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ORIGINAL PAPER

Attitudes and physical distance to an individual with schizophrenia: the moderating effect of self-transcendent values

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Abstract

Background There is evidence that personal value priorities may influence prejudicial behaviors. In particular, it has been hypothesized that those who place a high priority on values such as equality, benevolence and social justice may be less likely to express any prejudicial personal attitudes in behavior. In the present study, we tested this hypothesis in the context of physical distance with reference to a person with schizophrenia. Self-transcendent value priorities and attitudes toward a young woman described as having schizophrenia were assessed in 95 university students. They were then led to anticipate meeting the person and the distance they sat from the expected location of the ill person was assessed.

Results Women sat closer to the anticipated seat of the person with schizophrenia. In addition, there was a significant interaction between priority placed on self-transcendent values and attitude toward the person in predicting seating distance. There was a significant relationship between favorability of attitudes and sitting closer for those who were low in self-transcendent values, but attitudes did not predict physical proximity for those with high self-transcendent values.

Conclusion The impact of attitudes toward an individual with schizophrenia and subtle aspects of behavior such as physical proximity appear to be moderated by self-transcendent personal values. The role of implicit in comparison to explicit attitudes in explaining these results is worthy for further investigation.

Keywords Stigma · Schizophrenia · Attitudes · Values

Introduction

In social psychology, the concept of values refers to the relative priority that a person ascribes to desirable end states or behaviors, which act as transsituational guides of how to respond [1–4]. Attitudes in contrast, generally refer to an individual's evaluation of an entity such as a group, person or action [5, 6]. Essentially, "values focus on ideals while attitudes are applied to more concrete social objects" [1].

Research on the stigmatization of mental illness has traditionally focused on the importance of beliefs about mental illness or individuals with mental illness in determining relevant attitudes and in turn behavior [7, 8]. Although there has been speculation that value priorities may be important in determining reactions to those with mental illness [9, 10], there has been little investigation on this issue. In a population survey in Germany, Angermeyer and Matschinger [11] found a preference for greater social distance toward individuals with mental illness to be associated with a greater personal endorsement of values

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related to achievement and materialism, and less endorsement of equality or tolerance. On the other hand, Schomerus et al. [12] found no relationship between endorsement of such values and support for funding cuts for treatment of mental illness. In a recent report, Norman et al. [13] found that greater endorsement of self-transcendent values, which emphasize concern for the welfare of others, is associated with behavioral intentions reflecting less social distance toward hypothetical individuals with either schizophrenia or depression independently of beliefs about individuals with these illnesses. The authors noted, however, the importance of further assessing the role of value priorities in predicting overt behavior.

The work of Schwartz and colleagues has been a major influence on contemporary research on values [1]. Schwartz's theory proposes a system of ten distinct values (power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security), which are linked to three universal requirements of human life (meeting biological needs; coordinated social interaction; and the survival of groups). There is cross-cultural evidence that individual differences in priority placed on these values can be explained by a circumplex (see Fig. 1), in which values closer together in the circular structure are positively correlated while values on opposite sides of the structure are negatively correlated [4, 14, 15]. Two higher order dimensions have been found to underlie priorities given to the ten specific values. These two dimensions are labeled self-transcendence versus self-enhancement, and conservatism versus openness to change. Value priorities as assessed by the Schwartz Value Scale (SVS, [16]) have been found related to a variety of behaviors and attitudes including the environment [17, 18], politics [19–22], prosocial and co-operative behavior [22–24], and intergroup contact [22]. Of particular relevance for current purposes is the self-transcendence vs self-enhancement dimension, wherein universalism and benevolence values (reflecting concern for the welfare and interests of others through social justice, equality and helpfulness) oppose power and achievement (reflecting the pursuit of self-interests).

