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The Relation between Psychological Flexibility and Mental Health Stigma in Acceptance and Commitment Therapy: A Preliminary Process Investigation

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**A copy of the complete ACT intervention manual is available from the first author.

Abstract

The present study examined the relation between changes in psychological flexibility and changes in mental health stigma in the context of a 2.5-hour long Acceptance and Commitment Therapy group workshop for reducing mental health stigma. Of 27 college undergraduates who attended the workshop, 22 completed one-month follow-up assessments, and their data were used for analyses. Results revealed that mental health stigma reduced significantly at post-treatment, and these reductions were maintained at one-month follow-up. The degree of improvement in psychological flexibility from pre to follow-up was found to be significantly correlated with the degree of reduction in mental health stigma from pre to follow-up. Limitations of the current study and directions for future research are discussed.

DESCRIPTORS: Acceptance and Commitment Therapy, Psychological Flexibility, Mental Health Stigma, Stigma

The Relation between Psychological Flexibility and Mental Health Stigma in Acceptance and Commitment Therapy: A Preliminary Process Investigation

Stigmatization can be conceptualized as the process of objectification and dehumanization of another human being because of ordinary human verbal practices of categorization, comparison, and evaluation (Hayes, Niccolls, Masuda, & Rye, 2002). As such, mental health stigma can be defined as the process of objectifying and dehumanizing a person who is labeled as "mentally ill." In general, the term "mental illness" is associated with negative images (e.g., Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000; Link & Phelan, 2006). Once a person is labeled as having a "mental illness", the person is likely to be avoided by those who hold such stigmatizing beliefs (Kurzban & Leavy, 2001; Link & Phelan, 2001; Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999).

From a socio-cultural perspective, mental health stigma is widespread (e.g., Crisp et al., 2000), and it is linked to a wide range of negative outcomes among the stigmatized, such as unemployment (e.g., Link, 1987; Penn & Martin, 1998), housing problems (Page, 1995; Penn & Martin), social adjustment (e.g., Perlick et al., 2001), underutilization of psychological services (Kushner & Sher, 1991), treatment delay (Scambler, 1998) and premature termination from treatment (Sirey et al., 2001). Given these negative consequences, the effect of various stigma-reduction programs has been examined (Corrigan & Penn, 1999). In literature on mental health stigma, stigma-reduction interventions are generally categorized into three groups: protest, education, and contact-based education (Corrigan & Penn). Among those, education and contact-based education have shown promising evidence (e.g., Brockington, Hall, Levings, & Murphy, 1993;

Corrigan et al., 2001; Corrigan et al., 2002; Link, Cullen, Frank, & Wozniak, 1987; Morrison, 1980; Penn et al., 1994).

These education-based interventions are subject to limitations, however. Empirical evidence showing the long-term effects of education-based intervention with or without contact is lacking (Corrigan, 2004). Their mechanisms of change are not clearly understood (Penn & Corrigan, 2002). In this research climate, a workshop format of Acceptance and Commitment Therapy (ACT; Hayes Strosahl, & Wilson, 1999), an acceptance-based behavioral intervention, has been examined as another avenue (; Hayes et al., 2004; Lillis & Hayes, 2007; Lillis, Hayes, Bunting, & Masuda, 2009; Luoma, Kohlenberg, Hayes, Bunting, & Rye, 2008; Masuda et al., 2007). ACT is developed based on a contemporary behavior analytic theory of human behavior (Hayes, Barnes-Holmes, & Roche, 2001).

ACT is designed to undermine the negative impact of stigmatizing attitudes by increasing the process of psychological flexibility (Biglan, 2009; Hayes, Luoma, Bond, Masuda, & Lillis, 2006). According to Hayes et al., psychological flexibility is "the ability to contact the present moment fully as a conscious human being, and to change or persist in behavior when doing so serves valued ends" (p. 7). It is theorized that a person with greater psychological flexibility is likely to engage in activities that are congruent with his or her own personal values (e.g., genuineness and compassion toward self and others), while at the same time fully experiencing whatever he or she is experiencing as it is without being caught up by it or trying to control, down-regulate, and avoid it. In regard to mental health stigma, when a person low in psychological flexibility has the thought "that person is depressed," he or she is likely to be caught up with the thought

and other relevant ones (e.g. “must be unstable”) as literally true. In turn, the person may more or less objectify, dehumanize, and avoid the “depressed” individual. The literal entanglement is likely to evoke avoidance behavior and prevent value-directed activities from occurring (Hayes et al., 2002; Masuda et al., 2007).

