

Improving Pre-Service Teachers' Attitudes towards Individuals with Mental Illness through an Introduction to Special Education Course

John W. Maag^{1*}, Mickey Losinski², & Antonis Katsiyannis³

¹College of Education and Human Sciences, University of Nebraska-Lincoln, Lincoln, Nebraska

²College of Education, Kansas State University, Manhattan, Kansas

³College of Health, Education, and Human Development

*Correspondence: John W. Maag, 202 Barkley Memorial Center, University of Nebraska-Lincoln, Lincoln, NE, United States. Tel: 1-402-472-5477; E-mail: jmaag1@unl.edu

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Abstract

Mental illness in children and adults continues to be a controversial and misunderstood topic. Previous research has examined different populations' attitudes toward mental illness, and efforts to change community attitudes toward individuals with mental illness have included contact with the mentally ill and education programs. However, little research has examined teachers' attitudes toward the mentally ill, nor programs for positively impacting those beliefs. The purpose of the present study was to first assess preservice teachers' beliefs toward individuals with mental illness and to determine if the completion of an undergraduate Introduction to Special Education course could positively impact their attitudes toward individuals with mental illness. Participants included students attending three different institutions of higher education who were divided into three groups: general education majors, special education majors, and education minors. Results indicated that significant differences were obtained for all institutions and groups among their pre-test and post-test scores on the *Community Attitudes Toward the Mentally Ill* scale (CAMI). Implications for practice and future research are presented.

Keywords: mental illness, CAMI, special education, preservice teachers

1. Introduction

1.1 Scope of the Problem

Mental illness in children and adults have been a challenging, controversial, and misunderstood topic. With horrific mass shootings such as those in Aurora, Colorado, Newtown, Connecticut, and Tucson, Arizona the issues surrounding individuals with mental illness and public safety have intensified with many in the country calling for more authoritarian and restrictive measures to deal with these individuals. For example, the National Rifle Association (NRA) advocates for a national mental illness registry (Kliff, 2012). A registry of this kind would indeed be very large because there are approximately 11 million adults—or 4.8 percent of the population—who experience serious mental illness (Kessler, Chiu, Demler, Merikangas, & Walters, 2005; Substance Abuse and Mental Health Services Administration [SAMHSA], 2012). The numbers for children and adolescents are even higher: 13.1% of children and adolescents ages 8 to 15 years of age met

criteria for a mental illness, 11.3% experienced a severe impairment, and 22.6% of children involved in the welfare system due to neglect or maltreatment experienced a mental illness (SAMHSA, 2012).

The sad reality of these figures is that both private and public perceptions of mental illness over the past 15 years remain negative (Hannigan, 1999; Murphy, 1998). Furthermore, the general public's beliefs about the causes and treatments of mental illness are quite different from those held by mental health professionals, and attitudes that deter seeking help are widespread (Jorm, 2000). The stigma of mental illness continues to be a pervasive problem with deleterious effects including individuals denying their symptoms, delaying in getting treatment as well as problems gaining employment, finding housing, and maintaining relationships (Center for Disease Control [CDC], 2010; Corrigan, Watson, Warpinski, & Garcia, 2004; Doll, 2008; Hinshaw, 2006). Kelly (2006) concluded that mental illness remains misunderstood and individuals suffering from mental illness are forced to live lives typified by isolation, under-employment, stigma and denial of rights.

1.2 Efforts to Change Attitudes towards Mental Illness

To combat these negative perceptions, efforts have been made to change the public stigma associated with mental illness including contact and education. Programs focusing on contact with individuals with mental illness such as In Our Own Voice (IOOV)—which is a 30 –to 90-minute anti-stigma program that comprises a set of face-to-face challenges mimicking those individuals with mental illness face—has been effective in changing individuals' attitudes toward mental illness (Corrigan *et al.*, 2010). Education programs for changing societal attitudes about mental illness have been mixed. For example, Holmes, Corrigan, Williams, Canar, and Kubiak (1999) examined the effect of adults' attitudes toward mental illness before and after taking a community college course in “Severe Mental Illness” or “General Psychology.” They found that attitudes about benevolence and social restriction towards mental illness improved after taking the semester-long (i.e., 16-weeks) courses, but that they had no effect on authoritarian attitudes. Conversely, Keane (1991) found that authoritarian attitudes of nursing students were positively modified after an 8-week psychiatry course. Finally, Dalky (2012) found that both educational and contact-based strategies have been effective for combating the stigma attached to mental illness.

