# What predicts stigmatisation about schizophrenia? Results from a general population survey examining its underlying cognitive, affective and behavioural factors

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Abstract: Stigmatisation towards individuals diagnosed with schizophrenia (SZ individuals) remains an important problem, yet few studies to date have examined a theoretically comprehensive set of predictors of stigmatisation. This study aimed to evaluate cognitive, emotional and behavioural aspects of stigmatisation towards SZ individuals in the Belgian general population in order to better understand its underlying factors. A sample of 544 participants completed online questionnaires assessing common stereotypes regarding schizophrenia, desired social distance, level of contact and the Behaviours from Intergroup Affect and Stereotypes map (Cuddy et al., 2007). On average, most respondents believed SZ individuals are unpredictable and have a poor prognosis. Around 10% believed that they are dangerous. The most frequently reported emotions were pity and fear. Around 65% of the sample indicated that they would have positive behavioural reactions (passive/active facilitation). Around 33% of the sample indicated that they would distance themselves from SZ individuals, and around 20% would flee if in contact with a SZ individual. Fear and stereotypes of dangerousness and incompetence best predicted these fleeing and avoiding reactions. Fear was also explained by stereotypes of dangerousness and unpredictability. These factors should be accounted for when developing anti-stigma campaigns. The effect of contact should be further investigated.

Keywords: schizophrenia, stigmatisation, prejudice, discrimination, predictors, intervention.

# Introduction

Studies focusing on the stigmatisation suffered by people diagnosed with a mental illness show the tenacity of some stereotypes, in particular for individuals diagnosed with schizophrenia (SZ individuals) (Sanders-Thompson, Noel, & Campbell, 2004; Schomerus et al., 2012). For instance, Angermeyer, Millier, Rémuzat, Refaï, and Toumi (2013) found that, in a French sample, a large proportion of the respondents believed that SZ individuals were unpredictable and dangerous. Stigmatisation provoked by such beliefs can be seriously damaging and distressing, leading notably to social rejection (Feldman & Crandall, 2007), but also to internalized stigmatisation (Brohan et al., 2010). It is therefore crucial to understand what specifically and significantly drives discrimination in order, thereafter, to develop anti-stigma campaigns that address these specific factors and that will hence have a beneficial effect on people's attitudes regarding schizophrenia.

Previous studies (e.g., Angermeyer et al., 2013; Pescosolido et al., 2013), however, have mainly only included a description of the level of stereotypes and discriminatory behavioural intentions. Indeed, a paucity of studies have carried out prediction analyses that provide an understanding of what actually underlies stigmatisation regarding schizophrenia. Furthermore, regarding the few studies that have, they usually only include cognitive predictors (e.g., stereotypes, causes of the illness), thus ignoring other potential predictors such as emotions, which can attenuate or elicit various forms of discrimination. Besides, to the best of our knowledge, no studies have examined the predictors of discriminatory behaviours other than the desired social distance towards SZ individuals. In order to efficiently reduce the varied expressions of stigmatisation, anti-stigma campaigns need to influence as many relevant factors as possible.

Another consequence of previous studies mostly being descriptive is that they have not based their methods on a theoretical model of stigmatisation. In this context, the Model of

Stereotype Content (MSC; Fiske, Cuddy, Glick, & Xu, 2002) provides an interesting theoretical framework to approach the potential factors of stigmatisation regarding schizophrenia. The MSC has been validated in several studies and has shown that the evaluation of an out-group on the dimensions of warmth and competence predicts certain emotional reactions. Perceived warmth and competence predict the emotion of admiration, perceived warmth and lack of competence predict pity, perceived competence and lack of warmth predict envy, and perceived lack of both competence and warmth predict contempt. Cuddy, Fiske, and Glick (2007) took this model a step further and developed a pattern of behaviours (active or passive facilitation and harm) that are predicted by certain sets of stereotypes and emotions: the Behaviours from Intergroup Affect and Stereotypes (BIAS) map. According to the BIAS map, admiration elicits facilitative behaviours (both passive and active), whereas contempt elicits harmful behaviours (both passive and active). As for the more ambiguous emotions, envy leads to more active harm, but also possibly passive facilitation, and pity leads to more active facilitation, but also possibly passive harm. The prediction of stigmatisation is thus understood within a three dimensional model, where stereotypes lead to certain emotions, which in turn prompt or attenuate certain behaviours. Accordingly, the BIAS map takes the study of stigmatisation beyond the mere description of stereotypes to the prediction of prejudice and discrimination. In Cuddy et al. (2007), fear – the most reported emotion when it comes to schizophrenia (Švab, 2012) – was added to the BIAS map and was elicited by perceived low warmth, regardless of the level of competence. In their study, fear correlated positively with active harm, and to a lesser degree with passive harm and passive facilitation. However, the primal behavioural reaction provoked by fear is flight, but which has not been previously examined in a predictive study regarding schizophrenia.

