Reducing patients' self-stigmatization via mental health care professionals

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Abstract

Background Previous studies have shown that a significant proportion of mental health care professionals (MHCPs) hold stigmatizing attitudes towards their patients, hereby increasing the chances of their patients to perceive and internalize these, allegedly self-stigmatization. Several studies into interventions to decrease self-stigmatization have been conducted. However, results vary and questions arise whether providing such treatments is not a form of stigmatization itself. Applying an indirect approach might reduce this risk. Acceptance and Commitment Therapy (ACT) has been found to decrease stigmatizing attitudes by changing the 'us' versus 'them' thinking. In the present study MHCPs were given an ACT-based training, thereby aiming to decrease stigmatization, and subsequently self-stigmatization of their patients. It was hypothesized that patients' self-stigmatization would be reduced when their MHCP received an ACT-based training.

Methods An RCT with a 2 (pre-test / post-test) x 2 (no training / training) design was conducted. A total of 41 MHCPs and 41 patients participated, 20 in the experimental and 21 in the control condition respectively. The MHCPs in the experimental condition received an ACT-based training, MHCPs in the control condition received no training. Patients' self-stigmatization was measured before and after the training session.

Results The hypothesis was not supported as no interaction effect was found. A significant effect of time occurred, indicating that solely addressing self-stigmatization tends to decrease it. Explorative analysis of subscales found significant decreases after the ACT-based training in internalization of mental illness stereotypes in patients.

Conclusion The present study demonstrated that training MHCPs in ACT did not result in a decline in patients' self-stigmatization, thereby indicating the ineffectiveness of ACT-based treatments which address self-stigmatization indirectly. The validity of the used instrument in regard to its subscales is questioned. Importantly, the explorative analysis showed more promising effects of ACT in reducing patients' internalization of common mental illness stereotypes. Considering this study's limitations, more research is necessary to determine the true effects of ACT in decreasing (self-)stigmatization.

Preface

During my work in the field of psychiatry at various mental health care organisations in the Netherlands, I often encountered colleagues who held firmly strong negative attitudes towards the(ir) patients. When discussing patients, it was not uncommon to speak of 'that schizo' or 'a typical borderliner'. There seemed to be a distinct border between 'being a patient' and 'being a mental health care professional'. I have always held a different point of view. Namely, we are all human beings, and it might as well could have been me, admitted to a mental health clinic, or suffering from a depression. I believe all individuals suffer to a certain extend from a variety of mental problems. When I started my internship I met Kim Helmus, a psychologist and my current supervisor, who held the same view. Together we came up with an approach to try to look at all individuals as the same, and to try to diminish the 'us' versus 'them' thinking in the mental health care. 'What if we changed the whole mental health care system, instead of just trying to treat the patients?'

During the study, I learned about ethics, how to optimize a research design, how to conduct an RCT, and how to write a clear and concise report concerning the results. At the same time, I encountered many interesting and open-hearted patients, who shared their personal experiences with me, and passionate mental health care professionals, who in my opinion made an important contribution in the try to change the 'us' versus 'them' thinking in the Dutch mental health care.

I am therefore grateful for all participating individuals of the organisation of Arkin Amsterdam, and I would like to give a special word of thanks to them. Even more I would like to thank Kim Helmus for her enthusiasm, help, guidance, and positivity. She is, and has been, a great example of a psychologist, and I have her to thank for much of my own growth during this year. And not to be forgotten Henk Schut, for whom I am thankful to be supervised by. Henk is a passionate researcher, but an even more passionate supervisor. We shared a lot of philosophical talks, and many laughs the past year. Not unimportantly, he has the capability to be critical in a charismatic way, and he provided feedback in an enthusiastic and expeditious manner. Never have I received feedback so rapidly and at bizarre times in the night/morning (subject: '*Version two of the discussion, feedback HS*', sent: *Saturday the 17th of June at 05:41*). Lastly I would like to thank Robbert, Neeke, Gertrude, my roommates, and my parents John and Annemarie, for their support, and patience with me during stressful moments. I could not have been able to do such a large research project on my own without you.