1.3 Community Attitudes toward the Mentally Ill

The most common way researchers have studied individuals' perceptions of mental illness has been through their responses on the *Community Attitudes Toward the Mentally Ill* (CAMI) scale developed by Taylor and Dear (1981). It has been used with nurses from various countries including the United States, Europe, Africa, and India (Addison & Thorpe, 2004; Chambers *et al.*, 2010; Guise, Chambers, Valimaki, & Makkonen, 2010; Morris *et al.*, 2012; Ukpong & Abasiubong, 2010; Vibha, Saddichha, & Kumar, 2008) and college students including those majoring in psychology, medical, and law (Addison & Thorpe, 2004; Barney, Corser, & White, 2010; Mahatane & Johnston, 1989; Wahl & Lefkowitz, 1989).

A population whose attitudes toward individuals with mental illness has not received much research is teachers. Graham, Phelps, Maddison, and Fitzgerald (2011) found that teachers' perceptions played a role in the importance they place schools promoting students' mental health. They concluded that close attention should be paid to the assumptions, values, beliefs, and attitudes of teachers in relation to children's mental health because these variables may predict their confidence and skill in supporting students' social and emotional well-being in schools. Given these findings and conclusions, pre-service teachers would seem like an ideal group to sample their beliefs and try and change negative attitudes before they have their own classroom which is likely to contain at least a few students with mental health issues (Forness, Kim, & Walker, 2012). Warger and Trippe (1982) found that the beliefs of undergraduate student teachers predicted their overall attitude toward mainstreamed students with emotional impairments.

1.4. Purpose and Hypothesis

Clearly, there is a paucity of research on teachers' and preservice teachers' attitudes toward mental illness. Therefore, the purpose of the present study was to add to the extant literature by specifically examining preservice teachers' beliefs about mental illness as measured by the CAMI. In addition, because teachers' perceptions are related to the importance they place on schools providing services for students with mental illness, the present study also sought to determine whether preservice teachers' completion of an Introduction to Special Education course could positively impact their attitudes toward individuals with mental illness. It was hypothesized that completion of the Introduction to Special Education course would improve participants' attitudes toward individuals with mental illness.

2. Method

Several areas will be address in this section. First, participants and the setting in which the study took place will be described. Second, the materials for implementing the study and measurement instruments are presented. Fourth, the experimental variable is detailed. Fifth, a detailed description of the procedures is presented. Finally, research design and statistical analysis are described.

2.1 Participants and Setting

A convenience sample of participants were selected by asking students to take part in the study who were enrolled in an introduction to special education course as part of their 4-year teacher education programs at three universities located in the southeastern United States: One large public research institution (R1, N = 29) and the other two being medium sized private teaching universities (P1, N = 40; P2, N = 14). Of these, a total of 79 participants—78% female and 22% male—agreed to take part in the study. The majority of the participants were Caucasian (94%). Participants were broken down into three groups: general education majors (N = 52, mean age 25.50), special education majors (N = 12, mean age 18.33), and education minors (N = 20, mean age 22.53). The introduction to special education course at each of the universities was a degree requirement for all teacher education majors and, therefore, included larger numbers of general education majors (and minors) than special education majors.

2.2 Materials and Measures

A demographic questionnaire was developed that asked participants for details of gender, ethnicity, age, year in school, and major (general education, special education, and education minor). This questionnaire was administered in their introduction to special education course.