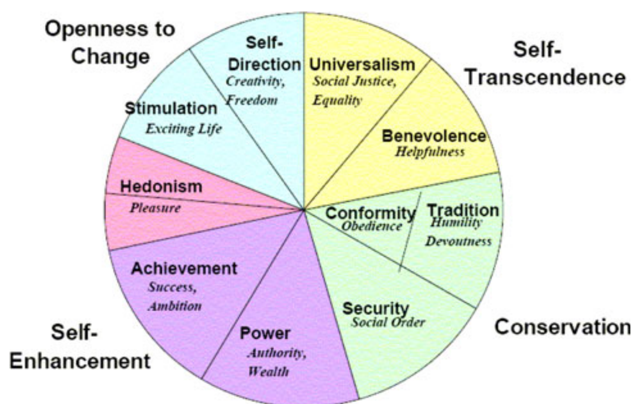

Fig. 1 Schwartz circumplex structure of values

It has recently been suggested that measures of physical proximity, such as seating distance, could be used as a direct behavioral measure of feelings to those with a mental illness [25]. There is evidence that people maintain less physical distance from people they like or with whom they feel comfortable to interact [26, 27] and measures of physical seating distance have been used successfully in the investigation of several other forms of stigma or discrimination [28–33].

In the current study, we investigate the role of self-transcendence values in predicting seating distance with reference to an individual with schizophrenia. We test the prediction that both self-transcendence values and attitude toward the person with schizophrenia have an influence on seating distance. There are two forms that the joint influence of attitude toward the person and self-transcendence values could take. One would be an additive relationship wherein having a more positive attitude toward the person and placing a higher priority on self-transcendence values independently contribute to closer seating distance. The other possibility is to hypothesize an interaction between priority placed on self-transcendence values and attitude toward the person. Values priorities have been found to moderate the relationships among beliefs, attitudes and/or behavior [24, 34, 35] and it has been argued that the priority given to values, such as egalitarianism and social justice, can moderate the likelihood of negative personal attitudes being displayed in prejudicial behavior [36–39]; with those high in such values being less likely to display their attitudes in behavior toward outgroups. However, there have been no direct tests for the importance of values in moderating the relationship between attitudes and actual social distance related behavior to those with mental illness.

Method

Participants

Participants were 103 men and women undergraduates at the University of Western Ontario who participated for course credits in an introductory course in psychology.

Procedures

All assessments were carried out on an individual basis using a computerized protocol developed with MediaLab software (http://www.epirisoft.com/medialab.aspx). The components of the protocol relevant to the current report were the following.

Short Schwartz value survey (SSVS; [40])

This is an abbreviated 10-item version of the Schwartz value scale. Respondents were asked to rate the importance they attributed to 10 values. The exact wording of the values rated were: power (that is, social power, authority, wealth), achievement (success, capability, ambition, influence on people and events), hedonism (gratification of desires, enjoyment in life, self-indulgence), stimulation (daring, a varied and challenging life, an exciting life), self-direction (creativity, freedom, curiosity, independence, choosing one's own goals), universalism (equality, broad-mindedness, social justice, a world at peace, wisdom, unity with nature, environmental protection), benevolence (helpfulness, honesty, forgiveness, loyalty, responsibility), tradition (respect for tradition, humbleness, accepting one's portion in life, devotion, modesty), conformity (obedience, honoring parents and elders, self-discipline, politeness), and security (national security, family security, social order, cleanliness, reciprocation of favors). Each value was rated on a nine-point scale ranging from 0 ("opposed to my principles") to 8 ("of supreme importance"). Consistent with the structure underlying value priorities [4, 14, 15], scoring for self-transcendence value orientation was based on the average score for universalism and benevolence.

Mental illness vignette

A vignette was provided concerning a young woman suffering from schizophrenia. The vignette was adapted from one used in an extensive population survey in Germany [41], and the symptoms described in the vignette fulfill DSM criteria for schizophrenia as established by five experts in psychopathology. The vignette consisted of a photograph of a young woman (Lisa) and the following description:

> Within the past month, Lisa has changed in her nature. More and more she has retreated from her friends and colleagues, up to the point of avoiding them. If someone manages to involve her in a conversation, she only talks about whether some people have the natural gift of reading other people's thoughts. This question has become her sole concern. In contrast with her previous habits, she has stopped taking care of her appearance and looks increasingly untidy. At work, Lisa seems absent-minded and frequently makes mistakes. As a consequence she has already been summoned to her boss.
>
> Finally, Lisa has stayed away from work for an entire week without an excuse. Upon her return, she seemed anxious and harassed. She reported that she was now absolutely certain that people cannot only read other people's thoughts, but that they can also directly influence them. She was, however, unsure who would steer her thoughts. She also said that, when thinking, she was continually interrupted. Frequently she would even hear those people talk to her, and they would give her instructions. Sometimes, they would also talk to each other and make fun of whatever she was doing at the time. She said that the situation was particularly bad at her apartment. At home she would really feel threatened and would be terribly scared. Hence, she had not spent the night at her place for a week, but rather she had hidden in hotel rooms and hardly dared to go out. Lisa sought professional help and was told she appears to be suffering from schizophrenia.