In regard to mental health stigma, one study has examined the effects of ACT by comparing it to an education condition (Masuda et al., 2007). The study has shown that, whereas both interventions were successful in reducing mental health stigma in those reporting high psychological flexibility, only the ACT group significantly reduced stigma in those reporting lower levels of psychological flexibility. These findings suggest that psychological flexibility may be an important process involved in the development and maintenance of stigmatization. A subsequent cross-sectional study has shown that there is an inverse relation between mental health stigma and psychological flexibility (Masuda, Price, Anderson, Schmertz, & Calamaras, in press).

Although literature has suggested the link between mental health stigma and psychological flexibility, no study has examined whether or how changes in psychological flexibility are related to changes in mental health stigma in a context of stigma reduction intervention. The purpose of the present study was to investigate the relations, using archive data of a previous pilot investigation of ACT. The pilot study was a single-group quasi-experiment (i.e., pre-, post-, and one-month follow-up), investigating the potential utility of ACT for reducing stigmatizing attitudes toward people with psychological disorders. College students were selected as participants because the majority of studies on mental health stigma have been done with this sample, and because the present study was a theoretical investigation. Given its methodological

limitations, the present study did not allow a mediation analysis (e.g., MacKinnon, Fairchild, & Fritz, 2007). However, this study could investigate whether and how the change score of psychological flexibility from pre to follow-up would predict the change score of mental health stigma from pre- to follow-up. Based on previous research (Masuda et al., 2007; Masuda et al., in press), it was hypothesized that the change score of psychological flexibility from pre-treatment to follow-up would be inversely related to the change score of mental health stigma.

Method

Participants and Setting

Participants were 27 college undergraduates (7 male and 20 female). The majority of participants (i.e., 89%) were Non-Hispanic Caucasians. The average participant was 21.1 years of age. They were recruited from psychology courses. Participants voluntarily participated in this study and were required to sign an informed consent document prior to their participation in the study. All participants received extra credit for participation. The size of group varied from two participants to seven. Data analyses were conducted on 22 participants (5 male and 17 female; mean age = 21.4), who returned to complete follow-up questionnaires.

Treatment Condition

In the present study, Acceptance and Commitment Training (ACT) was delivered in a 150-minute workshop-format (total contact time of three hours). Each group was led by the first and third authors (AM, KB). Emphasis was placed on the view that stigma was built into our daily linguistic practice. Specific exercises encouraged participants to notice how automatic, prevalent, and rigid this process is. The paradoxical effect of

deliberate attempts to eliminate stigmatizing attitudes was revealed though various experiential exercises. In order to increase the sense of understanding and empathy, participants were then asked to notice the parallel between their reactions to people with psychological disorders and reactions to their own psychological struggles (e.g., self-stigma) and the costs of stigmatization (e.g., sense of isolation, distress from deliberate attempts to eliminate psychological struggles). Following the normalization of psychological disorders and psychological struggles, participants learned psychological processes of acceptance and detachment of stigma toward others and self. Finally, participants were guided through the nature and importance of values and commitment to value-directed actions and then went through public values declaration exercises.

Administration of Assessments

Participants were assessed at the beginning of the workshop (pre), at the end of the workshop (post), and at one-month follow-up. Participants filled out assessment packages across three assessment periods at the intervention site.