In order to assess participants' perceptions of mental illness, the Community Attitudes Toward the Mentally Ill (CAMI) scale was used. First developed by Taylor and Dear (1981), the CAMI consists of 40 statements that are rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) on four attitude factors: (1) Authoritarianism (viewing the mentally ill as an inferior class needing coercive treatment), (2) Benevolence (viewing the mentally ill in a sympathetic way based on humanistic and religions principles), (3) Social Restrictiveness (viewing the mentally ill as a threat to society), and (4) Community Mental Health Ideology (valuing the therapeutic benefit of community and acceptance of de-institutionalized care).

In their initial investigation of the CAMI, Taylor and Dear (1981) demonstrated that the measure had adequate reliability and validity. The original scale exhibited adequate internal reliability with the following Cronbach's coefficient alphas for each factor: authoritarianism ($\alpha = 0.68$), benevolence ($\alpha = 0.76$), ideology ($\alpha = 0.88$), and social restrictiveness ($\alpha = 0.80$). With regard to validity, Taylor and Dear generated items for the CAMI through a procedure including a review of

the literature, using existing validated surveys (Opinions about Mental Illness, Community Mental Health Ideology), and through factor analysis that identified the four factors described above. However, other researchers have found a three factor solution (Wolff, Pathare, Craig, & Leff, 1996; Barney *et al.*, 2010).

2.3 Experimental Variable

The experimental variable investigated was the impact of participants taking an introduction to special education course on positively modifying their attitudes toward individuals with mental illness from those obtained on the CAMI at the beginning of the semester (pre-test) and those acquired at the end of the semester (post-test). Although the introduction to special education courses was obviously being taught at different institutions, they had many similarities. First, all three instructors received their training at the same university. Second, all three instructors used the same course objectives, outline, and schedule. Specific content covered by all three instructors included (a) special education legislation and IDEA regulations, (b) eligibility criteria and Individual Education Plans (IEPs), (c) definitions, causes, characteristics, and educational implications of various disability conditions, (d) national trends in special education, teacher attitudes, and cultural biases, and (e) curricular modifications and instructional accommodations. Third, all three instructors used the same textbook (i.e., Hallahan, Kauffman, & Pullen, 2011). Fourth, the course at all three institutions was three credits over a 15-week semester.

2.4 Procedure

The CAMI scale and demographic questionnaire were administered during the first three weeks (pre-test) of the semester and re-administered during the last two weeks (post-test) of the fall semester 2012 in order to assess any possible changes in participants attitudes towards individuals with mental illness as a result of taking the introduction to special education course. During each administration, students were given a general description of the nature of the survey and instructed that participation was strictly voluntary. However, the purpose of the study (i.e., determine if the course positively impacted their attitudes about mental illness) was not revealed to participants until after the second, post-test administration of the CAMI was completed. Those who agreed to participate signed a participant consent form at the first administration and were assigned a study number that was used to link their pre and post-test scores. Therefore, participant names did not appear on any forms so that course instructors were unaware of who was and was not taking part in the study. This practice was to ensure participants that their grade in the course would not be affected by their participation (or lack thereof) nor by the specific responses they provided. After administration of the post-test, all identifying information was destroyed.

2.5 Research Design and Analysis

A pre-test post-test design was used to evaluate participants' ratings of their beliefs toward individuals with mental illness using the CAMI. Mean ratings of the CAMI and its four subscales (authoritarianism, benevolence, ideology, and social restrictiveness) served as the unit of analysis in a one-way repeated-measures ANOVA using IBM SPSS v.20. The CAMI includes an equal number of positively and negatively worded items. Therefore, after data were entered into the database items were transposed so that they reflected answers to positive statements (i.e., 5 = strongly disagree, 1 = strongly agree). Additionally, data from each subscale were transposed to allow the total score for each subscale to reflect a more tolerant attitude towards individuals with mental illness on the scale. For example, a larger number on authoritarianism subscale indicates the participant agreed with a more tolerant approach to dealing with individuals with mental illness.

