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Short report

The effects of a documentary film about schizophrenia on cognitive, affective and behavioural aspects of stigmatisation



Bénédicte Thonon ^{a,*}, Amandine Pletinx ^b, Allison Grandjean ^b, Joël Billieux ^b, Frank Larøi ^a

^a Department of Psychology: Cognition and Behaviour, University of Liège, Boulevard du Rectorat, 3 (B33), 4000 Liège, Belgium

^b Laboratory for Experimental Psychopathology, Psychological Science Research Institute, Catholic University of Louvain, Place Cardinal Mercier, 10, 1348 Louvain-la-Neuve, Belgium

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ABSTRACT

Background and Objectives: Stereotypes about schizophrenia may lead to prejudicial attitudes and discrimination with debilitating effects on people diagnosed with schizophrenia. There is thus a need to develop interventions aiming to prevent, reduce or eliminate such stereotypes. The aim of this study was to evaluate the effects of a documentary film on schizophrenia on cognitive, affective and behavioural aspects of stigmatisation.

Methods: Forty-nine participants were assessed on measures of stereotypes and social distance, and on the Model of Stereotype Content, which includes measures of stereotypes, emotional reactions and behavioural tendencies. Participants were randomly assigned into either a condition in which they viewed the documentary film (Film group), or into a control condition in which no intervention was conducted (Control group).

Results: Only participants in the Film group revealed a significant decrease of negative stereotypes (Dangerousness and Unpredictability) and desired Social distance, and a significant increase in the perception of sociability in persons with schizophrenia.

Limitations: Small sample size and its reduced generalizability are the main limitations in this study.

Conclusions: These findings suggest that a documentary film promoting indirect contact with people diagnosed with schizophrenia is a promising tool to prevent and reduce stigmatisation regarding schizophrenia.

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1. Introduction

Stereotypes are commonly used in order to simplify our surrounding world, thus making it more predictable (Whitley & Kite, 2013). Nevertheless, stereotypes can lead to prejudice (i.e., negative attitudes) and discrimination (i.e., unfair treatment) (Corrigan, Kerr, & Knudsen, 2005). Studies clearly show that people diagnosed with schizophrenia are particularly stigmatised (Fiske, 2012; Sanders Thompson, Noel, & Campbell, 2004). Stigmatisation might be as damaging as the symptoms, leading notably to social rejection, family conflicts and employment discrimination (Feldman & Crandall, 2007). Although studies indicate that

stereotypes are slowly changing towards a better understanding of mental illness, negative attitudes persist (Sanders Thompson et al., 2004) or may even have worsened (Schomerus et al., 2012). Therefore, it is crucial to find ways of preventing or modifying these negative stereotypes in order to avoid or reduce the prejudice and discrimination experienced by people diagnosed with schizophrenia.

Combining anti-stigma strategies may be the most effective solution to reduce stigmatisation. For instance, Rüscher et al. (Rüscher, Angermeyer, & Corrigan, 2005) argued that the most promising approach consists of a combination of contact and education. Contact-type strategies have been reported to be the most efficient for reducing prejudicial attitudes and discrimination of people diagnosed with a serious mental illness (Overton & Medina, 2008; Schachter et al., 2008; Schultze, Richter-Werling, Matschinger, & Angermeyer, 2003). Documentary films are one example of combining education and contact with people diagnosed with

Abbreviations: MSC, Model of stereotype content.

* Corresponding author.

E-mail address: benedicte.thonon@ulg.ac.be (B. Thonon).

schizophrenia, and a number of studies have examined the efficacy of this type of intervention on reducing negative stereotypes about schizophrenia (Brown, Evans, Espenschade, & O'Connor, 2010; Corrigan, Larson, Sells, Niessen, & Watson, 2007; Larøi & Van der Linden, 2009). For instance, Larøi and Van der Linden (Larøi & Van der Linden, 2009) used a documentary film (“Radio Schizo”) that follows young people diagnosed with schizophrenia in their daily lives. In contrast to other documentary films presenting schizophrenia by interviewing mental health professionals, in the film used in the study it is the patients themselves who talk about their mental illness through individual interviews. This kind of indirect contact – first person account – has already shown to have broader positive effects on stigmatisation than information given by, for instance, a mental health professional or a teacher (Corrigan et al., 2007). Larøi and Van der Linden (Larøi & Van der Linden, 2009) observed that the intervention reduced negative beliefs and desired social distance with those diagnosed with schizophrenia in a group of psychology (second-year) students. Although these results are promising, the study presented an important limitation. A control group, consisting of participants who did not view the documentary film, was not included and therefore the observed changes in attitudes could not exclusively and specifically be attributed to the intervention itself.