After having been presented with the vignette, participants were asked to complete several ratings with respect to the person, including a set of semantic differential items designed to assess evaluative attitude toward the person. These items used seven-point response formats to rate the extent to which the person was seen as unpleasant–pleasant, bad–good, nasty–nice, and unattractive–attractive. The alpha co-efficient for the scale, to measure attitude to the person, was 0.82.

The complete computerized protocol, which included several measures unrelated to the focus of this report, took an average of approximately 30 min to complete.

Seating measure

After completing the computerized assessment, participants were told that the next stage of the study consisted of an opportunity to meet the young woman whose past experience with schizophrenia had been described. It was explained that she was helping the researchers with the project and she would tell them about her experience with the illness. The researcher then accompanied the participant to another room, which had a desk against one wall and a series of 7 chairs along the other wall. A clipboard and sweater were on the second chair from the left, and participants were told that the young woman they were going to meet had apparently left the room but would undoubtedly be back very soon. It was indicated that she had been sitting in the chair with the items and participants were asked to take a seat and wait until her return. The researcher then left the room. A hidden video camera recorded the participants' seating choice. The seating distance measure reflected the proximity of the chair the participant chose to that of the chair identified as that belonging to the young woman with schizophrenia, varying between 1 (right next to her seat) and 5 (maximum distance away). After a couple of minutes, the researcher returned

and indicated again that the young lady was going to be returning shortly, and asked if in the meantime the participants would complete a questionnaire which he had neglected to give them earlier. The questionnaire was designed to assess any suspicions the participant may have had regarding the nature of the study. Consistent with the general recommendations of Aronson and Carlsmith [42], subjects were asked what they thought was the hypothesis or purpose of the study, and whether there were any aspects of the procedure that caused them to be suspicious.

Following the participants' completion of the suspiciousness questions, the researcher again re-entered the room and the study was terminated, and he de-briefed the participants. All procedures were approved by the Ethics Review Board of the Department of Psychology, University of Western Ontario.

Results

Technical problems were encountered in saving data from the computerized assessment of one participant and in recording seating choice of two other participants. The response times of five participants on the computerized assessment was judged to be so fast (<600 ms) as to raise concerns about random responding. These eight participants were dropped from the data set leaving a final sample of 95. There were 35 males and 60 females with a mean age of 18.8 years (SD 2.1).

Seating distance

Nine participants sat immediately next to the chair designated as belonging to the young woman, 47 sat two chairs away, 27 sat three chairs away and 12 sat four chairs away. The intercorrelations between attitude to the person with schizophrenia, priority rating of self-transcendent values, gender, and seating distance are presented in Table 1. Gender was coded with '1' indicating female and '2' male. Women sat significantly closer in anticipation of encountering a female with schizophrenia than did men (means of 2.20, SD 0.68; and 2.86 SD 0.91, respectively). Those who provided a higher endorsement of self-transcendent values also indicated a more positive attitude toward the ill person, but neither attitude to the person nor self-transcendent values showed a zero-order correlation with seating distance.

In order to test for the predicted moderating effect of self-transcendence on the importance of attitude to the person in predicting seating distance, we carried out a multiple regression analysis, which included standardized scores of self-transcendence, attitude, and the interaction of the two variables. In addition, we included gender as a covariate to control the obtained zero-order relation between gender and seating distance. The results are presented in the upper portion of Table 2. They show that gender makes an independent contribution to the prediction of seating distance. In addition, there was significant interaction between self-transcendent values and attitude toward the person in predicting seating distance. Figure 2 shows the results of a simple slope analysis [43], which illustrates the interaction between self-transcendence and attitude toward the person described as having schizophrenia in predicting seating distance. The pattern outlined in Fig. 2 is consistent with the hypothesis outlined in the introduction. When self-transcendent values were high, there was no significant relationship between attitude to the person with schizophrenia and seating distance ($\beta = 0.14$, t (90) = 1.12, n.s.). When self-transcendent values were low, however, more positive attitudes predicted closer seating distance ($\beta = -0.38$; t (90) = 3.04, $p < 0.01$).