A one-way ANOVA was then conducted to determine if there were significant difference between sites and majors at pre and post-test scores on the total CAMI. Next, one-way repeated-measures ANOVAs were performed for the total CAMI and subscales with site as the between-

subjects factor and pre- and post-tests as the within-subjects factor to determine if there were significant differences in treatment effect between sites on preservice teachers' attitudes toward individuals with mental illness. An alpha level of 0.05 was used to determine statistical significance for all analyses. In the event significant findings were found, effect sizes were calculated for each scale using the standard mean difference (Cohen's *d* statistic).

3. Results

Two aspects of results are presented. First, the pre-test results of participants on the CANI will be described. Second, the effects of completing the Introduction to Special Education course will be presented.

3.1 Pre-Test Results

Results from the one-way ANOVA of the total CAMI pre-test found no statistically significant differences among the scores of the three majors (general education major, special education major, education minor), but did find a significant difference between sites ($F = 3.734, p = .028$). Tukey HSD post-hoc comparisons of the three sites showed significant differences between R1 and P2 (mean difference = 10.38, $p = .048$). Results from the pre-test found that preservice teachers rated highest on the benevolence subscale of the CAMI (mean = 39.00) suggesting that they agreed with the idea that it was society's responsibility to care for the mentally ill. Participants were nearly neutral on the ideology subscale indicating that they were neither for nor against the idea that persons with mental illness should be engaged in the community. Additionally, participants generally disagreed with the notions that the mentally ill require outside control and institutionalization and pose a threat to society as found on scores on the authoritarianism (mean = 35.44) and social restrictiveness scales (mean = 36.39). Number of participants, means and standard deviations for each site and subscale of the CAMI are presented in Tables 1 and 2.

Table 1

Descriptive Statistics by Site for Subscale Scores of the CAMI

Site		CAMI		Benevolence		Ideology		Social Restrictiveness		Authoritarianism	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
R1	N	29	26	29	26	29	26	29	26	29	26
	Mean	149.38	162.64	40.17	42.42	34.31	38.50	37.62	40.81	37.28	40.81
	SD	17.41	18.64	4.86	4.35	6.64	6.37	5.05	5.57	4.04	4.40
P1	N	14	14	14	15	14	14	15	15	14	15
	Mean	150.14	152.07	40.43	40.13	36.50	36.43	37.47	39.67	36.00	37.00
	SD	17.36	14.83	4.72	4.21	6.03	6.02	4.91	4.64	3.51	4.17
P2	N	37	39	38	39	40	40	40	40	39	40
	Mean	139.00	142.95	37.58	38.36	32.62	34.15	35.10	35.53	33.87	34.75
	SD	17.33	17.70	4.59	4.82	6.40	6.63	5.39	5.01	4.61	4.23
Total	N	80	79	81	80	83	80	84	81	82	81
	Mean	144.71	151.01	39.00	40.01	33.87	35.96	36.39	37.99	35.44	37.11
	SD	17.96	19.43	4.84	4.86	6.50	6.66	5.28	5.65	4.48	5.00

Table 2

Descriptive Statistics by Major for CAMI and Subscales.

Major		CAMI		Benevolence		Ideology		Social Restrictiveness		Authoritarianism	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
GenED	Mean	147.92	148.68	38.70	39.26	32.71	35.84	35.58	37.43	34.96	35.92
	N	49	50	50	50	52	51	52	51	51	51
	SD	17.59	19.70	5.02	4.96	6.16	6.61	5.30	5.84	4.43	4.95
SPED	Mean	149.00	150.55	39.45	40.83	36.27	35.10	37.67	38.42	35.91	37.67
	N	11	11	11	12	11	11	12	12	11	12
	SD	13.48	12.64	4.13	3.43	6.05	4.91	4.10	4.10	3.39	4.01
Other	Mean	149.20	157.78	39.50	41.56	35.55	36.83	37.75	39.28	36.40	40.11
	N	20	18	20	18	20	18	20	18	20	18
	SD	20.28	21.35	4.90	5.14	7.17	7.87	5.66	5.62	5.11	4.63
Total	Mean	144.71	151.01	39.00	40.01	33.87	35.96	36.39	37.99	35.44	37.11
	N	80	79	81	80	83	80	84	81	82	81
	SD	17.96	19.43	4.84	4.86	6.50	6.66	5.28	5.65	4.48	5.00