Marilon van Doorn
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Introduction

Mental health care has improved greatly over the past five decades. Nonetheless, a great deal of individuals might not benefit fully or at all from this care. One of the reasons, is being affected by stigmatization (Corrigan, 2004a). When negative judgements are formed about labels or categories that describe a certain human characteristic or condition, and the behaviour of the actor is adjusted accordingly, we speak of stigmatization. Specifically, the stigmatization of individuals with mental health problems is the process in which a mental condition or problem is observed by an individual or a group, is experienced and labelled as deviant, and leads to discrimination, prejudice, exclusion, stereotyping, and/or status loss of individuals (Angermeyer & Matschinger, 2005; Link & Phelan, 2001). The form in which stigmatization shows itself differs depending on the situation, the context, and previous experiences, values, and goals of the actor (Schwartz, 2007). Potential consequences for a stigmatized individual are a decline in life satisfaction (Turner & Turner, 2013), employment chances and housing opportunities (Link & Phelan, 2013). Moreover, in comparison to individuals with mental health problems who do not perceive public mental health stigma, individuals who do, have been found to have less social opportunities, are more prone to treatment noncompliance (Corrigan, 2014), less likely seek help, and are more likely to terminate treatment early (Vogel, Wade & Hackler, 2007).

The existence of mental health stigma has been well documented (e.g. Byrne, 1997; Crisp, Gelder, Rix, Meltzer & Rowlands, 2000; Chandra & Minkovitz, 2005; Schulze, 2007). This study aims to shed light on stigmatization *within* the Dutch mental health care system (Geestelijke Gezondheids Zorg; GGZ) in particular. Namely, where the GGZ is aspired to be a place aimed at improvement or recovery, a significant percentage of mental health care professionals is known to have stigmatizing attitudes towards patients (Corrigan & Watson, 2002; Horsfall, Cleary & Hunt, 2010; Reavley, Mackinnon, Morgan & Jorm, 2014; Schulze & Angermeyer, 2003; Schulze, 2007; Stuart, Arboleda-Florez & Sartorius, 2012). Be that as may, in a previous study on stigmatization in the GGZ no stigmatizing attitudes among mental health care professionals were found. However, the authors raised serious questions about the instrument with which stigmatization was measured, which they suggest is sensitive to social desirability (Kleine Schaars, 2015). Additionally, more than 20% of stigmatization experiences reported by patients take place in contact with their mental health care professional (MHCP; Schulze, 2007), thereby increasing the chance of aforementioned negative consequences.

Nonetheless, not all individuals that experience stigmatization are affected by negative consequences. Namely, certain individuals react indifferent towards mental health stigma, and others show high levels of psychological reactance. However, and most importantly, certain individuals suffer more remarkably from negative consequences, since they tend to agree with the stigmatizing attitudes (Corrigan & Watson, 2002).

When an individual considers an experienced stigma as true, the stigma will be internalised; allegedly self-stigmatization. Self-stigmatization is the belief of an individual that he or she is socially less acceptable and/or valuable (Vogel, Wade & Hackler, 2007), involves identification with a stigmatized group (Luoma, Kohlenberg, Hayes, Bunting & Rye, 2007), and the acceptance of negative

expectations and stereotypes associated with this group (Link, 2001). Self-stigmatization in individuals with mental problems has been found to occur often, and to be related to demoralization (Rüsch, et al., 2014), a lower degree of physical and/or mental health (Muntaner, Ng, Vanroelen, Christ & Eaton, 2013), and to a diminished sense of the self. In particular, one's self concept, identity (McCay et al., 2007), self-efficiency, and self-esteem (Corrigan & Watson, 2002) can become impaired because of it. Moreover, a decrease in life quality, hope and treatment outcomes have been observed (McCay et al., 2007), in which shame is an important driving factor in avoiding treatment (Corrigan, 2014). Self-stigmatization hereby raises costs in, and decreases the cost-effectiveness of mental health care (Corrigan, 2014; Muntaner, Ng, Vanroelen, Christ & Eaton, 2013).

Several meta-analyses on the effectiveness of interventions for individuals with psychiatric diagnoses aimed at diminishing self-stigmatization have been published (e.g., Mittal, Sullivan, Chekuri, Allee & Corrigan, 2012; Tsang et al., 2016; Wood, Byrne, Varese & Morrison, 2016). These include psycho-education, trainings, individual- and group treatments. However, most studies suffer from methodological short-comings, and the results vary substantially, from non-existent to effective. In our eyes, these studies give rise to the intriguing issue whether providing interventions addressing self-stigmatization is not a form of stigmatization itself; suggesting that deviation of patients could be implicitly emphasized. Proposedly, providing an intervention to reduce self-stigmatization possibly creates a new dimension to illness and normality. Additionally, since stigmatization occurs within the GGZ, and thus potentially increases self-stigmatization in patients, solely addressing self-stigmatization seems to be a try to empty the ocean with a thimble. For these reasons, finding an effective direct intervention to reduce self-stigmatization would be challenging. An alternative approach, namely addressing self-stigma of patients indirectly (e.g. Horsfall, Cleary & Hunt, 2010) might reduce that risk.