Level of contact is another factor that could explain stigmatisation towards a SZ individual. Results for this factor, however, are mixed (Benov et al., 2013): a closer contact

can be linked, or not (Reavly, Mackinnon, Morgan, & Jorm, 2014), with either more (Loch et al., 2014) or less (West & Turner, 2014) stigmatisation. The impact of contact on stigmatisation thus clearly needs to be further explored.

The main goal of the present study was to examine the predictors of prejudicial attitudes and discriminatory behaviours, in order to guide interventions aiming to reduce stigmatisation towards schizophrenia. More specifically, and with the help of the BIAS map, we wished to explore the cognitive, affective and behavioural aspects of stigmatisation regarding schizophrenia. Furthermore, in order to address a limit of previous studies, fear and flight were added to the emotional and behavioural reactions. Moreover, those stereotypes that are most frequently reported in the scientific literature (dangerousness, unpredictability, incompetence, responsibility, poor prognosis, creativity) were also evaluated so that links between emotional and behavioural reactions with specific beliefs regarding schizophrenia could be explored.

Based on previous studies, it was hypothesized that SZ individuals would be regarded as low on warmth (Fiske, 2012; Sadler et al., 2012; Thonon et al., 2016), and that respondents would report mostly stereotypes of dangerousness and unpredictability (Angermeyer et al., 2013; Pescosolido et al., 2013). On the affective level, it was hypothesized that the most commonly reported emotions would be fear (Švab, 2012) and pity (Angermeyer et al., 2013; Thonon et al., 2016). As for behavioural tendencies, it was hypothesized that pity would lead to active facilitation (Cuddy et al., 2007), and that fear would lead to flight. It was also hypothesized that dangerousness would predict fear. Moreover, we wanted to generally explore what emotions would predict positive and negative behavioural tendencies regarding SZ individuals. Further, we wished to examine what underpinned such emotions. Finally, we wished to generally investigate the influence that contact may have on stigmatisation, as results in the literature concerning this variable are highly inconsistent.

## Methods

### Participants

The online survey included 544 Belgian participants. The average age of the sample was 29.71 years (*SD* = 10.78; min-max = 18-69) and 73% were female. The majority of the respondents (83%) had a tertiary level education (university or non-university).

The study was conducted in accordance with the Faculty of Psychology's (University of Liège) ethical code regarding research with human participants. Participants were recruited through social and university networks. They were told that filling in the survey implied that they freely consented to participate in the study and that they authorized the anonymous use of their data.

### Measures

#### *BIAS map (Cuddy et al., 2007)*

Respondents were asked to indicate the extent to which they agreed with the different Stereotypes, Emotions and Behaviours presented. Questions included for example: "I think a SZ individual is generally…(stereotype)", "Regarding a SZ individual, I feel… (emotion)", "In the presence of a SZ individual, I would… (behaviour)". The stereotypes dimension consists of Competence ("competent", "capable", "intelligent") and Warmth ("warm", "sociable", "nice"). Emotions include Pity ("pity", "compassion"), Envy ("envy", "jealousy"), Admiration ("admiration", "pride") and Contempt ("contempt", "disgust"). The emotion of Fear was added ("fear", "scare"). Behavioural tendencies comprised Active harm ("attack", "fight"), Passive harm ("exclude", "demean"), Active facilitation ("help", "protect") and Passive facilitation ("associate with", "cooperate with"). The behavioural tendency Flight was also added ("flee", "escape") as a reaction to Fear. Each statement was evaluated on a 5-point Likert-scale (ranging from 1 = "strongly disagree" to 5 = "strongly agree"; 3 = "not sure").