3.2 Effects of Introduction to Special Education Course

In order to determine the effects of the Introduction to Special Education course on preservice teachers' attitudes toward individuals with mental illness, scores from the post-test were compared to those of the pre-test. A one-way repeated measures ANOVA was calculated for the total CAMI and each subscale score to determine if there were significant differences in change from pre to post-test between sites, majors, and as a whole. Results of the one-way repeated measures ANOVA on the total CAMI from pre -to post-test scores indicated that there were no significant differences between the level of change (mean = 6.93) experienced by each of the groups ($F [2,76] = 1.564, p = .216$). Mean change for each of the subscales were authoritarianism (mean = 1.58), benevolence (mean = 1.29), ideology (mean = 2.25), and social restrictiveness (mean = 1.51). Table 3 presents the results from one-way repeated-measures ANOVAs of the CAMI and subscales along with standard mean differences.

Significant effects were obtained for the CAMI and each subscale, except the benevolence subscale, indicating that pre-service teachers' attitudes toward the mentally ill were positively impacted upon completion of the Introduction to Special Education course. The most significant effects were found on the authoritarianism ($p = .017$) and ideology subscales ($p = .023$) with effect sizes of .35 and .32 respectively indicating that the introductory course in special education had a medium to moderate effect on the attitudes of pre-service teachers toward the ideas of needing to control persons with mental illness and role of the community in regard to persons with mental illness whereas the other subscales would be considered a small but significant effect (Cohen, 1988).

Finally, upon conducting Tukey HSD post-hoc tests of the post-test scores, there were no statistically significant differences between the three majors (general education major, special education major, and education minor) on the CAMI. However, consistent with pre-test, there was a statistically significant difference between the post-test scores of R1 and P2 with the latter displaying less tolerance for individuals with mental illness ($mean dif = 15.3974, p = 0.000$).

Table 3

Tests of Within-Subjects Effects for Subscales of the CAMI with Effect Size Calculation.

CAMI Subscale	<i>df</i>	Mean Square	F	Sig.	<i>d</i>
CAMI-Total Score	1	1468.351	7.149	.009	0.34
Authoritarianism	1	83.784	5.979	0.017	0.35
Benevolence	1	34.534	2.856	0.095	-
Ideology	1	151.639	5.368	0.023	0.32
Social Restrictiveness	1	111.804	6.420	0.013	0.29

Note: Standard Mean Difference (*d*) not reported for *Benevolence* subscale because a significant effect was not achieved.

4. Discussion

The purpose of the study was to assess preservice teachers' attitudes toward individuals with mental illness and determine if the completion of an Introduction to Special Education course could positively impact those attitudes. Students attending three different institutions of higher education participated in the present study. Within each Introduction to Special Education course, participants were assigned to one of three groups: general education majors, special education majors, and education minors. Significant differences were obtained for all groups at the three institutions among their pre-test and post-test CAMI scores. These results were consistent across their total CAMI scores and for all subscales with the largest differences for the authoritarianism and ideology subscales. Further, the smallest improvement on all subscales was found between the pre-test and post-test scores for the small Christian university. In addition, there was a significant difference among participant' attitudes who attended a large public research institution (R1) and a small Christian university (P2) with the latter being less tolerant of individuals with mental illness. No significant differences were obtained among the three academic majors on pre-test CAMI or post-test CAMI scores.

4.1 Previous Research and the Current Results

These results were similar to those obtained by Keane (1991) who found that an 8-week course in general psychiatry positively impacted nursing and medical students, and Holmes *et al.* (1999) who found that a semester-long course in severe mental illness or general psychology improved college participants' attitudes toward individuals with mental illness. However, improvements for participants in the Keane (1991) study were only observed for scores on a benevolence subscale of the Opinions about Mental Illness questionnaire whereas results from Watson *et al.* (2004) were

significant on benevolence and social restrictiveness subscales of the Attribution Questionnaire. In the present study significant and positive changes were noted on each subscale, but with the largest changes in the authoritarianism and ideology subscales of the CAMI. Comparisons between Keane and Watson *et al.* studies and the present study must be viewed cautiously because of the different measures of community attitudes, although the subscales of each instrument were very similar to those on the CAMI.