The aim of this study is exactly to implement such an approach, through an intervention based on acceptance and commitment treatment (ACT). ACT is based on the relational frame theory (Hayes, Holmes & Roche, 2001), and holds the assumptions that judgement is at core of many psychological difficulties, and that human suffering is more or less prevalent in all human beings. The main goal of ACT is promoting psychological flexibility, which is defined as the ability to maintain a gentle and kind awareness of thoughts, emotions, and the present moment, and take action, based on personal values and goals. Decreased psychological flexibility is found to be a feature in increased stigmatization (Masuda, Price, Anderson, Schmertz, & Calamaras, in press), thereby making ACT a potential method in decreasing stigma. ACT has previously been suggested to have the potential of altering stigmatizing attitudes (Hayes, Lillis, Bunting, Herbst & Fletcher, 2009; Masuda, Hayes, Fletcher, Seignourel & Bunting, 2007), but studies thus far lacked control conditions, preventing solid conclusions regarding the effects.

A logical next step is to conduct an RCT with the focus on the effectiveness of ACT in addressing stigmatization in the GGZ, and subsequently diminishing self-stigmatization in patients. Accordingly, MHCPs will be offered an ACT-based training proposed to change the 'us' (MHCPs) versus 'them' (patients) thinking. The aim is to decrease possible stigmatizing attitudes of MHCPs, and

therefore chances of their patients to perceive, and internalize these. Concisely, training MHCPs in ACT is intended to reduce patients' self-stigmatization. In line with ACT, the study will be conducted transdiagnostically, aiming to transcend diagnosis classifications, and possible stigmatization of patients (Dindo, van Liew & Arch; 2017; Hayes, Strosahl & Wilson, 2011; Luoma & Platt, 2015).

The central question of the proposed study all in all is whether self-stigmatization of patients will decline through training their MHCP's psychological flexibility with a focus on mental health problems. It is hypothesized that self-stigmatization of patients will be reduced when their MHCP has participated in an ACT-based training.

Method

Participants

The study made use of a coupled participant pool; per MHCP one of his/her patients was arbitrarily selected to participate. Subsequently, two semi-random conditions were formed, meaning half of the MHCPs participated in an ACT based training, and the other half did not. The patients all underwent the same procedure.

A total of 105 MHCPs of the organisation Arkin Amsterdam, the Netherlands, were randomly selected and asked to participate. With the aim of obtaining a diverse sample MHCPs, no restriction in selection was made considering their profession (see table 1). The number of participants needed was determined by means of power analysis. Expecting a medium size effect (.25) and accepting an alpha and beta of .05, the optimal n = 44 for testing a time*condition interaction. With full data a total of 41 MHCPs and 41 patients were tested, 20 MHCPs and patients in the experimental, and 21 MHCPs and patients in the control condition. The inclusion criterion for MHCPs was that during the study they were able to arrange face to face contact with the participating patient weekly. For sample characteristics, see table 1.

No significant differences were found between conditions on age of MHCPs, $t(36.79) = -.63$, p = .53, amount of years working in the mental health care, $t(39) = .19$, p = .85, age of patients, $t(39) = -.18$, p = 86, amount of years of patients having mental health problems, $t(39) = -.03$, p = .98, gender of MHCPs, $X^2 (1) = .20$, p = .66, encounter of mental problems in personal life with self and/or others, $X^2 (3) = 1.32$, p = .72, function of MHCPs, $X^2 (7) = 4.51$, p = .72, gender of patients, $X^2 (1) = 1.48$, p = .22, marital status of patients, $X^2 (1) = .00$, p = .97, and living situation of patients, $X^2 (6) = 8.53$, p = .20.

The patients could be any age between 18 and 80, and since the research is conducted transdiagnostically, they could have any kind of diagnosis. The inclusion criteria for was being fluent in Dutch.

Table 1.

