M*	*SD*	*t*	*df*	*p*
Authoritarian	No	42	23.57	5.04	.436	87	.66
	Yes	47	23.10	5.00			
Benevolence	No	42	38.35	5.65	-.254	86	.80
	Yes	46	38.67	6.02			
Social restrictiveness	No	42	23.00	6.04	-.849	87	.39
	Yes	47	24.12	6.43			
Community mental health ideology	No	42	34.52	6.454	-.452	87	.65
	Yes	47	35.14	6.557			

The next *t*-test for independent samples was used to determine if authoritarian, benevolence, social restriction and CMH ideology varied as a function of mental health utilization. There were statistically significant differences in authoritarian, social restriction, and CMH ideology by mental health utilization (see Table 3). More specifically, those who reported no mental health utilization had significantly higher authoritarian scores (M = 23.96) than those who reported using mental health services (*M* = 21.37); *t*(88) = 2.22, *p* = .02. Those who reported no mental health utilization had significantly higher social restrictiveness scores (*M* = 24.59) than those who reported using mental health services (*M* = 20.87); *t*(88) = 2.588, *p* = .01. Finally, those who used mental health services had significantly higher community mental health ideology scores (*M* = 38.08) than those who reported they did not use mental health services (*M* = 33.80); *t*(88) = -2.873, *p* = .005.

Table 3

T- test for Mental Health Utilization (Time 1)

Variable	Mental health utilization	*n*	*M*	*SD*	*t*	*df*	*p*
Authoritarian	No	66	23.96	4.85	2.22	88	.02
	Yes	24	21.37	4.97			
Benevolence	No	65	37.81	5.83	-1.843	87	.06
	Yes	24	40.33	5.37			
Social restrictiveness	No	66	24.59	6.08	2.588	88	.01
	Yes	24	20.87	5.83			
Community mental health ideology	No	66	33.80	6.47	-2.873	88	.005
	Yes	24	38.08	5.57			

The next *t*-test for independent samples was used to determine if authoritarian, benevolence, social restriction and CMH ideology varied as a function of family mental health utilization. There were statistically significant differences in authoritarian scores by family mental health utilization (see Table 4). More specifically, those who reported no mental health utilization had significantly higher authoritarian scores ($M = 24.16$) than those who reported using mental health services ($M = 21.90$); $t(87) = 2.09$, $p = .04$. There were no other statistically significant differences by family mental health utilization.

Table 4

T- test for Family Mental Health Utilization (Time 1)

Variable	Family mental health utilization	*n*	*M*	*SD*	*t*	*df*	*p*
Authoritarian	No	56	24.16	5.06	2.09	87	.04
	Yes	33	21.90	4.61			
Benevolence	No	56	37.78	5.67	-1.51	87	.13
	Yes	33	39.69	5.88			
Social restrictiveness	No	56	24.26	6.25	1.37	87	.17
	Yes	33	22.39	6.13			
Community mental health ideology	No	56	34.17	6.60	-1.40	87	.16
	Yes	33	36.18	6.30			

The next *t*-test for independent samples was used to determine if authoritarian, benevolence, social restriction and CMH ideology varied as a function of bachelor's degree status. There were statistically significant differences in authoritarian and social restrictiveness scores by bachelor's degree status (see Table 5). More specifically, those with no bachelor's degree had significantly higher authoritarian scores ($M = 24.50$) than those with a bachelor's degree ($M = 21.26$); $t(88) = 3.12$, $p = .002$. In addition, those with no bachelor's degree had significantly higher social restrictiveness scores ($M = 24.84$) than those with a bachelor's degree ($M = 21.38$); $t(88) = 2.73$, $p = .008$. There were no other statistically significant differences by bachelor's degree status.