Table 1 Intercorrelations of predictor variables and seating distance ($n = 95$)

	Seating Distance	Attitude to Person	Self-transcendence
Positive Attitude to Person	-.19		
High Self-transcendent Values	-.16	.35**	
Gender	.38**	-.09	-.05

** p 0.001

Table 2 Regression analysis for predictor of seating distance

Predictor	Standardized beta	t	p
1. All subjects ($n = 95$)			
Gender	0.298	3.16	0.002
Positive attitude to person with schizophrenia	−0.132	−1.36	0.176
High self-transcendent values	−0.033	−0.338	0.736
Interaction self-transcendent values and attitude to persons with schizophrenia	0.291	3.01	0.003
2. Those with no suspicions ($n = 80$)			
Gender	0.296	2.86	0.005
Positive attitude to person with schizophrenia	−0.200	−1.88	0.063
High self-transcendent values	−0.010	−0.00	0.923
Interaction self-transcendent values and attitude to persons with schizophrenia	0.288	2.62	0.011

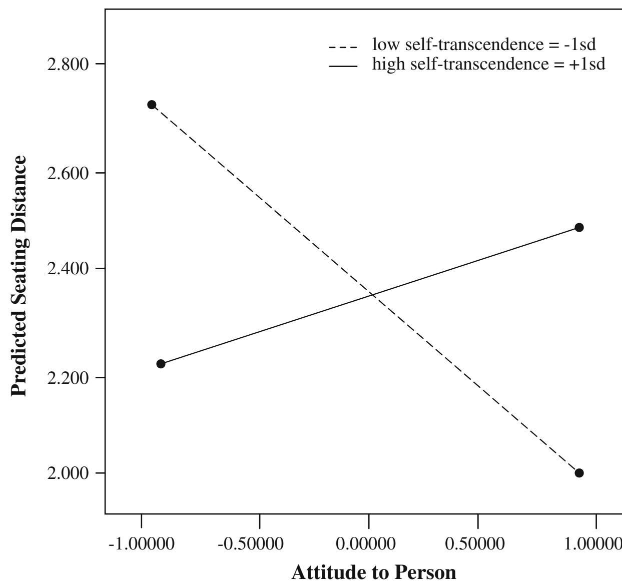

Fig. 2 Relation between attitude to person and seating distance as a function of priority given to self-transcendent values. Attitude to person is presented as a centered score (score minus mean), with higher scores indicating more positive attitudes

In order to examine whether the foregoing results were influenced by suspicions about the experimental procedure, we examined the responses of each participant to the suspiciousness questionnaire. A conservative approach was taken in identifying participants who indicated suspiciousness about whether an interview with a person with schizophrenia was actually going to occur ($n = 13$), or that the researchers were interested in where they sat ($n = 2$). Eliminating these participants left a reduced sample of 80. The lower portion of Table 2 presents the results of the regression analysis on this reduced sample. This shows a similar pattern as for the total sample with gender and the interaction between self-transcendent values. Additional analyses revealed no significant main effects or interactions for the other three values priority dimensions of enhancement, conservatism or openness to change.

Discussion

Individuals with a mental illness are generally acutely aware of their stigmatized identity [44–46], which can result in increased sensitivity to cues regarding others' degree of comfort or ease in interacting with them. Unfortunately, there has been very little research on factors which influence actual behaviors with respect to someone with a psychiatric diagnosis [47–50]. Research on discrimination with reference to other groups indicates that self-reported attitudes and beliefs do not always predict spontaneous behavior related to feelings of ease in interaction [28, 33, 39].

In recent years, researchers have highlighted the potential importance of personal standards or values, which emphasize behaving in an egalitarian or non-prejudicial manner in predicting reactions to stigmatized groups [38, 51–53]. Although a recent report found a significant correlation between self-transcendent values of equality and benevolence and behavioral intentions toward individuals with either schizophrenia or depression [13], the current data suggest a more complex relationship with respect to predicting a potentially significant aspect of actual social interaction—physical distance. We did not find a simple bivariate relationship between self-transcendent values and seating distance, but priority placed on this value did moderate the relationship between stated attitudes toward an individual described as having a mental illness, and seating proximity. In particular, higher endorsement of self-transcendent values was associated with more positive evaluative ratings of a person with schizophrenia, but such ratings did not predict seating distance. On the other hand, those with lower self-transcendent values reported less positive attitudes, and these attitudes were a significant predictor of physical proximity.