The goal of the present study was to evaluate the effects that the documentary film “Radio Schizo” might have on general stereotypes and the desired social distance regarding people diagnosed with schizophrenia. Moreover, another important goal was to assess the change in three components of stigmatisation: stereotypes, prejudice, and discrimination, i.e., cognitive, emotional and behavioural components. In this respect, we used the Model of Stereotype Content (MSC) (Fiske, Cuddy, Glick, & Xu, 2002). The MSC allows predicting emotional reactions and behavioural tendencies grounded on a primary evaluation involving two dimensions: warmth and competence. Warmth (or “sociability”) refers to the assessment of the other’s intentions (i.e., “Does that person have good or bad intention?”), whereas competence refers to the assessment of the ability to enact these intentions. The combination of the two dimensions forms the stereotype content. Further, four main patterns of emotional reactions (i.e., prejudicial attitudes) emanate from the two dimensions: pity, admiration, envy and contempt. In addition, four behavioural tendencies (i.e., discrimination) are linked to these emotions: active and passive help, and active and passive harm (Fiske, Cuddy, & Glick, 2007).

In the current study it was hypothesized that, compared to control condition, viewing the film would have a significant positive impact in terms of stereotypes, emotional reactions, desired social distance and behavioural tendencies towards people with schizophrenia.

2. Methods

2.1. Participants

Participants were recruited from the general population via social networks, and among first-year psychology students (i.e., who do not have any experience in the mental health field yet) via email distribution and information given in classes. Potential participants were informed that the study aimed to evaluate people’s knowledge about schizophrenia in order to avoid any biases in future answers. The sample included 53 volunteer participants from different educational levels and with varied occupations. Exclusion criteria included being under the age of 18, or working or studying in the mental health field. Participants were paired as best as possible in terms of age, sex, educational level, occupation and knowledge about schizophrenia. Two participants dropped out

after the first session and two participants were excluded due to non-compliance with the procedure.

Socio-demographic data for the entire sample, and for each group, are presented in Table 1. As assessed by a *t*-test, average age and years of education did not significantly differ between groups. Fisher’s exact tests were carried out, revealing that there were no significant differences between groups in terms of proportion of male-female ($p = .75$), psychology students ($p = 1.00$), participants knowing about schizophrenia ($p = 1.00$) and participants having had previous contact with persons with schizophrenia ($p = .72$).

2.2. Procedure

All participants provided written informed consent and the study was conducted in accordance with the Faculty of Psychology’s (Catholic University of Louvain) ethical code regarding research with human participants. Participants were paired and randomly assigned to the Film or Control groups. Both groups were assessed on different variables at study entry. Within a week, participants from the Film group watched the documentary film about schizophrenia. Participants from the Control group did not watch any film. About one week after the first assessment, both groups were re-assessed on all variables. The average interval between the first and the second assessment was 7.67 days ($SD = 3.43$). Both groups were debriefed at the end of the study.

The documentary film, “Radio Schizo” (duration: 55 min), follows five young persons diagnosed with schizophrenia, all of whom are relatively stabilised but differ on many levels (e.g., symptom severity, awareness of illness, living conditions, working status, etc.). They are presented in various social situations (e.g., with their friends, relatives, psychiatrist, etc.) and locations (e.g., in the hospital, in a shared supervised house, at home, etc.). Some scenes are more intimate, consisting of interviews where they share their feelings and thoughts about their illness. The camera also follows them in their radio project, which involves creating a radio programme that introduces schizophrenia to the general public. The key messages that the documentary film wants to present are that schizophrenia varies in its manifestation and that there are regular human beings behind the illness. Interestingly, experts in the field agree upon the fact that this latter issue (seeing the person instead of the illness) is the type of message that should be included in population-level campaigns that aim to reduce mental health-related stigma (Clement, Jarrett, Henderson, & Thornicroft, 2010).

Participants of the Film group were provided with a DVD of the film and instructed to watch it alone, in its entirety, in a quiet environment, without having consumed alcohol or drugs, and without being too tired. They were also asked not to talk about the documentary film with others, including other study participants.