Table 5

T- test for Bachelors Degree Status (Time 1)

Variable	Bachelors degree	*n*	*M*	*SD*	*t*	*df*	*p*
Authoritarian	No	56	24.50	4.96	3.12	88	.002
	Yes	34	21.26	4.41			
Benevolence	No	55	38.16	6.14	-.68	87	.497
	Yes	34	39.02	5.23			
Social restrictiveness	No	56	24.94	6.28	2.73	88	.008
	Yes	34	21.38	5.48			
Community mental health ideology	No	56	33.92	6.53	-1.92	88	.057
	Yes	34	36.61	6.17			

The next *t*-test for independent samples was used to determine if authoritarian, benevolence, social restriction and CMH ideology varied as a function of gender. There were no statistically significant differences in authoritarian, benevolence, social restriction, and CMH ideology scores by gender (see Table 6).

Table 6

T- test for Gender (Time 1)

Variable	Gender	*n*	*M*	*SD*	*t*	*df*	*p*
Authoritarian	Female	77	22.85	4.56	-1.97	88	.051
	Male	13	25.76	6.72			
Benevolence	Female	76	38.94	5.28	1.80	87	.074
	Male	13	35.84	7.91			
Social restrictiveness	Female	77	23.27	6.15	-1.22	88	.226
	Male	13	25.53	6.461			
Community mental health ideology	Female	77	35.48	6.35	1.93	88	.056
	Male	13	31.76	6.69			

Correlational Analysis (Time 1)

Spearman's correlations were used to analyze the bivariate relationships between the key variables.

Correlations with authoritarianism. Authoritarianism was negatively and significantly correlated with age ($r = -.235$, $p = .02$); illegal drugs ($r = -.362$, $p = .00$), dirty ($r = -.500$, $p = .00$); homeless ($r = -.403$, $p = .00$); and feeling comfortable speaking ($r = -.435$, $p = .00$). There was an inverse relationship between authoritarianism and these variables.

Correlations with benevolence. Benevolence was positively and significantly correlated with illegal drugs ($r = .413$, $p = .00$), Dirty ($r = .542$, $p = .00$); homeless ($r = .359$, $p = .00$); and feeling comfortable speaking ($r = .435$, $p = .00$). There was a positive relationship between benevolence and these variables.

Correlations with social restrictiveness. Social restrictiveness was negatively and significantly correlated with illegal drugs ($r = -.366$, $p = .00$), Dirty ($r = -.560$, $p = .00$); homeless ($r = -.478$, $p = .00$); and feeling comfortable speaking ($r = -.442$, $p = .00$). There was an inverse relationship between social restrictiveness and these variables.

Correlations with cmh ideology. CMH ideology was positively and significantly correlated with illegal drugs ($r = .325$, $p = .00$), Dirty ($r = .491$, $p = .00$); homeless ($r = .386$, $p = .00$); and feeling comfortable speaking ($r = .493$, $p = .00$). There was a positive association between social restrictiveness and these variables.

Table 7- *Correlational Analysis (Time 1)*

		SES	Age	Importance of Religion	Authoritarian	Benevolence	Social restrictiveness	CMH ideology
SES	*r*	--	-					
Age	*r*	-.157	--					
	p	.140						
	N	90						
Importance of Religion	*r*	.033	-.062	--				
	p	.757	.566					
	N	89	89					
Authoritarian	*r*	-.123	-.235*	-.018	--			
	p	.248	.026	.870				
	N	90	90	89				
Benevolence	*r*	-.024	.079	.006	-.631**	--		
	p	.821	.464	.952	.000			
	N	89	89	88	89			
Social restrict	*r*	.057	-.172	.051	.613**	-.651**	--	
	p	.592	.104	.636	.000	.000		
	N	90	90	89	90	89		
CMH ideology	*r*	-.109	.111	-.015	-.615**	.620**	-.746**	--
	p	.308	.299	.886	.000	.000	.000	
	N	90	90	89	90	89	90	

* Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

Table 7- *Correlational Analysis cont.*

		Authoritarian	Benevolence	Social restrict	CMH ideology	Illegal drugs	Dirty	Homeless	comfortable speaking
Authoritarian	*r*	--							
Benevolence	*r*	-.631**	--						
	p	.000							
	N	89							
Social restrictiveness	*r*	.613**	-.651**	--					
	p	.000	.000						
	N	90	89						
CMH ideology	*r*	-.615**	.620**	-.746**	--				
	p	.000	.000	.000					
	N	90	89	90					
Illegal drugs	*r*	-.362**	.413**	-.366**	.325**	--			
	p	.000	.000	.000	.002				
	N	90	89	90	90				
Dirty	*r*	-.500**	.542**	-.560**	.491**	.584**	--		
	p	.000	.000	.000	.000	.000			
	N	90	89	90	90	90			
Homeless	*r*	-.403**	.359**	-.478**	.386**	.477**	.616**	--	
	p	.000	.001	.000	.000	.000	.000		
	N	90	89	90	90	90	90		
comfortable speaking	*r*	-.435**	.435**	-.442**	.493**	.212*	.417**	.277**	--
	p	.000	.000	.000	.000	.045	.000	.008	
	N	90	89	90	90	90	90	90	

* Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

RESULTS FOR TIME 2

The results for time 2 are presented in this section. The first *t*-test for independent samples was used to determine if authoritarian, benevolence, social restriction and CMH ideology varied as a function of church attendance (time 2). There were no statistically significant differences in authoritarian, benevolence, social restriction and CMH ideology by church attendance (see Table 8).

Table 8

T- test for Church Attendance (Time 2)

Variable	Church Attendance	*n*	*M*	*SD*	*t*	*df*	*p*
Authoritarian	No	40	21.85	4.09	-.00	79	.99
	Yes	41	21.85	6.09			
Benevolence	No	40	38.80	4.77	-1.16	79	.24
	Yes	41	40.26	6.43			
Social restrictiveness	No	40	21.47	4.50	-.78	79	.43
	Yes	41	22.41	6.15			
Community mental health ideology	No	40	36.02	6.24	.48	79	.63
	Yes	41	35.311	6.95			

The next *t*-test for independent samples was used to determine if authoritarian, benevolence, social restriction and CMH ideology varied as a function of mental health utilization. There were statistically significant differences in authoritarian, social restriction, and CMH ideology by mental health utilization (see Table 9). More specifically, those who reported

no mental health utilization had significantly higher authoritarian scores (M = 22.67) than those

who reported using mental health services (M = 20.28); $t(79)$ = 2.01, p = .04. Those who

reported no mental health utilization had significantly higher social restrictiveness scores (M =

23.35) than those who reported using mental health services (M = 19.28); $t(79)$ = 3.44, p = .001.

Finally, those who used mental health services had significantly higher community mental health

ideology scores (M = 37.82) than those who reported they did not use mental health services (M

= 34.52); $t(79)$ = -2.19, p = .03.

Table 9

T- test for Mental Health Utilization (Time 2)

Variable	Mental health utilization	n	M	SD	t	df	p
Authoritarian	No	53	22.67	5.19	2.01	79	.047
	Yes	28	20.28	4.83			
Benevolence	No	53	38.83	6.08	-1.56	79	.121
	Yes	28	40.89	4.66			
Social restrictiveness	No	53	23.35	5.27	3.44	79	.001
	Yes	28	19.28	4.61			
Community mental health ideology	No	53	34.52	6.75	-2.19	79	.031
	Yes	28	37.82	5.74			

The next *t*-test for independent samples was used to determine if social restriction and

CMH ideology varied as a function of family mental health utilization. There were statistically

significant differences in social restriction and CMH ideology scores by family mental health

utilization (see Table 10). More specifically, those who reported no family mental health

utilization had significantly higher social restrictiveness scores (*M* = 23.39) than those who

reported using family mental health services (*M* = 20.47); *t*(79) = 2.51, p = .01. In addition,

those who reported no family mental health utilization had significantly lower CMH ideology

scores (*M* = 34.21) than those who reported that they did have a family member utilize mental

health services (*M* = 37.15); *t*(79) = -2.04, *p* = .04.