### *Stereotypes and Desired social distance*

A 26-item questionnaire based on different studies (Angermeyer & Matschinger, 2004; Schultze, Richter-Werling, Matschinger, & Angermeyer, 2003) assessed commonly held stereotypes about schizophrenia: Dangerousness, Unpredictability, Incompetence, Responsibility, Poor prognosis, Creativity. Rotated component matrix showed that Unpredictability and Incompetence were two separate factors, as opposed to one in Angermeyer and Matschinger (2004). The questionnaire also included the Desired social distance (DSD) scale (Link, Cullen, Frank, & Wozniak, 1987), which measures the desired distance relative to SZ individuals. Each statement (e.g., "People with schizophrenia are not capable of making important decisions about their lives", "I would not mind having a person with schizophrenia as a neighbour") was evaluated on a 5-point Likert-scale (ranging from 1 = "strongly disagree" to 5 = "strongly agree"; 3 = "not sure").

### *Contact*

Respondents indicated the kind of contact they had had with SZ individuals. Scores ranged from 0 to 6, with higher scores representing closer contact: never met a SZ individual (score = 0); seen movies/read books presenting SZ individuals (1); already met a SZ individual (2); a friend of the family is diagnosed with schizophrenia (3); studied/worked with a SZ individual (4); a family member is diagnosed with schizophrenia (5); currently living with a SZ individual (6). The variable Contact is the rank score of the closest contact the respondent was engaged in.

### *Social Desirability*

The "impression management" 18-item subscale of the Social Desirability questionnaire developed by Tournois, Mesnil and Kop (2000) was used. Participants are requested to indicate how different statements apply to them (e.g., "I always respect the law", "I

sometimes laugh about other people"). Each item was evaluated on a 7-point Likert-scale (ranging from 0 = "Completely false" to 6 = "Totally true"). Cronbach's alpha for the Impression management subscale is .82 (Tournois et al., 2000).

## Results

**Stigmatisation**

*Cognitive, affective and behavioural aspects of stigmatisation*

Results on the different scales of cognitive, affective and behavioural aspects of stigmatisation can be found in Table 1. On average, respondents believed that SZ individuals are competent, but tended to doubt that they are sociable. The most frequently reported emotion was Pity, followed by Fear. As for behavioural tendencies, respondents indicated that they would react in a positive way, using Active or Passive facilitation. Flight was reported in a quarter of the sample. Almost none of the respondents reported harmful behavioural tendencies.

Concerning the DSD, 30.9% of the sample indicated that they wished to distance themselves from SZ individuals. Specifically, 62.8% would not have SZ individuals taking care of their children for a couple of hours; 29.8% would not want them married to a member of their family; 27.4% would not recommend them for a job; 20.6% would not rent a room to them; 19.3% would not want them as their neighbour; 13% would not want to have them as their colleague; 10.7% would not introduce them to friends.

Regarding results from general stereotypes regarding schizophrenia, more than 50% of the sample believed that SZ individuals are unpredictable, and 10.1% that they are dangerous. A minority (15%) thought SZ individuals are incompetent. Almost half the sample agreed that schizophrenia has a poor prognosis. The majority of the respondents were not sure if SZ

individuals are creative. Finally, only 1% believed that SZ individuals are responsible for their illness.

**Table 1**
*Mean scores (SD) and frequencies (%) on the BIAS, DSD and Stereotypes questionnaires*

|  | *M (SD)* | *Disagree[a]* | *Not sure* | *Agree[b]* |
|---|---|---|---|---|
| **BIAS-Stereotype** | | | | |
| Competence | 3.55 (0.68) | 12.7 | 18.2 | 69.1 |
| Warmth | 2.91 (0.71) | 44.5 | 24.6 | 30.9 |
| **BIAS-Emotions** | | | | |
| Pity | 3.20 (0.88) | 27.6 | 24.7 | 47.7 |
| Admiration | 1.75 (0.79) | 86 | 9.4 | 4.6 |
| Envy | 1.23 (0.52) | 96.3 | 2.9 | 0.7 |
| Contempt | 1.40 (0.64) | 93.9 | 4.2 | 1.8 |
| Fear | 2.90 (1.12) | 41.4 | 16.2 | 42.4 |
| **BIAS-Behaviours** | | | | |
| Active facilitation | 3.75 (0.73) | 9.5 | 14.1 | 76.4 |
| Passive facilitation | 3.41 (0.78) | 18 | 22.5 | 59.5 |
| Active harm | 1.18 (0.44) | 97.6 | 1.9 | 0.6 |
| Passive harm | 1.86 (0.83) | 83.3 | 10 | 6.7 |
| Flight | 2.42 (1.05) | 61.5 | 16.2 | 22.3 |
| **DSD** | 2.83 (0.70) | 60.9 | 8.2 | 30.9 |
| **Stereotypes** | | | | |
| Dangerousness | 2.35 (0.64) | 80.7 | 9.1 | 10.1 |
| Unpredictability | 3.28 (0.77) | 28.2 | 18.5 | 53.3 |
| Incompetence | 2.50 (0.63) | 74.3 | 10.9 | 14.8 |
| Responsibility | 1.33 (0.49) | 98.6 | 0.4 | 1 |
| Poor prognosis | 3.11 (0.75) | 33.5 | 22.8 | 43.8 |
| Creativity | 3.17 (0.71) | 18.5 | 43.2 | 38.3 |