Demographic characteristics of participants. Means (SD) of MHCPs' age and amount of years working in the mental health care (Years MHC), and percentages of gender, education, job, and the encounter of mental problems in personal life with self and/or others (Encounter). Means (SD) of patients' age, and the amount of years having mental problems (Years MP), and percentages gender, education, living situation, and marital status.

MHCPs					
Age	Gender	Education	Job	Years MHC	Encounter
40.0 (1.81)	32% Men 68% Women	2% Senior general secondary education 12% Intermediate vocational education 85% College	12% Society worker 39% Psychiatric nurse 7% Personal/ambulant guider 2% Patients confidants 7% Psychologist 15% Job coach 15% Probation officer	11.6 (1.42)	54% Others 5% Self 34% Both 7% None

Patients					
Age	Gender	Education	Living situation	Years MP	Marital status
37.6 (2.19)	78% Men 22% Women	22% Primary school 17% Lower general secondary education 15% Intermediate vocational education 27% College	46% Independent living 2% Student flat 20% With parents 20% Guided living 7% Admitted in mental hospital 2% Different	17.4 (2.57)	95% Unmarried 5% Divorced

Materials

　　Questionnaires. A demographic questionnaire for patients, including an item regarding problem duration, a demographic questionnaire for MHCPs, including an item regarding personal experience with mental health problems, and a self-stigmatization list were used.

　　The Self Stigma of Mental Illness Scale - Short Form (SSMIS-SF; Corrigan, 2012) consists of 20 items scaled on a 9-point Likert scale anchored at 0 (I strongly disagree) to 9 (I strongly agree). The psychometric qualities were recently revised, and found to be positive. The internal consistency lied between a = .72 and a = .91, and the test-retest reliability ranged from .68 to .82. Moreover, the content and construct validity were considered good (Brohan, Slade, Clement & Thornicroft, 2010; Corrigan et al., 2012). The questionnaire consists of 4 subscales, which were analysed exploratively, namely Agreement, which measures the agreement with common mental illness stereotypes (item example: 'I think that most persons with mental health problems are dangerous'), Application, which

measures internalization these stereotypes (item example: 'Because I have mental health problems, I am unpredictable'), Hurts-Self, which measures self-esteem or self-efficacy as a consequence of internalizing these stereotypes (item example: 'I currently respect myself less because I am unable to take care for myself'), and Awareness, which measures the knowledge of these stereotypes in society (item example: 'I think the public beliefs most persons with mental health problems will not recover'). Notably, Application most closely corresponds with the definition of self-stigmatization as mentioned in the introduction. The subscales have been found to be reliable with Cronbach's alpha of .72 for Agreement, .81 for Application, .88 for Hurts Self, and .91 for Awareness (Cavelti, Kvrgic, Beck, Rüsch, & Vauth, 2012), and valid with .82, .72, .74, and .83 respectively (Rüsch, Lieb, Bohus, & Corrigan, 2006). The questions of the subscale Awareness were adjusted to measure perceived stigma of a patient's' MHCP (item example: 'I think that my MHCP thinks that most persons with mental health problems will not recover or get better'). The questionnaire was translated into Dutch, and adapted slightly to eliminate possible abusive words.

Training. MHCPs in the experimental condition received a 4-hour training given by a psychologist experienced in ACT. The theoretical framework of ACT that was applied had the aim to change the 'us' versus 'them' thinking and acting in the GGZ, to recognize judgmental thoughts around mental health problems ('I am healthy, you are sick' or 'Mental health problems are unacceptable'), and to be able to behave in a way that suits deeper lying personal values (for example respect, balance and acceptance) instead of based on judgmental thoughts. All exercises aimed to involve the MHCPs' participating patient. Because the main goal was to create psychological flexibility around mental health problems, the focus was on the six cornerstones of ACT: Acceptance, defusion of thoughts (a technique that helps individuals to 'deliteralize' the content of thoughts, and create distance to their meaning; Luoma, Kohlenberg, Hayes, Bunting, & Rye, 2007), values, value based acting, defusion of self (meaning a creation of distance between the description of ones self or characteristics, and ones identity), and mindfulness (Hayes, Strosahl, & Wilson, 2011). Examples of exercises that were given are: Sharing one's own experiences with mental difficulties (multideskundheid, Delespaul & Milo, 2016), defusion of judgmental thoughts towards the participating patient and the self, and education about continuum beliefs around mental disorders.