Table 10

T- test for Family Mental Health Utilization (Time 2)

Variable	Family mental health utilization	*n*	*M*	*SD*	*t*	*df*	*p*
Authoritarian	No	41	22.87	5.39	1.83	79	.07
	Yes	40	20.80	4.76			
Benevolence	No	41	38.87	6.29	-1.06	79	.28
	Yes	40	40.22	4.97			
Social restrictiveness	No	41	23.39	5.64	2.51	79	.01
	Yes	40	20.47	4.74			
Community mental health ideology	No	41	34.21	7.07	-2.04	79	.04
	Yes	40	37.15	5.73			

The next *t*-test for independent samples was used to determine if authoritarian,

benevolence, social restriction and CMH ideology varied as a function of bachelor's degree

status. There were statistically significant differences in authoritarian, social restrictiveness, and

CMH ideology scores by bachelor's degree status (see Table 11). More specifically, those with

no bachelor's degree had significantly higher authoritarian scores ($M = 22.76$) than those with a

bachelor's degree (M = 19.80); $t(79) = 2.46$, p = .01. Those with no bachelor's degree had

significantly higher social restrictiveness scores ($M = 22.94$) than those with a bachelor's degree

($M = 19.72$); $t(79) = 2.57$, p = .01. Finally, Those with no bachelor's degree had significantly

lower CMH ideology scores ($M = 34.12$) than those with a bachelor's degree ($M = 39.12$); $t(79)$

$= -3.35$, $p = .00$.

Table 11

T- test for Bachelors Degree Status (Time 2)

Variable	Bachelors degree	*n*	*M*	*SD*	*t*	*df*	*p*
Authoritarian	No	56	22.76	5.30	2.46	79	.01
	Yes	25	19.80	4.27			
Benevolence	No	56	39.25	6.19	-.69	79	.49
	Yes	25	40.20	4.37			
Social restrictiveness	No	56	22.94	5.49	2.57	79	.01
	Yes	25	19.72	4.48			
Community mental health ideology	No	56	34.12	6.53	-3.35	79	.00
	Yes	25	39.12	5.32			

The next *t*-test for independent samples was used to determine if authoritarian, benevolence, social restriction and CMH ideology varied as a function of gender. There were statistically significant differences in authoritarian, benevolence, and CMH ideology scores by gender (see Table 12). More specifically, males had significantly higher authoritarian scores (*M* = 25.72) than females (*M* = 21.16); *t*(77) = -2.82, *p* = .00. Females had significantly higher benevolence scores (*M* = 40.33) than males (*M* = 35.27); *t*(77) = 2.84, *p* = .00. Finally, females had significantly higher CMH ideology scores (*M* = 36.47) than males (*M* = 30.54); *t*(77) = 2.86, *p* = .00.

Table 12

T- test for Gender (Time 2)

Variable	Gender	*n*	*M*	*SD*	*t*	*df*	*p*
Authoritarian	Female	68	21.16	4.09	-2.82	77	.00
	Male	11	25.72	8.81			
Benevolence	Female	68	40.33	4.68	2.84	77	.00
	Male	11	35.27	9.19			
Social restrictiveness	Female	68	21.50	5.07	-1.58	77	.11
	Male	11	24.27	7.12			
Community mental health ideology	Female	68	36.47	6.00	2.86	77	.00
	Male	11	30.54	8.34			

Correlational Analysis (Time 2)

      Correlations with authoritarianism. Authoritarianism was negatively and significantly correlated with illegal drugs ($r = -.404$, $p = .00$), Dirty ($r = -.352$, $p = .00$); and feeling comfortable speaking ($r = -.357$, $p = .00$). There was an inverse relationship between authoritarianism and these variables.

      Correlations with benevolence. Benevolence was positively and significantly correlated with illegal drugs ($r = .335$, $p = .00$), Dirty ($r = .464$, $p = .00$); homeless ($r = .259$, $p = .00$); and feeling comfortable speaking ($r = .239$, $p = .00$). There was a positive relationship between benevolence and these variables.

      Correlations with social restrictiveness. Social restrictiveness was negatively and significantly correlated with age ($r = -.223$, $p = .048$); illegal drugs ($r = -.270$, $p = .01$), Dirty ($r = -.388$, $p = .00$); homeless ($r = -.392$, $p = .00$); and feeling comfortable speaking ($r = -.344$, $p = .00$). There was an inverse relationship between social restrictiveness and these variables.