Instruments

Attitudes towards Psychological Disorders. The *Community Attitudes toward the Mentally Ill* scale (*CAMI*; 40 items; Taylor & Dear, 1981) is a 5-point Likert, self-report questionnaire that was designed to measure attitudes toward the mentally ill. The CAMI asks participants to rate their degree of agreement with each statement, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). In order to make psychological disorders more applicable to college student samples, it was modified as follows. The term *mental disturbance* was replaced with *psychological disturbance, the mentally ill* was substituted with the term *a person with a psychological disorder* (e.g., severe depression, panic

attacks, schizophrenia, eating disorder, alcohol or substance abuse disorder), *mental illness* with *psychological disorder*, and gender specific references (e.g., *a woman*) with *a person*. The CAMI has four subscales: (a) Authoritarianism, (b) Benevolence, (c) Social Restrictiveness, and (d) Community Approach. Consistent with previous research (Hayes et al., 2004; Masuda et al., 2007), to reach an overall attitude score (i.e., stigma toward people with psychological disorders), Benevolence and Community Approach were subtracted from Authoritarianism and Social Restrictiveness. Thus, possible scores ranged from -80 to 80, with higher scores indicating more negative attitudes toward people with psychological disorders. In the present study, the alpha coefficients of Authoritarianism, Benevolence, Social Restrictiveness, and Community Approach at pre-treatment were .44, .74, .71, and .91. Scale inter-correlations varied from .31 to .86 at pre-treatment.

Acceptance and Action Questionnaire-16 (*AAQ*; Bond & Bunce, 2003). Another process measure was the AAQ-16. The AAQ assesses people's willingness to accept their undesirable thoughts and feelings, whilst acting in a way that is congruent with their values and goals. The AAQ-16 consisted of two subscales, Willingness/Acceptance & Action. The Willingness/Acceptance subscale is designed to measure one's willingness to experience negative thoughts and feelings fully as they are, and the Action subscale is designed to measure the degree to which one engages in value-directed actions. The AAQ-16 is a seven-point Likert scale ranging from 1 (*Never true*) to 7 (*Always true*), with higher scores indicating greater psychological acceptance. In a previous study conducted with non-clinical adult samples in work settings (Bond & Bunce), alpha coefficients for this measure were between .72 and .79. In the present study, the alpha

coefficient at pre-treatment was .54, which was notably low. This may be in part due to the small sample size (n = 22).

Results

Effects on Mental Health Stigma

The scores for all measures at different time periods are shown in Table 1. All outcome and process variables were analyzed using a repeated measure design. A significant main effect for time was followed by pairwise comparisons with a Bonferroni correction to maintain an overall alpha of .05. Five repeated measures analyses were conducted for the CAMI total and subscales. In CAMI total, a significant effect for time was found, F (2, 42) = 46.27, p < .001. As seen in Figure 1, subsequent pairwise comparisons showed that mental health stigma significantly reduced at post-treatment (*Mdiff* = 14.23, p < .001), and the reduction was maintained at one-month follow-up (pretreatment vs. follow-up, *Mdiff* = 11.32, p < .001; post-treatment vs. follow-up, *Mdiff* = 2.91, p = .136). The same trend was found in all CAMI subscales. No significant effects for time were found in the AAQ-16 total and subscales, however.

Process Analyses

The change score of mental health stigma (i.e., CAMI total score) and that of psychological flexibility (i.e., AAQ-16 total score) from pre-treatment to follow-up were calculated and used for a process analysis. The change scores of these measures from pre- to post-treatment were not included for analysis because the pre- and post-assessments took place within a three-hour period of the same day. The change score of the AAQ-16 total and CAMI total were calculated using the formula of pre-treatment score subtracted from follow-up score. As shown in Figure 2, a Pearson

correlation revealed that the change of psychological flexibility (i.e., AAQ-16 total) was significantly and inversely related to the change of mental health stigma (CAMI total) (r = -.549, p = .008).

Discussion

The present preliminary study revealed that mental health stigma reduced, and the reduction maintained at one-month follow-up in the group of participants who received the ACT. Unlike our prediction, psychological flexibility did not increase significantly either immediately or one-month after the intervention. However, as predicted, the present study also revealed that the change of psychological flexibility from pre to follow-up significantly predicted the change of mental health stigma from pre to follow-up. The present results revealed that, from pre-treatment to follow-up, greater improvement in psychological flexibility from pre to follow-up was associated with greater reduction in mental health stigma. This finding seems to suggest that psychological flexibility may be an important factor related to the occurrence and maintenance of mental health stigma.