Design and procedure
The research was approved by the Faculty Ethics Test Commission of the University of Utrecht (FETC16-132). The design was an RCT with a 2 (pre-test / post-test) x 2 (no training / training) design. In order to measure the effect of the training, patients self-stigmatization of MHCPs in the control group versus patients self-stigmatization of MHCPs in the experimental condition was measured by means of time*condition interaction effects. To our knowledge, this study is the first RCT to address self-stigmatization through ACT.

A total of 106 MHCPs of the organisation Arkin Amsterdam, were randomly selected to participate in the study, and informed via e-mail, which contained a form for obtaining informed consent and the demographic questionnaire. Of the approached professionals 38% did not reply or declined participation, and 23% were excluded based on insufficient patient contact. The included MHCPs, a total of 42 individuals (40%), were randomly assigned to either the control (no training) or the experimental condition (training). One additional participant dropped out during the research. The patients all continued to receive treatment as usual.

All participating MHCPs were requested to either select the first, second, third or fourth patient of the week they had weekly contact with. It was left to their professionality to decide whether a patient was fit and stable enough to participate. If a patient was not suitable to participate or declined, the following patient was arbitrary selected, and so forth. The researchers contacted the selected patient to make an appointment for the first measurement. The MHCPs in the experimental condition were invited for the training *after* the pre-test measure of patients was completed.

The research took place in a treatment setting. The training was held in groups of 10-14 MHCPs and took four hours. The first measurement for the patient took place in the form of an individual appointment. The patients filled out an informed consent, the demographic questionnaire, and the SSMIS-SF. The informed consent specified that all participants were at liberty to stop participation whenever they wanted and that the answers would be handled confidentially and anonymously. The procedure took 15-45 minutes per patient, and taxed patients minimally. The post-test took place two weeks after the training. Patients filled out the SSMIS-SF, received a debriefing after completion, and had the opportunity to pose any questions or comments. All MHCPs received a debriefing via email once the final measurements were conducted.

Statistical analysis

The data was analysed using a 2 (pre-test / post-test) x 2 (no training / training) repeated measures design ANOVA. An alpha of .05 was used and two-tailed tests were reported. Only the total score of the SSMIS-SF was used for testing the hypothesis. Since the SSMIS-SF consists of four subscales measuring different aspects of (self)-stigmatization, additional analyses were run for explorative purposes.

<div align="center">

Results

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No significant differences between conditions on SSMIS-SF-scores were found, $t(39) = -.43$, $p = .67$, indicating that pre-test self-stigmatization was equal over conditions. The assumption of normality was not met for age of MHCPs (experimental condition), $W = .85$, $p = .01$, amount of years working in the GGZ (control condition), $W = .82$, $p < .01$, and amount of years of patients having mental problems (control condition), $W = .78$, $p < .001$, for which the distributions were positively skewed. Moreover, the assumption of homogeneity of variance was not met for age of MHCPs $F(1, 39) = 2.27$, $p = .05$, and for amount of years of patients having mental problems $F(1, 39) = 4.50$, $p = .04$. Since the sample size of this study is sufficiently large (N > 30; Mordkoff, 2016), and conditions exist of approximately the

same number of individuals (N=21 in the control, and N=20 in the experimental condition; Markowski & Markowski, 1990), no corrections will be necessary to control for the unmet assumptions of normality, and homogeneity of variance respectively.

The main analysis demonstrated a significant effect of time on self-stigmatization $F(1, 39) = 6.46$, $p = .02$, $\eta_p^2 = .70$. No significant effect of condition was found, $F(1, 39) = .00$, $p = .99$. Crucially, despite a stronger decrease in self-stigmatisation scores in the experimental condition, no significant time*condition interaction effect was found, $F(1, 39) = 1.55$, $p = .22$, $\eta_p^2 = .04$ see Figure 1. These findings suggest that self-stigmatisation decreased with time, regardless of condition, which is contrary to the hypothesis that training MHCPS in ACT reduces self-stigmatisation of their patients.
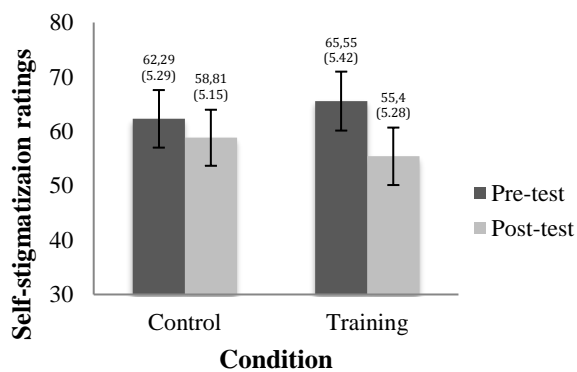

Figure 1. Pre- and post-test means (SD) of self-stigmatization scores per condition.