      Correlations with cmh ideology. CMH ideology was positively and significantly correlated with illegal drugs ($r = .316$, $p = .00$), Dirty ($r = .438$, $p = .00$); and homeless ($r = .236$, $p = .03$). There was a positive association between social restrictiveness and these variables.

Table 13
Correlational Analysis (Time 2)

		SES	Age	Importance of Religion	Authoritarian	Benevolence	Social restricts	CMH ideology
SES	*r*	--						
Age	*r*	-.175	--					
	p	.128						
	n	77						
Importance of Religion	*r*	.038	-.059	--				
	p	.740	.613					
	n	79	77					
Authoritarian	*r*	-.128	-.218	-.012	--			
	p	.265	.053	.916				
	n	78	79	78				
Benevolence	*r*	.108	.039	.097	-.652**	--		
	p	.349	.735	.400	.000			
	n	78	79	78	81			
Social restricts	*r*	-.114	-.223*	.117	.733**	-.638(**)	--	
	p	.321	.048	.306	.000	.000		
	n	78	79	78	81	81		
CMH ideology	*r*	.207	.173	-.091	-.697**	.627**	-.740**	--
	p	.069	.126	.429	.000	.000	.000	
	n	78	79	78	81	81	81	

* Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

Table 13
Correlational Analysis (Time 2) cont.

		Authoritarian	Benevolence	Social restrict	CMH ideology	Illegal drugs	Dirty	Homeless	Feel comfortable speaking
Authoritarian	*r*	--							
Benevolence	*r*	-.652**	--						
	p	.000							
	n	81							
Social restrict	*r*	.733**	-.638**	--					
	p	.000	.000						
	n	81	81						
CMH ideology	*r*	-.697**	.627**	-.740**	--				
	p	.000	.000	.000					
	n	81	81	81					
Illegal drugs	*r*	-.404**	.335**	-.270*	.316**	--			
	p	.000	.002	.015	.004				
	n	81	81	81	81				
Dirty	*r*	-.352**	.464**	-.388**	.438**	.238*	--		
	p	.001	.000	.000	.000	.031			
	n	81	81	81	81	82			
Homeless	*r*	-.214	.259*	-.392**	.236*	.321**	.345**	--	
	p	.055	.020	.000	.034	.003	.002		
	n	81	81	81	81	82	82		
Feel comfortable speaking	*r*	-.357**	.239*	-.344**	.208	.042	.238*	.268*	--
	p	.001	.032	.002	.062	.708	.031	.015	
	n	81	81	81	81	82	82	82	

* Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

Analysis of Total Authoritarianism, Benevolence, Social Restrictiveness and CMH Ideology

from Pre to Post-test

      In the final analysis, the researcher conducted a t-test for independent samples to determine if there were significant changes form pre to post-test for total authoritarianism, benevolence, social restrictiveness and CMH ideology. The differences in total authoritarianism and social restrictiveness from pre to post test came close to being statistically significant (see Table 14). More specifically, total authoritarian scores at pre-test (M = 23.27) were significantly higher than total authoritarian scores at post-test (M = 21.85); t(169) = 1.83, p = .069. Total social restrictiveness scores at pre-test (M = 23.60) were significantly higher than total social restrictiveness scores at post-test (M = 21.95); t(169) = 1.84, p = .067. There were no other significant differences from pre to post-test.

Table 14

T- test for Pre and Post Survey Administration

Variable	Time	n	M	SD	t	df	p
Authoritarian	Pre	90	23.27	4.99	1.83	169	.069
	Post	81	21.85	5.16			
Benevolence	Pre	89	38.49	5.79	-1.18	168	.236
	Post	81	39.54	5.68			
Social restrictiveness	Pre	90	23.60	6.21	1.84	169	.067
	Post	81	21.95	5.38			
Community mental health ideology	Pre	90	34.94	6.50	-.721	169	.472
	Post	81	35.66	6.57			

Summary of the Results

The demographic questions, church attendance (see Tables 2 and 8), socioeconomic status , and importance of religion (see Tables 7 and 13) showed no statistical significance in time one or time two. Self mental health utilization was significant, as indicated by the sig (2-tailed), or p values $< .05$, in time one and two for total authoritarianism, total social restrictiveness, and total community mental health (CMH) ideology (see Tables 3 and 9). The mean scores for people who had utilized mental health services was lower for total authoritarianism, and social restrictiveness, and higher for total CMH ideology for both administrations of the survey (time 1 and time 2), indicating students who used mental health services were less authoritarian, and socially restrictive, and more ideological when it comes to mental health patients in the community.