It is interesting to speculate why results from the present study were more complete across subscales compared to the Keane (1991) and Watson *et al.* (2004) studies. It could be argued that because some participants in the present study were special education majors that they would have a greater interest and contact with persons with disabilities. However, only 15% of participants were special education majors and there were no differences among this group and both general education majors and education minors. A more parsimonious explanation may be found in the type of university courses that were used in the present study compared to Keane and Watson *et al.* In the Keane and Watson *et al.* studies, a general psychiatry, severe mental illness, and general psychology courses were the independent variable. These courses provide factual information on their topics. In the present study, an introduction to special education course was the independent variable. This course not only covers the etiology, characteristics, and treatment of individuals with different types of disabilities (e.g., emotional/behavioral disorders, sensory impairments, learning and intellectual disabilities), but focuses heavily on the concepts of diversity, inclusion, and individuals' strengths rather than their weaknesses—all of which involve tolerance, understanding, empathy, and acceptance.

4.2 Relation between Religion and Mental Health

A particularly interesting finding was that participants attending the small Christian university had the lowest and least significant change from pre -to post-test scores compared to a large state university. The relation between religion and mental health has been debated for centuries. According to Koenig and Larson (2001), historical record indicates that religious beliefs had both negative and positive associations with attitudes towards individuals with mental illness. Perhaps the association is not particularly religious, but rather philosophical. For example, several researchers have found that individuals with conservative beliefs have less positive attitudes toward individuals with mental illness than individuals holding more moderate and liberal beliefs (Tygart, 1992; Watson, Corrigan, & Angell, 2005). Although these observations are speculative, what is clear is that much remains to be explained about the formation of attitudes toward the mentally ill.

Results of the present study should be interpreted cautiously. A convenience, rather than random, sample of preservice teachers was used and no control group was employed. Nevertheless, the present study does provide preliminary information on the effectiveness of an introduction to special education course to positively alter preservice teachers' attitudes toward individuals with mental illness. One unique aspect of the present study was that all three instructors at each institution encouraged interdependence through discussions and activities related to diversity. Aronson and Patnoe (1997) pointed out how interdependence of individuals is paramount in reducing prejudice toward individuals with mental illness. Therefore, information, without activities aimed at interdependence between students, may be insufficient to alter those individuals' beliefs.

4.3 Areas for Future Research

There are several areas upon which future research should focus. First, the specific characteristics of different higher education courses and their ability to produce positive changes in participants' attitudes toward individual with mental illness should be investigated. For example, a course in cultural diversity may produce larger changes in attitudes toward mental illness than one with specific content in this area. Holmes *et al.* (1999) indicated that it is currently unclear what

variables of a course lead to specific changes in attitudes toward individuals with mental illness and whether certain variables can enhance a course. Second, researchers should examine whether changes in a group's attitudes toward individuals with mental illness also results in a change in their behavior toward them. Desforges *et al.* (1991) described how years of research on the attitude-behavior relationship have indicated that sometimes behaviors reflect attitude change and sometimes they do not reflect attitudes. Finally, future research needs to determine whether changes in attitudes toward mental illness are maintained over time. This variable would seem especially relevant for preservice teachers who will be in the teaching profession multiple years. The challenges of identifying and changing preservice teachers' attitudes toward individuals with mental illness are many and this line of inquiry is still in its infancy. Nevertheless, ongoing research is required given the increasing number of children with mental illnesses and the importance educators and schools play in providing mental health services.