Additional analysis

A significant difference in time*condition interaction effects between subscales was found, $F(3,39) = 5.54$, $p = 0.001$, $\eta_p^2 = .12$. Considering Application, no significant differences between conditions on pre-test scores were found, $t(39) = -1.71$, $p = .10$, indicating that pre-test Application-scores were equal over conditions. The analyses demonstrated no significant effect of time, $F(1,39) = .11$, $p = .74$ or condition, $F(1,39) = .19$, $p = .67$. However, a significant interaction effect of time and condition was found, $F(1,39) = 9.33$, $p < 0.01$, $\eta_p^2 = .85$, see Figure 2.
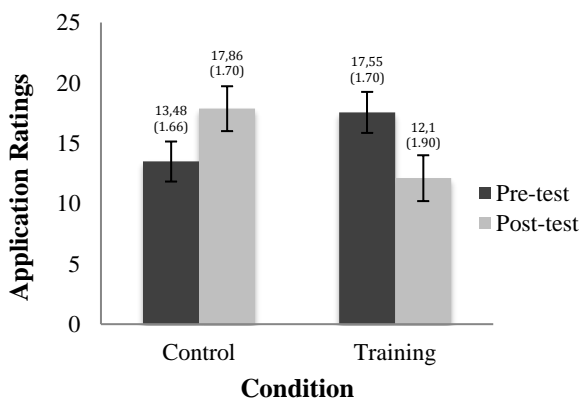

Figure 2. Pre- and post-test means (SD) of Application-scores per condition.

No significant differences between conditions on Agreement, t(39) = .74, p = .46, Awareness, t(1,33.52) = 1.29, p = .21, and Hurt-self, t(1,33.11) = -1.98, p = .06, were found, indicating that pre-test scores were equal over conditions. For Agreement, significant effects of time were found, $F(1,39)$ = 9.86, p < .01 η_p^2 = .87. No effects of time were found on Awareness, $F(1,39)$ = .04, p = .85, and Hurt-self, $F(1,39)$ = 1.90, p = .18. No significant effects of condition were found for Agreement, $F(1,39)$ = .00, p = .98, Awareness, F(1,39) = .85, p = .36, and Hurt-self, $F(1,39)$ = 1.66, p = .21. For Agreement, $F(1,39)$ = 1.31, p =.26, Awareness, $F(1,39)$ = 2.02, p = .16, and Hurt-Self, $F(1,39)$ = 3.78, p = .06 no significant interaction effects were found.

Discussion

To our knowledge, the present study has been the first RCT to investigate the effects of acceptance and commitment therapy (ACT) in reducing self-stigmatization of mental health care patients. It was hypothesized that training MHCPs in ACT reduces self-stigmatization of their patients. The hypothesis was not supported, which indicates that ACT does not have the potential to reduce stigmatization in MHCPs and subsequently patients' self-stigmatization. This is contrary to findings of previous studies, which found additional benefits of ACT in increasing psychological flexibility (Hayes, Strosahl & Wilson, 2011), and decreasing stigmatizing attitudes (Hayes, Lillis, Bunting, Herbst & Fletcher, 2009; Masuda, Hayes, Fletcher, Seignourel & Bunting, 2007; Masuda, Price, Anderson, Schmertz, & Calamaras, in press). Possibly, applying an indirect intervention is less effective in tackling self-stigmatization than applying a direct one, especially since merely part of patients' stigmatization experiences appear to occur in contact with MHCPs (Schulze, 2007). Additionally, one training might be insufficient in changing stigmatizing attitudes (Knight, Wykes & Hayward, 2006; Mittal, Sullivan, Chekuri, Allee & Corrigan, 2012; Tsang et al., 2016; Wood, Byrne, Varese & Morrison, 2016), and as stigma-related attitudinal changes do not necessarily lead to an improvement in social behaviours (Angermeyer & Dietrich, 2006; Thornicroft, Brohan, Kassam & Lewis-Holmes, 2008) changing stigmatized attitudes of MHCPs could have been more complicated and/or less visible for the patients. Furthermore, previous research found that anti-stigma interventions revealed residual negative beliefs (Horsfall, Cleary & Hunt, 2010). An explanation for this is that individuals are not homogenous, and attitudes can depend on aspects such as age, level of education, ethnic affiliation, and personal experience with people with mental illness (Corrigan, 2004b). Thus it is possible that one ACT-training did not suffice in altering stigmatizing attitudes and/or corresponding behaviour of MHCPs, and subsequently self-stigmatization of patients was not addressed at its full potential. Differentiated, personal and direct strategies might be needed to address (self-)stigmatization fully (Corrigan, 2004b). Because of a small effect size ($\eta p2$ = .04), the non-significance could be due to an inadequate sample size or 'underpowerment' (Maxwell, 2004). However, this also indicates that the effects of applying ACT indirectly, are too small to be clinically relevant.