Having a family member who has utilized mental health services was a statistically significant factor for total authoritarianism ($p = .04$); those who did have a family member utilize mental health services had lower authoritarianism scores in time one. In time two however, the results were statistically significant for total social restrictiveness ($p = .014$), and CMH ideology ($p =.044$) and were approaching significance ($p = .07$) for authoritarianism (see Tables 4 and 10).. The results showed that those with family members who used mental health services were less authoritarian and socially restrictive and had a more positive CMH ideology than those without family members who used those services.

For the first survey administration, there were significant differences in total authoritarianism ($p = .002$) and social restrictiveness ($p = .008$) depending on bachelor's degree status. The results for CMH ideology and bachelor's degree status approached statistical significance ($p = .057$). Bachelor's degree status had significant values for the second survey

administration in total authoritarianism (p = .016), social restrictiveness (p = .012), and CMH

ideology (p = .001). The results demonstrated that those without a bachelor's degree were more

authoritarian, and socially restrictive, and according to time 2, had less CMH ideology (see

Tables 5 and 11).

Gender was shown to be significant in regards to total authoritarianism, benevolence, and

CMH ideology, but only for the second survey administration. Females were less authoritarian,

more benevolent, and had more CMH ideology than males. This was shown by the mean values

being higher for females in the benevolence and CMH ideology category, and lower in the

authoritarian category, than the mean values of males. This was also true for the first

administration of the survey, but the results were not statistically significant. (see Tables 6 and

12)

Age was shown to have a weak negative correlation with total authoritarianism in the first

of the survey. As age increased, total authoritarianism decreased. In the second survey

administration age was shown to have a weak negative correlation with total social

restrictiveness. As age increased, total social restrictiveness decreased. (see Tables 7 and 13)

There were four questions, created independently of the CAMI scale, to gauge the

students' feelings toward those with mental illness in general. The questions were on a likert

scale of 1 to 5 and asked the student's to rate how comfortable the student felt speaking to

someone with mental illness, if they agreed that all people with mental illness are homeless, dirty

or use illegal drugs. All of the four questions were significantly associated with the four major

subscales (authoritarianism, benevolence, social restrictiveness, and CMH ideology). The

stronger the disagreement with the questions that stated all mentally ill people are homeless,

dirty, or use illegal drugs, the less socially restrictive and authoritarian and more benevolent and

ideological the results became; as indicated by the negative correlations with total

authoritarianism and social restrictiveness and positive correlations with total benevolence and

CMH ideology. The stronger the agreement with the statement "I feel comfortable speaking to

people with mental illness", the less authoritarian, and socially restrictive and more benevolent

and ideological the results became; as indicated by the correlations. (see Tables 7 and 13)

Discussion

Limitations

The study was delayed a week into the Spring 2011 semester due to a delay in

notification of IRB approval. The students had been exposed to a class on stigma and patient

rights, therefore their answers may have been biased due to presented information. Due to

scheduling difficulties, the administration of the survey to one class of students needed to be

done outside of regular class hours, resulting in 8 students not completing the end of semester

survey, when compared to the beginning of the semester. Students also could be affected by

their prior knowledge of nursing ethics and teacher expectation which could make them

unwilling to honestly relate their stigma due to their desire to be benevolent (a good nurse).

Also, a larger sample size, collecting ages as numbers instead of categorically, and the collection

of an identifier to link time 1 to time 2 could produce more statistically significant results using a

paired sample T test. A suggested change for future studies would be to administer the survey

during the last class in the previous semester. This would lessen the possibility of bias based on

acquired knowledge or desire to gain instructor approval.