[a] Respondents who chose "strongly disagree" or "disagree".
[b] Respondents who chose "strongly agree" or "agree".

Independent samples *t*-tests revealed that women had slightly more positive attitudes than men regarding: Competence, Responsibility, Creativity, Envy, Contempt, Passive facilitation, Active harm, and Passive harm (mean differences under 0.25, out of a scale ranging from 1 to 5).

*Contact*

Around 50% of the sample indicated that they had never met a SZ individual, and 37.9% reported having had only a highly indirect contact with SZ individuals (through television). Some respondents (17.8%) indicated they had already met a SZ individual; 7.4% had a friend of their family who had schizophrenia; 7.7% worked or studied with a SZ individual; 13.6% had a family member diagnosed with schizophrenia; and 2.4% lived with a SZ individual.

As revealed by independent samples *t*-tests, the amount of contact one had with SZ individuals led to significant differences on various aspects of stigmatisation (see Figure 1). The links between Contact and stigmatisation were however inconsistent. In general, studying or working with a SZ individual (score 4) was related with more positive attitudes. Compared to lower levels of contact, this kind of contact was linked to less Fear, less Pity, more Active facilitation, less DSD, and a lesser agreement with stereotypes of Dangerousness, Unpredictability, Incompetence and Poor prognosis. Having a highly close contact (living with a SZ individual; score 6) led to more mixed results: more Active harm, less Active facilitation, less DSD, and less Fear. Finally, having a family member diagnosed with schizophrenia (but without living with him/her; score 5), generally led to a similar kind of stigmatisation to the kind of stigmatisation showed by people having lower levels of contact with SZ individuals (scores 0-3).
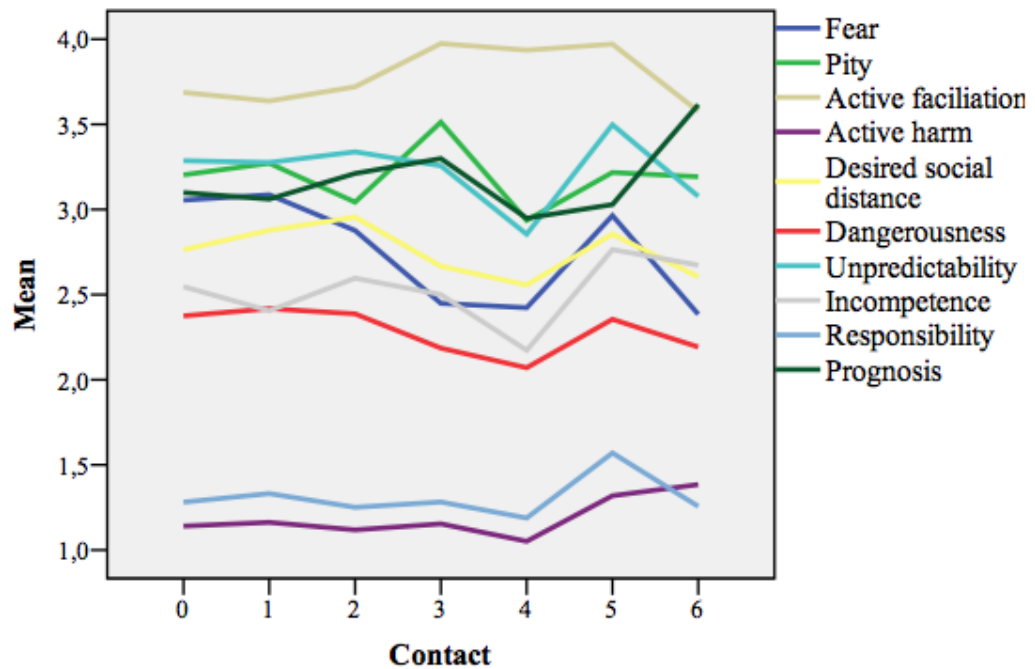
**Figure 1.** Relations between Contact and different aspects of stigmatisation.