4.4 Conclusion

The purpose of the study was to assess preservice teachers' attitudes toward individuals with mental illness and determine if the completion of an Introduction to Special Education course could positively impact those attitudes. The most relevant finding that adds to the extant literature is that differences were obtained for all groups at the three institutions among their pre-test and post-test CAMI scores. These results were consistent across their total CAMI scores and for all subscales with the largest differences for the authoritarianism and ideology subscales. This was the first study to assess changes in participants' attitudes toward individuals with disabilities after taking an Introduction to Special Education course. In addition, the present results were more complete across CAMI subscales than previous research that examined different types of university courses to change community attitudes toward mental illness. The present results represent an important addition to the literature because the Introduction to Special Education class is one all pre-service teachers must take, regardless of the education major and institution. There is a growing realization that many students suffer from mental illnesses. Having teachers sensitive to these conditions and respond positively creates a healthier environment for all students in schools.

References

- [1] Addison, S. J., & Thorpe, S. J. (2004). Factors involved in the formation of attitudes toward those who are mentally ill. *Social Psychiatry and Psychiatric Epidemiology*, 39(3), 228-234.
- [2] Aronson, E., & Patnoe, S. (1997). *The jigsaw classroom: Building cooperation in the classroom* (2nd ed.). New York: Addison Wesley Longman.
- [3] Barney, S. T., Corser, G. C., & White, L. H. (2010). Service-learning with the mentally ill: Softening the stigma. *Michigan Journal of Community Service Learning*, 16(2), 66-77.
- [4] Center for Disease Control. (2010). Attitudes toward mental illness- 35 states, District of Columbia, and Puerto Rico, 2007. *Weekly*, 59(20), 619-625. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5920a3.htm>
- [5] Chambers, M., Guise, V., Välimäki, M., Botelho, M. A. R., Scott, A., Staniulienė, V., & Zanotti, R. (2010). Nurses' attitudes to mental illness: A comparison of a sample of nurses from five European countries. *International Journal of Nursing Studies*, 47(3), 350-362.
- [6] Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.
- [7] Corrigan, P. W., Morris, S., Larson, J. E., Rafacz, J., Wassel, A., Michaels, P., . . . Rüsch, N. (2010). Self-stigma and coming out about one's mental illness. *Journal of Community Psychology*, 38(3), 259-275.

- [8] Corrigan, P. W., Watson, A. C., Warpinski, A. C., & Garcia, G. (2004). Implications of educating the public on mental illness, violence, and stigma. *Psychiatric Services*, 55(5), 577-580.
- [9] Dalky, H. F. (2012). Mental illness stigma reduction interventions: Review of intervention trials. *Western Journal of Nursing Research*, 34(4), 520-547.
- [10] Desforges, D. M., Lord, C. G., Ramsey, S. L., Mason, J. A., Van Leeuwen, M. D., West, S. C., & Lepper, M. R. (1991). Effects of structured cooperative contact on changing negative attitudes toward stigmatized social groups. *Journal of Personality and Social Psychology*, 60(4), 531-544.
- [11] Doll, B. (2008). The dual-factor model of mental health in youth. *School Psychology Review*, 37(1), 69-73.
- [12] Forness, S. R., Kim, J., & Walker, H. M. (2012). Prevalence of students with EBD: Impact on general education. *Beyond Behavior*, 21(2), 3-10.
- [13] Graham, A., Phelps, R., Maddison, C., & Fitzgerald, R. (2011). Supporting children's mental health in schools: Teacher views. *Teachers and Teaching: Theory and Practice*, 17(4), 479-496.
- [14] Guise, V., Chambers, M., Valimaki, M., & Makkonen, P. (2010). A mixed-mode approach to data collection: Combining web and paper questionnaires to examine nurses' attitudes to mental illness. *Journal of Advanced Nursing*, 66(7), 1623-1632.
- [15] Hallahan, D. P., Kauffman, J. M., & Pullen, P. C. (2011). *Exceptional learners: An introduction to special education* (12th ed.). Upper Saddle River, NJ: Pearson.
- [16] Hannigan, B. (1999). Mental health care in the community: An analysis of contemporary public attitudes towards, and public representations of, mental illness. *Journal of Mental Health*, 8(5), 431-440.
- [17] Hinshaw, S. P. (2006). *The mark of shame: Stigma of mental illness and an agenda for change*. UK: Oxford University Press.
- [18] Holmes, E. P., Corrigan, P. W., Williams, P., Canar, J., & Kubiak, M. A. (1999). Changing attitudes about schizophrenia. *Schizophrenia Bulletin*, 25(3), 447-456.
- [19] Jorm, A. F. (2000). Mental health literacy: Public knowledge and beliefs about mental disorders. *British Journal of Psychiatry*, 177, 396-401.
- [20] Keane, M. (1991). Beliefs about mental illness in a culturally diverse nursing students population: Implications for education and practice. *Journal of the New York State Nursing Association*, 22(4), 15-18.
- [21] Kelly, B. D. (2006). The power gap: Freedom, power and mental illness. *Social Science & Medicine*, 63(8), 2118-2128.
- [22] Kessler, R. C., Chiu, W. T., Demler, O., Merikangas, K. R., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62(6), 617-627.
- [23] Kliff, S. (2012, December 21). *The NRA wants an 'active' mental illness database. Thirty-eight states have that now*. The Washington Post.
- [24] Koenig, H. G., & Larson, D. B. (2001). Religion and mental health: Evidence for an association. *International Review of Psychiatry*, 13(2), 67-78.