Conclusion

After completion of the Psychiatric/Mental Health Nursing course, it was expected that student's would experience a positive change in attitude towards people with mental illness. Total authoritarianism and social restrictiveness from pre and post test were shown to decrease, and total benevolence and CMH ideology were show to increase from pre to post test, though the results were not statistically significant. However total authoritarianism and social restrictiveness were very close to significance ($p = < .05$): authoritarianism ($p = .069$) and social restrictiveness ($p = .067$). Also, as the comfort level speaking to the mentally ill increased, the less authoritarian and socially restrictive, and more benevolent and ideological the students became. This suggests that the course was able to produce some positive change toward the students' overall attitudes towards people with mental illness.

Students with previous experience with people with mental illness or having utilized mental health services themselves, were shown to be less authoritarian and socially restrictive, and more benevolent and ideological, suggesting that the more contact a student has with the mentally ill, the less fear the student has, and the more positive the attitudes become. Students with a Bachelors degree were shown to be more benevolent and ideological and less authoritarian and socially restrictive, possibly indicating that additional education and knowledge affect attitudes toward people with mental illness.

It was unexpected that no significant change occurred in the other areas assessed. Recommendations include adding a unique identifier to allow for more specific analysis, continuing the survey over another semester, and making sure to administer initial survey prior to any class work.

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Appendix A

Demographic and other Additional Questions

How would you describe your family's primary socioeconomic class during your upbringing?
   Under income   Average   Wealthy
[1   2   3   4   5   ]

How important is religion/spirituality in your life?
   Not Important   Important
[1   2   3   4   5   ]

Do you attend Church or another religious organization?
Yes   /   No

Have you ever utilized Mental Health Services?
Yes   /   No

Has someone in your family utilized Mental Health Services?
Yes   /   No

Do you have another Bachelors Degree?
Yes   /   No

If "Yes", is your 1st degree in:
   a) Social Work
   b) Education
   c) Other Health Care Field (name:_____.)
   d) Other: ._____.

Marital Status:
   a) Married
   b) Single
   c) Divorced
   d) Separated
   e) Widowed

Age:
18-20
21-23
24-26
27-29
30-39
40-49
50+

**Recoded for easier data analysis. (i.e. 5 became SA and 1 became SD)

Gender: Male   /   Female

Please Circle **ONE NUMBER** for each question:

1=Strongly Agree
2=Agree
3=Neutral
4=Disagree
5=Strongly Disagree

Mentally ill people usually use illegal drugs.
        SA   Agree   N   Disagree   SD
[1   2   3   4   5   ]

Mentally ill people are dirty.
        SA   Agree   N   Disagree   SD
[1   2   3   4   5   ]

Mentally ill people are usually homeless.
        SA   Agree   N   Disagree   SD
[1   2   3   4   5   ]

I feel comfortable speaking to people with mental illness.**
        SA   Agree   N   Disagree   SD
[1   2   3   4   5   ]

**Recoded for easier data analysis. (i.e. 5 became SA and 1 became SD)

The following statements express various opinions about mental illness and the mentally ill. The mentally ill refers to people needing treatment for mental disorders but who are capable of independent living outside a hospital. Please circle the response which most accurately describes your reaction to each statement. It's your first reaction which is important. Don't be concerned if some statements seem similar to ones you have previously answered. Please be sure to answer all statements.

a.   As soon as a person shows signs of mental disturbance, he should be hospitalized.

    SA   A   N   D   SD

b.   More tax money should be spent on the care and treatment of the mentally ill.

    SA   A   N   D   SD

c.   The mentally ill should be isolated from the rest of the community.

    SA   A   N   D   SD

d.   The best therapy for many mental patients is to be part of a normal community.

    SA   A   N   D   SD

e.   Mental illness is an illness like any other.

    SA   A   N   D   SD

f.   The mentally ill are a burden on society.

    SA   A   N   D   SD

g.   The mentally ill are far less of a danger than most people suppose.

    SA   A   N   D   SD

h.   Locating mental health facilities in a residential area downgrades the neighbourhood.

    SA   A   N   D   SD

i.   There is something about the mentally ill that makes it easy to tell them from normal people.