2.3. Measures¹

Stereotypes and social distance This 29-item questionnaire consisted of all the items from Schultze et al. (Schultze et al., 2003). Further, in order to create a more complete and nuanced questionnaire, additional items (not already included in Schultze et al.) were also included based on Angermeyer and Matschinger (Angermeyer & Matschinger, 2004) and Link, Cullen, Frank, and Wozniak (Link, Cullen, Frank, & Wozniak, 1987). The questionnaire

¹ We originally included an implicit measure using the Affect Misattribution Procedure (AMP; Payne, Cheng, Govorun, & Stewart, 2005), but as it lacked sensibility, information on this was removed. The interested reader can, however, find information regarding the implicit measure and the results for this measure in the supplementary appendix A.

Table 1
Socio-demographic data for the entire sample and for each group.

	Total sample (N = 49)	Control group (n = 25)	Film group (n = 24)
Age	28.57 (SD = 11.61; min–max = 18–63)	28.08 (SD = 11.3; min–max = 18–63)	29.08 (SD = 12.15; min–max = 18–60)
Sex (M/F)	13/36	6/19	7/17
Years of education M (SD)	13.94 (2.68)	13.96 (2.68)	13.92 (2.73)
Psychology students	24.5%	24%	25%
Previous contact	18.4%	16%	20.8%
Knowledge about SZ	77.6%	76%	79.2%

assesses various commonly held stereotypes about schizophrenia (see Table 2), as well as the desired Social distance towards people diagnosed with schizophrenia (for the complete questionnaire, see supplementary appendix B). Each item was evaluated on a 9-point Likert scale (ranging from 0 = strongly disagree, to 8 = strongly agree; 4 = not sure). The reliability coefficients can be found in Table 2.

Table 2
Stereotypes and social distance subscales.

	Item count	Cronbach's alpha
Unpredictability	3	.62
Dangerousness	4	.66
Incompetence	3	.55
Responsibility	2	.60
Creativity	1	
Social distance	16	.88

Model of Stereotype Content (MSC) Based on the model developed by Fiske et al. (Fiske et al., 2002), a three-dimensional questionnaire (26 items) was created relating to schizophrenia. For the Stereotype content scale (6 items), participants indicated how they agreed with people with schizophrenia being warm, sociable, and friendly (Warmth), and competent, capable, and intelligent (Competence). The Emotional reactions scale (8 items) assessed how participants would feel in the presence of a person with schizophrenia. This scale measured: Pity (pity, sympathy), Envy (envy, jealousy), Admiration (admiration, pride) and Contempt (contempt, disgust). The Behavioural tendencies scale (12 items) evaluated how participants would behave in the presence of a person with schizophrenia. This scale measured: Active harm (fight, attack, harass), Passive harm (exclude, ignore, demean), Active facilitation (help, protect, assist) and Passive facilitation (associate with, cooperate with, unite with). Each item was marked on a 5-point Likert scale (ranging from 1 = strongly disagree, to 5 = totally agree; 3 = neither agree nor disagree).

In order to verify if the intervention's effects were specific to schizophrenia, the same questions were asked regarding people presenting substance abuse.

Social Desirability The impression management subscale of the social desirability questionnaire (DS-36; Tournois, Mesnil, & Kop, 2000) was included in the present study. This dimension comes into play in evaluative contexts, particularly when there is an incentive for a favourable self-presentation (Steenkamp, de Jong, & Baumgartner, 2010). Cronbach's alpha for the Impression management subscale was .75.

3. Results

The means and standard deviations of the Stereotypes and Social distance questionnaire, and the MSC are listed in Tables 3 and 4, respectively. Independent-samples *t*-tests showed that the two

Table 3
Mean scores (SD) on Stereotypes and Social distance before and after viewing the documentary film.

	Control group		Film group	
	Before	After	Before	After
Stereotypes				
Dangerousness	2.88 (1.40)	2.68 (1.40)	2.81 (1.21)	1.72 (1.34)***
Unpredictability	4.24 (1.12)	4.19 (.94)	4.71 (1.13)	3.65 (1.73)**
Incompetence	2.61 (1.42)	2.64 (1.17)	2.53 (1.12)	2.62 (1.69)
Responsibility	1.18 (1.31)	1.26 (1.49)	1.44 (1.45)	1.27 (1.47)
Creativity	4.00 (1.29)	3.88 (.72)	4.58 (1.47)	4.58 (1.50)
Social distance	2.36 (1.13)	2.42 (1.26)	2.38 (1.07)	1.85 (1.20)**

** = $p < .01$; *** = $p < .001$ (paired-samples *t*-tests).

Table 4
Mean scores (SD) on the MSC before and after viewing the documentary film.