The analysis showed a significant effect of time on self-stigmatization, suggesting that solely making individuals aware of (the internalization of) common stereotypes about mental illness tends to decrease these beliefs. An explanation for the decrease in self-stigmatization could be the knowledge

of participants of partaking in a study with an explicit aim of 'decreasing self-stigmatization'. Moreover, the presence of the researcher during measurements could have resulted in lower level of anonymity for participants, and therefore possible higher rates of social desirability (Henderson, Evans-Lacko, Flach & Thornicroft, 2012).

Exploration of subscales brought interesting findings to light. A decrease was found in the agreement with common mental illness stereotypes after addressing these attitudes. Previous studies measuring similar concepts have found decreases as well as increases (Corrigan & Shapiro, 2010; Kleine Schaars, 2015), indicating that measuring agreement appears to be complex (Corrigan & Shapiro, 2010). No effects were found on self-esteem or self-efficacy. This is in line with the theoretical analysis of Gist and Mitchell (1992), which showed that these concepts are more resistant to change, thus influencing these appears to be less easily achieved on the short-term. Moreover, it appeared that patients did not observe a change in their MHCPs behaviour or attitudes after the training. Luoma, Kohlenberg, Hayes, Bunting & Rye (2007) found comparable results, namely perceived stigma was not affected by receiving ACT. The authors concluded that perceived stigma might not be a fruitful target for intervention.

Lastly, it was found that training MHCPs in ACT decreased the internalization of stereotypes in patients. Nonetheless, the increase in internalization of stereotypes in the control condition was approximately equally large as the decrease in the experimental condition. Internalization of stereotypes thus seems to increase when being addressed. This effect appears to be negated by ACT, and ACT subsequently decreases negative attitudes even further. An explanation for the increase can be found in the Ironic Process Theory (Wegner, 1994), which states that (negative) beliefs are stored subconsciously, addressing beliefs could make them surface, and trying to control the mind (in the present study this would mean trying not to think of negative self-beliefs) could result in a more salient occurrence of these beliefs. Additionally, beliefs could grow stronger solely by becoming more aware of them (Collins, Wong, Cerulley, Schultz & Ebenhart, 2012). Contrary to the experimental condition, individuals in the control condition were not offered tools to cope with these surfacing negative self-beliefs. In a previous study into stigmatization in the GGZ, it was found that measuring stigmatization increases it, thereby implying possible ethical objections for such measurements (Kleine Schaars, 2015). Findings from the present study regarding self-stigmatization appear to be similar, therefore cautiousness is needed when using (self-)stigmatization questionnaires without offering tools to cope with these surfacing negative beliefs.

Limitations

Firstly, even though findings from research conducted by the developer of the questionnaire indicated good psychometric qualities (Corrigan et al., 2012), the different subscale findings in the present study possibly question its content validity. Rather than in line with the definition of self-stigmatization (Vogel, Wade & Hackler, 2007) the subscale Agreement seemed to measure stigmatization (Link & Phelan, 2001); the subscale Hurts-Self measured self-esteem or self-efficacy, of which research has

indicated that decreases are *possible consequences* of self-stigmatization (Corrigan & Watson, 2002); and the subscale Awareness measured a possible eliciting factor of self-stigmatization, namely (perceived) stigma of MHCPs. Moreover, since Awareness was adjusted for the present research, and not validated beforehand, it is possible that the findings do not accurately reflect the concept aimed to be measured. The subscale Application measured internalization of common mental illness stereotypes, and thus its definition seems to be most similar to self-stigmatization (Vogel, Wade & Hackler, 2007). Similar differences in findings in proposed aspects of self-stigma were found in a study by Luoma, Kohlenberg, Hayes, Bunting & Rye (2007). Namely, in their research perceived stigma was not affected, and shame and internalized stigma were. For these reasons, Application seems to most accurately measure self-stigmatization and to be the most fruitful target for intervention.