- [25] Mahatane, J., & Johnston, M. (1989). Unrealistic optimism and attitudes towards mental health. *British Journal of Clinical Psychology*, 28(2), 181-182.
- [26] Morris, R., Scott, P. A., Cocoman, A., Chambers, M., Guise, V., Välimäki, M., & Clinton, G. (2012). Is the Community Attitudes towards the Mentally Ill scale valid for use in the investigation of European nurses' attitudes towards the mentally ill? A confirmatory factor analytic approach. *Journal of Advanced Nursing*, 68(2), 460-470.
- [27] Murphy, M. A. (1998). Rejection, stigma and hope. *Psychiatric Rehabilitation Journal*, 22(2), 185-189.
- [28] Substance Abuse and Mental Health Services Administration. (2012). *2010-2011 National survey on drug use and health model-based estimates*. Retrieved from <http://www.samhsa.gov/data/NSDUH/2k11State/NSDUHsaeTables2011.pdf>
- [29] Taylor, S. M., & Dear, M. J. (1981). Scaling community attitudes toward the mentally ill. *Schizophrenia Bulletin*, 7(2), 225-240.
- [30] Tygart, C. E. (1992). Public acceptance/rejection of insanity-mental illness legal defenses for defendants in criminal homicide cases. *Journal of Psychiatry and Law*, 20, 375-389.
- [31] Ukpong, D. I., & Abasiubong, F. (2010). Stigmatizing attitudes towards the mentally ill: A survey in a Nigerian university teaching hospital. *South African Journal of Psychiatry*, 16(2), 56-60.
- [32] Vibha, P., Saddichha, S., & Kumar, R. (2008). Attitudes of ward attendants towards mental illness: Comparisons and predictors. *International Journal of Social Psychiatry*, 54(5), 469-478.
- [33] Wahl, O. F., & Lefkowitz, J. Y. (1989). Impact of a television film on attitudes toward mental illness. *American Journal of Community Psychology*, 17(4), 521-528.
- [34] Warger, C. L., & Trippe, M. (1982). Preservice teacher attitudes toward mainstreamed students with emotional impairments. *Exceptional Children*, 49(3), 246-252.
- [35] Watson, A. C., Corrigan, P. W., & Angell, B. (2005). What motivates public support for legally mandated mental health treatment? *Social Work Research*, 29(2), 87-94.
- [36] Watson, A. C., Otey, E., Westbrook, A. L., Gardner, A. L., Lamb, T. A., Corrigan, P. W., & Fenton, W. S. (2004). Changing middle schoolers' attitudes about mental illness through education. *Schizophrenia Bulletin*, 30(3), 563-572.
- [37] Wolff, G., Pathare, S., Craig, T., & Leff, J. (1996). Community knowledge of mental illness and reaction to mentally ill people. *British Journal of Psychiatry*, 168(2), 191-198.

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