Given methodological limitations, the favorable findings cannot be solely attributed to the ACT intervention. Nevertheless, the present study appeared to extend our understanding of mental health stigma and its relation with psychological flexibility. A previous cross-sectional study has shown the link between mental health stigma and psychological flexibility (Masuda et al., in press). The present study provides additional longitudinal data of the relation between mental health stigma and psychological flexibility, whether these positive changes in mental health stigma and psychological flexibility are solely attributed to the ACT or not. In sum, the study

supports the ACT model of stigma, suggesting the inverse relation between stigma and psychological flexibility (e.g., Biglan, 2009; Hayes et al., 2002).

Although this is beyond the scope of the present study, the present ACT condition can be conceptualized as a contact-based empathy training intervention. This conceptualization may allow us to speculate a possible mechanism of change in contact-based education conditions (Corrigan & Penn, 1999). The participants in the present study were instructed to experientially get in touch with the roles of both the stigmatizing and stigmatized within their self. This experiential exercise seems to concur with the contact-based education intervention. Literature suggests that the effect of contact-based intervention is maximized when participants and stigmatized persons have equal status and stereotyped persons are introduced as one of many citizens ("us" not as "them"; Link & Phelan, 2001). From a contemporary behavioral perspective, such a perspective-taking experience undermines the negative impacts of judgment and stereotype. At the same time, the nonjudgmental experience of getting in touch with the roles of both the stigmatizing and stigmatized within their self seemed to naturally lead a person to the experience of psychological acceptance toward their self and others, the experience stressed by empathy training literature (e.g., Barnett, Thompson, & Pfeifer, 1985; Kohut, 1984; Sweet & Johnson, 1990). The present ACT intervention incorporated all of these aspects of contact-based intervention and empathy training because the ability of perspective-taking and psychological acceptance of self and others are all consistent with the model of psychological flexibility (Biglan, 2009). In regard to the mechanisms of change in contact-based education, if our favorable outcomes are attributed to the ACT intervention, we can speculate that a contact-based education

intervention may achieve its effects by improving psychological acceptance and empathy toward self and others, in addition to gaining more accurate and rather neutral information (Corrigan & Penn).

The present study has several notable methodological limitations. First, it is important to stress that the present study was a single-group quasi-experiment. Because of the lack of methodological rigor, the factors that led to the current results are unknown. For this reason, the present findings should be treated as preliminary, and exaggerated interpretation of present data should be avoided. Second, although the increasing trend of psychological flexibility was found in the present study, using the general, non-problem-specific AAQ-16 (Bond & Bunce, 2003), the improvement was not significant. Given its nature, the present study cannot conclude that the change in psychological flexibility was due to the ACT intervention. Nevertheless, it is important to note that failure to find large changes on the general AAQ has been reported in other studies (e.g., Hayes et al., 2006). A measure of psychological inflexibility particularly related to the issues of mental health stigma may more precisely capture the specific literal entanglement and avoidance strategies typical in this context. Future research is needed to develop and test such a measure.

A third methodological limitation is the variation in the number of participants per group. The number varied from two to seven participants. The size of the group may have influenced the degree of active engagement in study participation, as well as changes in outcome and process measures. A fourth limitation is the lack of intervention adherence checks. Because the interventions were closely scripted, adherence was not formally assessed. It is important that future studies employ an

adherence method, such as video-taped sessions. Finally, a fifth notable methodological problem is that the present research exclusively relied on self-report measures. From an ACT perspective, stigma is often conceptualized as a behavioral process, where stigmatizing thoughts evoke particular negative behaviors, such as excessive avoidance. The CAMI only assesses the cognitive aspects of stigma, not its overall pattern of stigmatization. Although behavioral measurement is difficult in this area, it seems to warrant the effort.