Secondly, a floor-effect (Hessling, Schmidt & Traxel, 2004) in self-stigmatization could have arising as a result of low levels of stigmatizing attitudes of MHCPs. Participating MHCPs were interested in the subject of stigmatization, and the majority stated to have a strong opinion against it. In addition, it was let to their professionality to decide whether patients could participate; they therefore possibly choose a patients that they had a more satisfying therapeutic relationship with, and accordingly, perhaps had less stigma towards (Tyszkowska & Podogrodzka, 2013). In point of fact, the mean self-stigmatization scores lay approximately 15% below median, indicating an absence of self-stigmatization among patients. Thus current findings potentially underestimate the effectiveness of ACT. Interestingly, for the subscale Application there was more room for improvement since scores lay approximately 12% above median.

Finally, several psychometric shortcomings could have influenced the present study's findings. The reliability could have been affected by the application of a different conduction method (Reynolds & Livingston, 2012) of the questionnaire at pre (face-to-face) and post-test (telephone). Furthermore, no measurement of stigmatization of MHCPs was included, since social desirability undermines the reliability and validity of such measures (Henderson, Evans-Lacko, Flach & Thornicroft, 2012; Link, Yang, Phelan, & Collins, 2004). Imaginably, groups differed in stigmatization beforehand. On the other hand, since results rely on differences within subjects, the influence is expected to be minimal. Lastly, several assumptions of normality and homogeneity of variance were not met, all in all resulting in a less representative sample and various other possible consequences. For example, considering that participating patients had a longer history of mental problems, self-stigmatization could be less affected because of its chronicity (Link & Phelan, 2013). Likewise, since MHCPs were of a relatively older age, their attitudes could have been less influenced because more difficulties in altering beliefs tend to occur when a certain age is met. Namely, research into the aging stability hypothesis has shown that the magnitude of attitude change is twice as large in young as it is in older adults (Caspi & Roberts, 2001). Lastly, it has been found that attitude change occurs more often when individuals encounter new situations, such as changing jobs (Caspi & Roberts, 2001), hereby implying that having a job in the same field for a long period of time, as is observed in the MHCPs, could decrease chances of accomplishing an attitude change. Altogether, in combination with the effects

of the violation of homoscedasticity in general (Neumann & Gujer, 2008), these factors could have resulted in an underestimation of the effectiveness of the current intervention.

Future research

Since no effects were found in the present study, it is questioned whether it is worth the effort, time and sources to conduct additional research into the efficacy of ACT-based trainings for decreasing (self-)stigmatization. On the other hand, the present study had several important and profound short-comings, thereby resulting in less reliable, valid and representative outcomes. Considerable improvements could be carried out in order to truly measure the effectiveness of ACT in decreasing (self-)stigmatization. It is advised to use a self-stigmatization questionnaire which is more sensitive and precise, and to use the same delivery method at pre- and post-test, thereby aiming to obtain a more reliable and valid image. Furthermore, making participation mandatory for all MHCPs within a mental health care organization would prevent floor-effects, result in the possibility of optimizing randomization procedures, guarantee a representative sample, and prevent underpowerment. Additionally, it is advised to refrain from letting MHCPs select a patient by carrying out more controlled selection procedures, and to provide MHCPs with more than three sessions of ACT. Finally, differentiated, personal and direct strategies might be needed to address (self-)stigmatization fully.

Conclusion

The present study demonstrated that training MHCPs in ACT did not result in a decline in patients' self-stigmatization, thereby indicating the ineffectiveness of ACT-based treatments which address self-stigmatization indirectly. It was found that solely bringing negative attitudes under the attention of patients tended to decrease the occurrence of these attitudes. For clinical settings it is advised not to provide ACT to MHCPs at the present moment. The validity of the used instrument in regard to its subscales is questioned. Importantly, the explorative analysis showed more promising effects of ACT in reducing patients' internalization of common stereotypes of mental illness. Carefulness should be warranted when addressing (self)-stigmatization, since measurements could increase the surfacing of negative attitudes. Considering the present study shows several limitations, more research is necessary to determine the true effects of ACT in decreasing (self-)stigmatization.

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