    SA   A   N   D   SD

j.   The mentally ill have for too long been the subject of ridicule.

    SA   A   N   D   SD

k.   A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered.

    SA   A   N   D   SD

l.   As far as possible mental health services should be provided through community-based facilities.

    SA   A   N   D   SD

m.   Less emphasis should be placed on protecting the public from the mentally ill.

    SA   A   N   D   SD

n.   Increased spending on mental health services is a waste of tax dollars.

    SA   A   N   D   SD

o.   No one has the right to exclude the mentally ill from their neighbourhood.

    SA   A   N   D   SD

p.   Having mental patients living within residential neighbourhoods might be good therapy, but the risks to residents are too great.

    SA   A   N   D   SD

q.   Mental patients need the same kind of control and discipline as a young child.

    SA   A   N   D   SD

r.   We need to adopt a far more tolerant attitude toward the mentally ill in our society.

    SA   A   N   D   SD

s.   I would not want to live next door to someone who has been mentally ill.

    SA   A   N   D   SD

t.   Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community.

    SA   A   N   D   SD

u.   The mentally ill should not be treated as outcasts of society.

    SA   A   N   D   SD

v.   There are sufficient existing services for the mentally ill.

    SA   A   N   D   SD

w.   Mental patients should be encouraged to assume the responsibilities of normal life.

    SA   A   N   D   SD

x.   Local residents have good reason to resist the location of mental health services in their neighbourhood.

    SA   A   N   D   SD

y.   The best way to handle the mentally ill is to keep them behind locked doors.

    SA   A   N   D   SD

z.   Our mental hospitals seem more like prisons than like places where the mentally ill can be cared for.

    SA   A   N   D   SD

SA=Strongly Agree   A=Agree   =Neutral   D=Disagree   SD=Strongly Disagree

SA=Strongly Agree   A=Agree   N=Neutral   D=Disagree   SD=Strongly Disagree

aa. Anyone with a history of mental problems should be excluded from taking public office.

SA   A   N   D   SD

bb. Locating mental health services in residential neighbourhoods does not endanger local residents.

SA   A   N   D   SD

cc. Mental hospitals are an outdated means of treating the mentally ill.

SA   A   N   D   SD

dd. The mentally ill do not deserve our sympathy.

SA   A   N   D   SD

ee. The mentally ill should not be denied their individual rights.

SA   A   N   D   SD

ff. Mental health facilities should be kept out of residential neighbourhoods.

SA   A   N   D   SD

gg. One of the main causes of mental illness is a lack of self-discipline and will power.

SA   A   N   D   SD

hh. We have the responsibility to provide the best possible care for the mentally ill.

SA   A   N   D   SD

ii. The mentally ill should not be given any responsibility.

SA   A   N   D   SD

jj. Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services.

SA   A   N   D   SD

kk. Virtually anyone can become mentally ill.

SA   A   N   D   SD

ll. It is best to avoid anyone who has mental problems.

SA   A   N   D   SD

mm. Most women who were once patients in a mental hospital can be trusted as baby sitters.

SA   A   N   D   SD

nn. It is frightening to think of people with mental problems living in residential neighbourhoods.

SA   A   N   D   SD

SA=Strongly Agree	**A=Agree**	**N=Neutral**	**D=Disagree**	**SD=Strongly Disagree**

COMMUNITY ATTITUDES TOWARDS THE MENTALLY ILL

Community Attitudes Toward The Mentally Ill

Key to Items	Scoring				
	SA	A	N	D	SD
Authoritarianism					
Pro: a, i, q, y, gg	5	4	3	2	1
Anti: e, m, u, cc, kk	1	2	3	4	5
Benevolence					
Pro: b, j, r, z, hh	5	4	3	2	1
Anti: f, n, v, dd, ll	1	2	3	4	5
Social Restrictiveness					
Pro: c, k, s, aa, ii	5	4	3	2	1
Anti: g, o, w, ee, mm	1	2	3	4	5
Community Mental Health Ideology					
Pro: d, l. t, bb, jj	5	4	3	2	1
Anti: h, p, x, ff, nn	1	2	3	4	5