Despite these limitations, the present study seems to provide additional insight for stigma and its relations with psychological flexibility. As the current ACT study suggests, psychological flexibility may be an important factor involved in the occurrence and maintenance of mental health stigma, and an acceptance and mindfulness-based intervention that targets the improvement of psychological flexibility may offer a new avenue for stigma reduction. The present findings are encouraging, and further investigations on the processes and effects of psychological flexibility in the context of mental health stigma seem fruitful.

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Table 1

Means and Standard Deviations of Study Variables (N = 22)

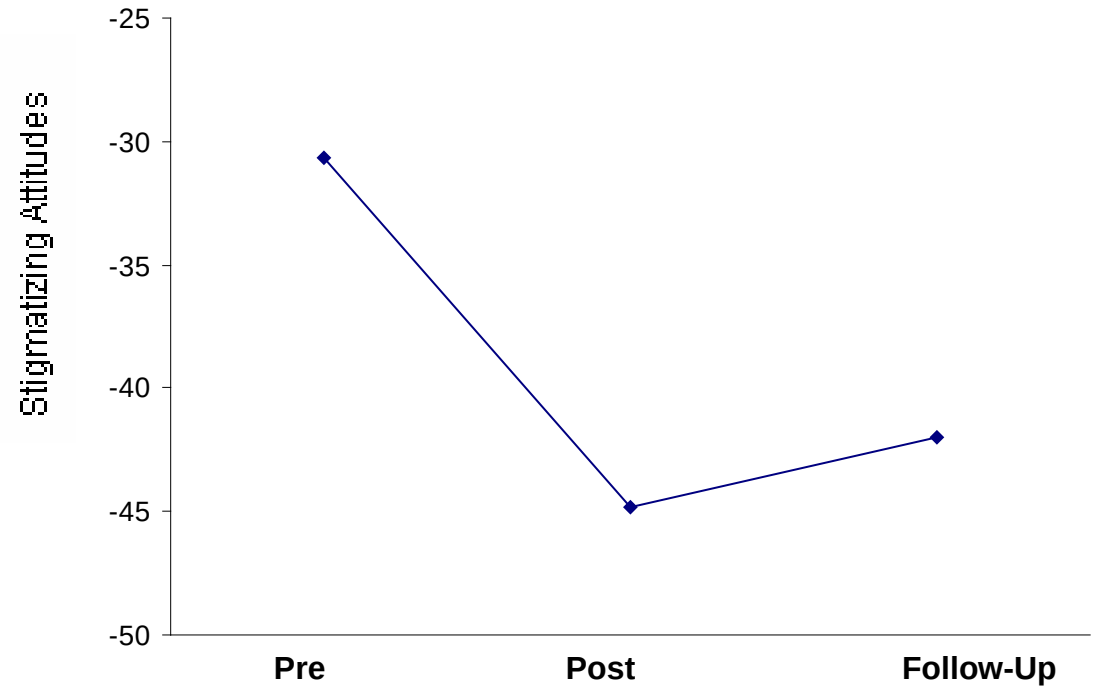
	Pre	Post	Follow-Up
CAMI			
Total	- 30.64	- 44.86	- 41.95
	(15.13)	(15.45)	(17.31)
Authoritarianism	22.45	18.86	19.73
	(3.53)	(3.75)	(3.54)
Benevolence	38.27	40.82	41.14
	(4.93)	(4.67)	(4.56)
Social Restrictiveness	21.55	18.00	18.82
	(4.64)	(4.42)	(5.11)
Community Approach	36.36	40.91	39.36
	(6.32)	(5.84)	(6.78)
AAQ-16			
Total	74.18	75.68	77.23
	(7.77)	(8.39)	(10.83)
Action	44.50	45.09	44.91
	(5.88)	(6.50)	(6.09)
Willingness/Acceptance	29.68	30.59	32.32
	(5.41)	(5.06)	(6.52)