One could postulate that those with high egalitarian values distorted their responses to the attitude scale in a desirable direction, and those with less commitment to such non-prejudicial goals were more honest in how they completed the scales. In a previous study [13] using another sample from the same student population, we found the relationship between self-transcendent values and stated behavioral intentions to be independent of social desirability bias. Subsequent analyses of those data indicate that the correlations of self-transcendent values with beliefs about depression or anxiety, or attitudes toward an individual with depression or anxiety, are not explained by differences in scores on a social desirability scale [13].

A second possibility is that, the self-transcendent values and the egalitarian goals can override other dispositions such as beliefs or attitudes in predicting aspects of prejudicial behavior [54, 55]. If this was occurring in the present study, we might expect a main effect for such values in predicting seating distance. Although we have reported such an independent role for self-transcendent values in predicting deliberate behavioral intention related to social distance (such as likelihood of working with a person, renting a room, etc.), no such main effect was found with reference to actual seating distance.

Recent research on "explicit", declarative aspects of attitudes in comparison to "implicit" or more associative affective components could provide another explanation of our findings. Explicit attitudes are reflected in the responses made to verbally based measures of evaluation as used in this study. Implicit attitudes, on the other hand, are based on more primitive affective associations including unease

and fear, which are assessed through measures such as the Implicit Association Test [56] or affective priming [57]. Although sometimes it has been assumed that implicit attitudes are more valid indicators of attitude, there is now evidence that both are valid concepts that vary in the nature of the behavior that they predict [58]. Declarative measures appear to be better predictors of deliberate planned actions (such as represented in statements of behavioral intention), while implicit attitudes are more likely to predict more spontaneous, less deliberate aspects of behavior, including non-verbal responses such as physical proximity [28, 33, 59–62].

It has been hypothesized that when non-prejudicial egalitarian goals or values are low, explicit measures are more likely to reflect primitive affective associations of ease, fear, etc., than when an individual is committed not to being prejudicial [38]. Therefore, we might expect that greater consistency between evaluative (explicit) and affective (implicit) responses for those with lower commitment to egalitarian goals would result in declarative attitudes being more predictive of seating behavior. On the other hand, consistent with our earlier report, self-transcendent values as well as explicit belief and attitude measures are more likely to predict deliberate behavioral intentions [13]. A full examination of the validity of this explanation will require an extension of our paradigm using valid measures of implicit attitude.

Two further issues warrant discussion: the role of gender in predicting seating distance and the possible influence of general preferences related to physical distance.

Our data show that women sat closer to the anticipated seat of the ill person than did men. Given that the ill person was always portrayed as a woman, we cannot be certain whether this finding reflects a general preference on the part of women regardless of the other person's gender, or it is a result of greater comfort with proximity in a same-gender interaction. While the effects of participant gender are certainly noteworthy, the regression analyses indicate that the interaction between self-transcendent values and attitudes in predicting seating distance is independent of the gender effect.

Norman et al. [13, 63] have shown that responses to a social distance scale reflecting behavioral intentions to someone with schizophrenia or depression are related to an individual's preferred social distance to a non-ill person. In the previous reports, the role of beliefs related to mental illness in predicting social distance to an ill person was independent of the more general preferences. Although it is likely that seating distance in this study may also be influenced by preferences regarding physical proximity to anyone, it is unlikely that this can explain the interaction between values and specific attitudes toward the person with schizophrenia in predicting seating distance. Nevertheless, it would be of interest to include and control for seating distance to a non-ill person in future work.

In discussing the implications of previous findings of a relationship between self-transcendent values and behavioral intentions [13], we argued that interventions which could increase the priority given to egalitarian goals [64, 65], or their salience [35, 66–69] could result in favorable changes in deliberate behaviors toward those with mental illness such as hiring, renting, etc. Although such interventions may have more impact on deliberate compared to spontaneous aspects of social interaction [58], we should not be over pessimistic. There is some evidence emerging that those with well-internalized, chronic concerns about being egalitarian may eventually come to be able to control more automatic aspects of prejudice [70–72]. Future research should explore differential influence of explicit and implicit attitudes more thoroughly in predicting actual behavior toward those with mental illness and the possible importance of value priorities in moderating such effects.

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