**Predictors of behavioural tendencies**

For each behavioural tendency and for DSD, multiple regression analyses were applied. First, the stepwise strategy was used to determine which variables significantly predicted the outcome. Independent variables included Age, Sex, Education, Contact, Social desirability, Stereotype content (BIAS map), Stereotypes and Emotions. Multiple regression analyses were then run using the hierarchical strategy on the best predictors. Relevant stereotypes and, where pertinent, Age, Sex, Education, Contact, and Social desirability were entered in the first step predictors. Relevant Emotions were entered one by one in the subsequent steps. The hierarchical models can be found in Table 2.

Creativity, Contact, and Dangerousness (step 1) weakly but significantly predicted Active facilitation. Pity (step 2) added a significant contribution to the model ($R^2$ change = .061; $p < .001$), as did Contempt (step 3; $R^2$ change = .038; $p < .001$) and Admiration (step 4; $R^2$ change = .014; $p = .004$). The contribution of Dangerousness decreased by adding

Contempt to the model, and became non-significant with the addition of Admiration.

Incompetence, Dangerousness, Warmth and Creativity (step 1) significantly predicted Passive facilitation. Contempt (step 2) added a significant contribution to the model ($R^2$ change = .054; $p$ <.001), as did Admiration (step 3; $R^2$ change = .048; $p$ <.001) and Fear (step 4; $R^2$ change = .019; $p$ <.001). The contribution of Dangerousness decreased by adding Contempt to the model, and became non-significant with the addition of Fear. The contribution of Creativity decreased with the addition of Admiration.

Responsibility and Incompetence (step 1) weakly but significantly predicted Active harm. Contempt (step 2) added a significant contribution to the model ($R^2$ change = .072; $p$ <.001). The contribution of Responsibility and Incompetence decreased with the addition of Contempt to the model.

Incompetence, Dangerousness and Warmth (step 1) weakly but significantly predicted Passive harm. Contempt (step 2) added a significant contribution to the model ($R^2$ change = .111; $p$ <.001), as did Fear (step 3; $R^2$ change = .018; $p$ <.001). The contribution of Incompetence, Dangerousness and Warmth decreased with the introduction of Contempt. The contribution of Dangerousness became non-significant after the introduction of Fear in the model.

Dangerousness significantly predicted Flight. Fear (step 2) added a significant and substantial contribution to the model ($R^2$ change = .178; $p$ <.001). The introduction of Fear was accompanied by a substantial decrease of the contribution of Dangerousness.

Finally, Incompetence, Unpredictability, Dangerousness and Creativity significantly predicted DSD. Fear (step 2) added a significant contribution to the model ($R^2$ change = .018; $p$ <.001), as did Admiration (step 3; $R^2$ change = .011; $p$ <.001). The contribution of Unpredictability and Dangerousness decreased after the introduction of Fear in the model.

**Table 2**

*Hierarchical multiple regression with behavioural tendencies and DSD as dependent variables*

| | $\beta$ | $t$ | $\Delta R^2$ |
|---|---|---|---|
| **Active facilitation** | | | |
| Step 1 | | | .058 |
| Creativity | .17 | 4.08**** | |
| Contact | .12 | 2.88** | |
| Dangerousness | -.11 | -2.66** | |
| Step 2 | | | .117 |
| Creativity | .17 | 4.14**** | |
| Contact | .13 | 3.08** | |
| Dangerousness | -.14 | -3.25** | |
| Pity | .25 | 5.92**** | |
| Step 3 | | | .156 |
| Creativity | .17 | 4.14**** | |
| Contact | .13 | 3.26** | |
| Dangerousness | -.09 | -2.13* | |
| Pity | .25 | 6.10**** | |
| Contempt | -.21 | -4.95**** | |
| Step 4 | | | .168 |
| Creativity | .14 | 3.46*** | |
| Contact | .14 | 3.49*** | |
| Dangerousness | -.07 | -1.77 | |
| Pity | .23 | 5.69**** | |
| Contempt | -.22 | -5.33**** | |
| Admiration | .12 | 2.97** | |
| **Passive facilitation** | | | |
| Step 1 | | | .212 |
| Incompetence | -.24 | -5.30**** | |
| Dangerousness | -.17 | -3.97**** | |
| Warmth | .16 | 3.84*** | |