	Control group		Film group	
	Before	After	Before	After
MSC – Stereotype content				
Warmth	2.86 (.62)	3.05 (.55)	2.80 (.78)	3.74 (.87)***
Competence	3.47 (.63)	3.57 (.70)	3.85 (.61)	4.08 (.47)
MSC – Emotional reaction				
Pity	2.86 (.62)	2.74 (.65)	3.12 (.68)	3.31 (1.02)
Admiration	1.72 (.80)	1.78 (.80)	1.75 (.75)	2.06 (.77)
Envy	1.38 (.71)	1.14 (.44)*	1.31 (.60)	1.14 (.45)*
Contempt	1.84 (.72)	1.74 (.72)	1.92 (.85)	1.94 (.76)
MSC – Behavioural tendency				
Active help	3.55 (.74)	3.47 (.76)	3.97 (.61)	3.79 (.63)
Passive help	2.92 (.74)	2.92 (.58)	3.01 (.70)	3.05 (.59)
Active harm	1.21 (.56)	1.17 (.48)	1.11 (.35)	1.07 (.19)
Passive harm	1.96 (.81)	1.99 (.86)	1.7 (.71)	1.57 (.84)

* = $p < .05$; *** = $p < .001$ (paired-samples *t*-tests).

groups did not significantly differ with regard to the various measures before viewing the film, except on Competence ($t = -2.356$) and Active help ($t = -2.179$).

We conducted a 2 (time: before vs. after viewing the film) \times 2 (group: control vs. film) ANOVA, with repeated measures on the time of assessment for the variables showing a significant

Table 5
2 \times 2 ANOVAs with repeated measures on time of assessment.

	Effect	<i>F</i>
Stereotypes		
Dangerousness	Time	21.719****
	Time \times group	10.365**
Unpredictability	Time	9.669**
	Time \times group	7.898**
Social distance	Time	4.812*
	Time \times group	7.196**
MSC – Stereotype content		
Warmth	Time	29.107****
	Time \times group	12.904***

* = $p < .05$; ** = $p \leq .01$; *** = $p < .001$; **** = $p < .0001$.

difference before and after viewing the documentary film (using paired-samples *t*-tests). A significant main effect for the time of assessment of Dangerousness, Unpredictability, Social distance and Warmth was found, as well as a significant interaction between time and group for all these measures (see Table 5).

Regarding Envy, there was a significant main effect for the time of assessment ($F(1, 47) = 8.737, p = .005$), but no significant interaction between time and group ($F(1, 47) = .284, p = .597$).

Paired-samples *t*-tests for the MSC regarding Substance abuse showed that only the Film group presented a slight increase on perception of Warmth ($M_1 = 3.31, SD = .75; M_2 = 3.57, SD = .90; t = -2.255, p = .034$) and on Active facilitation ($M_1 = .82, SD = .17; M_2 = 1.02, SD = .21; t = 2.250, p = .018$). A 2 (time: before vs. after viewing the film) \times 2 (group: control vs. film) ANOVA, with repeated measures on the time of assessment, revealed a significant main effect for the time of assessment of Warmth ($F(1, 47) = 6.321, p = .01$) and Active facilitation ($F(1, 47) = 8.030, p = .007$), but no significant interaction between time and group.

Assessing both groups separately, the Impression management subscale of the DS-36 was not significantly correlated with any of the measures, before nor after viewing the documentary film.

4. Discussion

The main goal of this study was to evaluate the effects that a documentary film about schizophrenia might have on cognitive, affective and behavioural aspects of stigmatisation concerning people diagnosed with schizophrenia.

It was hypothesized that the documentary film would diminish negative stereotypes and desired social distance towards people diagnosed with schizophrenia. This was confirmed as, within the Film group, stereotypes of dangerousness and unpredictability significantly decreased after viewing the film. This decrease in these particular stereotypes is important as they are significantly linked to desired social distance. In this study, after viewing the documentary film, the willingness for social distance significantly declined in the Film group but not in the Control group. This confirms our hypothesis and previous studies that also used filmed contact to change attitudes towards schizophrenia (Brown et al., 2010; Corrigan et al., 2007). These findings are promising as they suggest that a documentary film promoting indirect contact with people diagnosed with schizophrenia does not only have an effect on increasing knowledge about that illness, but also on improving certain attitudes towards people diagnosed with schizophrenia. Further, discrimination originating from desired social distance has been associated with lower self-esteem in stigmatised people (Lysaker, Tsai, Yanos, & Roe, 2007), underlining the importance of diminishing or preventing this kind of prejudicial attitude.