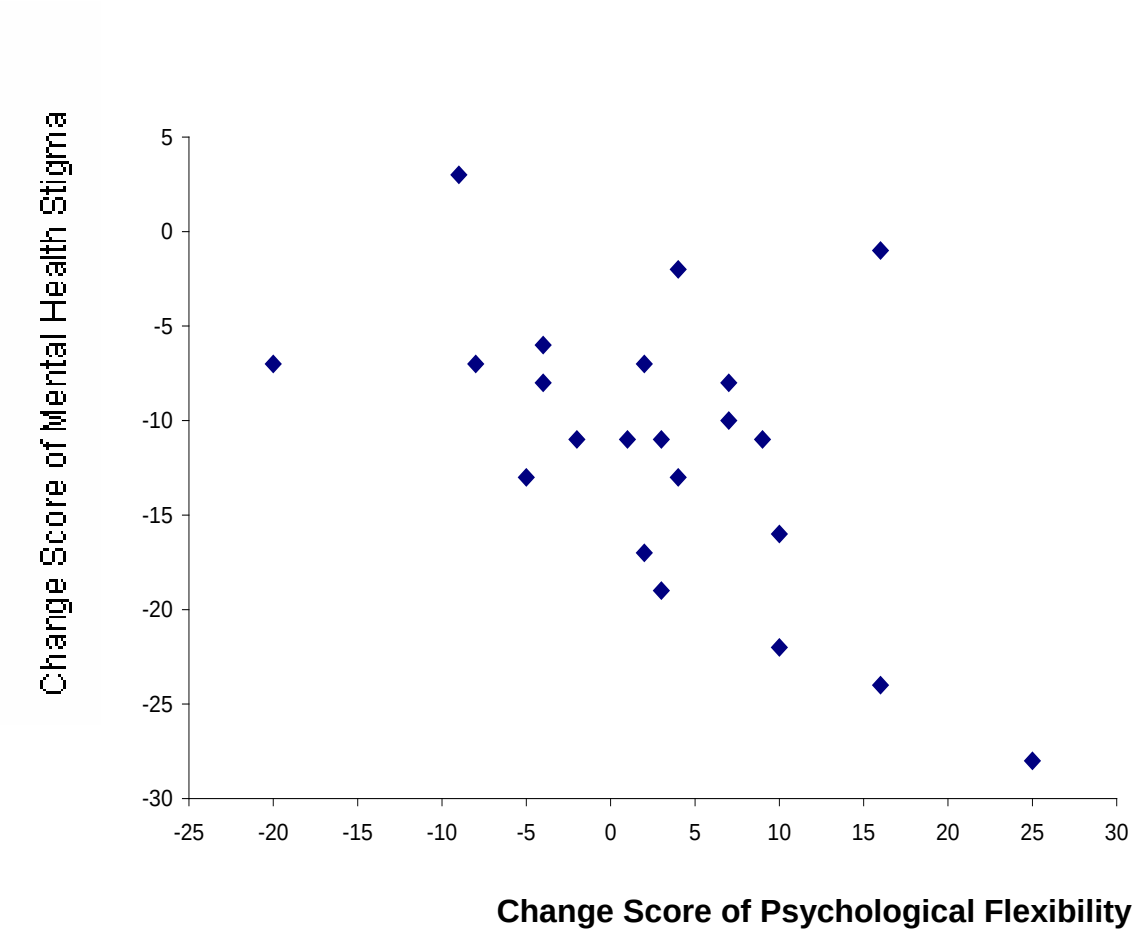
Note. CAMI = Community Attitudes toward the Mentally Ill; AAQ = Acceptance and Action Questionnaire.

Figure caption

Figure 1. The mean scores of CAMI total at pre, post, and follow-up.

Figure 2. Scatter plot revealing the relation between the change score of mental health stigma and that of psychological flexibility.


Stigmatizing Attitudes
-25
-30
-35
-40
-45
-50
Pre
Post
Follow-Up


Change Score of Mental Health Stigma
5
0
-5
-10
-15
-20
-25
-30
-25
-20
-15
-10
-5
0
5
10
15
20
25
30
Change Score of Psychological Flexibility