|  | | |
|---|---|---|
| Creativity | .14 | 3.50** |
| **Step 2** | | | .270 |
| Incompetence | -.20 | -4.48**** |
| Dangerousness | -.14 | -3.26** |
| Warmth | .16 | 3.90*** |
| Creativity | .13 | 3.54*** |
| Contempt | -.25 | -6.43**** |
| **Step 3** | | | .321 |
| Incompetence | -.18 | -4.20**** |
| Dangerousness | -.13 | -3.13** |
| Warmth | .12 | 3.09** |
| Creativity | .09 | 2.42* |
| Contempt | -.29 | -7.53**** |
| Admiration | .24 | 6.26**** |
| **Step 4** | | | .342 |
| Incompetence | -.18 | -4.33**** |
| Dangerousness | -.06 | -1.26 |
| Warmth | .10 | 2.52* |
| Creativity | .09 | 2.48* |
| Contempt | -.25 | -6.38**** |
| Admiration | .23 | 6.10**** |
| Fear | -.18 | -4.13**** |
| **Active harm** | | | |
| **Step 1** | | | .126 |
| Responsibility | .25 | 5.88**** |
| Incompetence | .19 | 4.51**** |
| **Step 2** | | | .205 |
| Responsibility | .20 | 4.82**** |
| Incompetence | .14 | 3.28** |
| Contempt | .30 | 7.20*** |
| **Passive harm** | | | |
| **Step 1** | | | .147 |

|  |  |  |  |
|---|---|---|---|
| Incompetence | .17 | 3.60*** |  |
| Dangerousness | .19 | 4.18**** |  |
| Warmth | -.16 | -3.61*** |  |
| **Step 2** |  |  | .271 |
| Incompetence | .11 | 2.45* |  |
| Dangerousness | .14 | 3.27** |  |
| Warmth | -.15 | -3.75*** |  |
| Contempt | .37 | 9.37**** |  |
| **Step 3** |  |  | .293 |
| Incompetence | .11 | 2.55* |  |
| Dangerousness | .06 | 1.40 |  |
| Warmth | -.12 | -3.12** |  |
| Contempt | .33 | 8.24**** |  |
| Fear | .18 | 4.10**** |  |
| **Flight** |  |  |  |
| **Step 1** |  |  | .18 |
| Dangerousness | .426 | 10.66**** |  |
| **Step 2** |  |  | .41 |
| Dangerousness | .16 | 4.09**** |  |
| Fear | .51 | 14.17**** |  |
| **DSD** |  |  |  |
| **Step 1** |  |  | .388 |
| Incompetence | .28 | 6.71**** |  |
| Unpredictability | .24 | 5.22**** |  |
| Dangerousness | .21 | 4.88**** |  |
| Creativity | -.18 | -5.14**** |  |
| **Step 2** |  |  | .434 |
| Incompetence | .28 | 6.95**** |  |
| Unpredictability | .19 | 4.30**** |  |
| Dangerousness | .12 | 2.67** |  |
| Creativity | -.17 | -5.02**** |  |
| Fear | .25 | 6.57**** |  |

| | | | |
|---|---|---|---|
| Step 3 | | | .458 |
| Incompetence | .27 | 6.88**** | |
| Unpredictability | .17 | 3.86*** | |
| Dangerousness | .13 | 2.88** | |
| Creativity | -.13 | -4.01**** | |
| Fear | .25 | 6.59**** | |
| Admiration | -.16 | -4.76**** | |

***p*<.05; \*\**p*<.01; \*\*\**p*<.001; \*\*\*\**p*<.0001**

## Predictors of emotional reactions

Predictors of the emotional reactions significantly contributing to behavioural tendencies and DSD were included in multiple regression analyses. The independent variables Age, Sex, Education, Contact, Social desirability, Stereotypes and Stereotype content (BIAS map) were integrated in stepwise multiple regression analyses.