Regarding the MSC, only stereotype content improved after viewing the documentary film, without any significant change on emotional reactions and behavioural tendencies. In particular, within the Film group, only perceived warmth increased regarding people with schizophrenia. Stereotype content regarding schizophrenia, supposedly low on both warmth and competence, should be accompanied by emotional reactions of contempt (Fiske, 2012), which would lead to discriminatory behaviours of active harm (Cuddy, Fiske, & Glick, 2007). In our sample, participants indicated that they would mostly feel pity if they met a person diagnosed with schizophrenia. As for behavioural tendencies, participants mainly reported that they would help or protect (i.e., active facilitation) people diagnosed with schizophrenia and, to a lesser extent, cooperate or associate with them (i.e., passive facilitation). This is not in line with the prediction of the MSC. Initial stereotypes relatively high on competence and low on warmth should have led to active harm, mediated by the emotional reaction of envy.

However, the most frequently reported emotional reaction in this study was pity, which should predict active facilitation (Cuddy et al., 2007), i.e., the behavioural tendency mostly reported by our participants.

The increased perception of warmth after viewing the film was not accompanied by significant changes in either emotional reactions, or behavioural tendencies. This does not confirm our hypotheses and might suggest that, despite a change in one of the dimensions of the stereotype content, it takes more than one indirect contact with a stigmatised person or group of people to change prejudicial attitudes and discriminatory behaviours towards them. This is consistent with general cognitive and behavioural principles of change. A modification in cognitions does not necessarily lead to a related evolution of emotions and behaviours. Repetitive exposures to a certain situation is required in order to adopt new emotional and behavioural responses, and, in turn, to anchor the new beliefs (e.g., the altered stereotypes). For instance, a recent study (West & Turner, 2014) showed that extended contact with a person diagnosed with schizophrenia (first through a two-minute film, then during a face-to-face meeting) incited more positive emotional attitudes and non-verbal behaviours than when there was only one contact with the person diagnosed with schizophrenia. Furthermore, a change in attitude could also require a modification of the competence dimension of the stereotype content. However, it is worth noting that the documentary film did not explicitly target this aspect of stereotypes about schizophrenia.

Regarding the specificity of our intervention, stereotypes, emotional reactions and behavioural tendencies in the MSC were also evaluated concerning people with substance abuse. Analyses of variance revealed that the slight increase of warmth perception and active facilitation was not linked to the intervention, as opposed to the increase of warmth perception relative to people with schizophrenia, which can be attributed to the documentary film. It can thus be concluded that the documentary film had an exclusive impact on stereotypes relative to schizophrenia, therefore confirming the specificity of the intervention.

Although social desirability might be considered a potential bias, no significant correlations were observed between the measures included in the present study and the impression management scale.

This study presents several strengths. First, it used an anti-stigma strategy that has shown promising results in previous studies in terms of its efficacy to reduce stigmatisation regarding schizophrenia and it is a strategy that is easy to apply on a large scale. Second, the procedure included measures of varied components of stigmatisation. Finally, this study is the first to date to assess changes as a result of an intervention on the different dimensions of the MSC.

There are also some limitations in the present study. First, the sample size is relatively small and a quarter of participants are first-year psychology students. However, as they had not yet followed any classes on serious mental illness, they could not have been biased compared to other participants and are hence comparable with the (young) general population. Second, the Stereotypes subscales possess low internal consistency coefficients, which is partly due to the fact that they contain few items. Another limitation is related to the fact that the Control group did not watch a “control film”, which would have helped to control for the expectancy effect that the Film group might have been subjected to. Finally, the emotional reactions from the MSC do not include fear, even though this is the most commonly reported emotion when it comes to schizophrenia (Svab, 2012).

Future interventions should aim at changing the incompetence stereotype in order to modify emotional and behavioural reactions. They should also offer more than one indirect contact with a

stigmatised person or group of stigmatised people. Documentary films, for instance, have the advantage of being easily widely distributed (e.g. via the Internet), in the hope of having a meaningful improvement on emotional reactions and behavioural tendencies, i.e., prejudicial attitudes and discriminatory behaviours.

Declaration of interest

The authors declare that they have no conflicts of interest.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.jbtep.2015.08.001>.

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