Fear was mostly explained ($\Delta R^2$=.272) by beliefs of Dangerousness ($\beta$=.35; $t$=7.69; $p$<.0001), Unpredictability ($\beta$=.17; $t$=3.57; $p$<.001) and low levels of Warmth ($\beta$=-.13; $t$=-3.42; $p$<.01). The models for Contempt, Admiration and Pity did not sufficiently explain their variance (all $\Delta R^2$ < .092) and conclusions on what triggers these emotions are thus problematic.

Social desirability did not contribute significantly to either aspects of stigmatisation, as shown in the different multiple regression analyses.

## Discussion

The main goal of the present study was to examine potential predictors of affective prejudice and discriminatory behavioural tendencies, in order to guide interventions aiming to reduce

stigmatisation towards people diagnosed with schizophrenia. Another purpose was to provide a report on cognitive, affective and behavioural aspects of stigmatisation in the French-speaking Belgian general population.

On the cognitive level, it was hypothesized that the general population would regard SZ individuals as low on warmth (BIAS), which was confirmed in our sample. They were also perceived as high on the competence dimension, which is similar to the results found by Thonon et al. (2016), but differs from previous studies (Fiske, 2012; Sadler et al., 2012) where SZ individuals were found to be regarded as low on both warmth and competence. Another hypothesis regarding stereotypes was that SZ individuals would be regarded as unpredictable and dangerous. This was partly confirmed, as the strongest stereotype reported in our sample was unpredictability, followed by poor prognosis. Only one person out of ten believed that SZ individuals are dangerous, which is lower than what has been found previously in Belgium and in other countries (Angermeyer et al., 2013; Pescosolido, 2013).

On the affective level, results confirmed our hypothesis that the strongest emotions reported would be pity and fear. As for behavioural tendencies, it was hypothesized that respondents would mostly report active facilitation and flight. This was partly confirmed, as respondents most frequently reported both active and passive facilitation (in two thirds of the sample), and flight albeit to a lesser extent (in one quarter of the sample). Furthermore, one respondent out of three would rather keep a distance between themselves and SZ individuals (e.g.,not work with, befriend, or live next to them). Finally, active and passive harm were only rarely reported.

Regarding predicting the different emotional reactions and behavioural tendencies, those respondents who did report discriminatory behaviours (i.e., active and passive harm) were the ones who felt more contempt. Also, respondents reporting positive behaviours (active and passive facilitation) were the ones who felt less contempt. Variables studied here

(stereotypes, level of contact and socio-demographic characteristics) could not, however, explain exactly how contempt was provoked. Fear was also an important emotional reaction that was linked to more passive harm, more flight, more DSD, and less passive facilitation. Fear was strongly predicted by the belief that SZ individuals are dangerous and, to a lesser extent, unpredictable and less sociable. Admiration and pity were linked to positive behavioural tendencies, respectively passive and active facilitation. It is not clear, however, what leads to these emotions that predict positive behaviours.

Concerning the use of the BIAS map for the prediction of discrimination, it appeared in this study that the emotions selected in the model were only weakly reported by respondents, except for pity, which was against the prediction of stereotype content including low warmth and high competence (which should have led to envy). Nonetheless, pity should predict active facilitation, i.e., the most reported behavioural tendency in our sample. Our analyses showed, however, that pity was not predicted by warmth, nor by competence. Furthermore, no emotional reactions were strongly predicted by these two dimensions of stereotype content. Only perceived low warmth slightly predicted the reaction of fear. Nevertheless, the regression analyses underlined the importance of measuring these different dimensions (cognitive, affective and behavioural) of stigmatisation. Indeed, the introduction of emotions in the regression analyses was accompanied by a decrease in the contribution of certain stereotypes, which indicates that emotional reactions possibly mediate the relation between stereotypes and behavioural tendencies. In terms of anti-stigma campaigns, this means that targeting emotions would be a very pertinent and fruitful approach.

Level of contact led to mixed results regarding stigmatisation. Moderate contact with SZ individuals (e.g., work or study) appeared to be linked to the most positive attitudes and behaviours. Both no, little and indirect contact (e.g., through TV shows) seemed to be related with higher levels of stigmatisation. More intimate levels of contact (e.g., having a family

member with schizophrenia or living with a SZ individual) showed opposite results. However, these results should be taken with caution, as only a very small portion of our sample had close and direct contact with SZ individuals. The divergent results found in this study and previous studies might be due to a possible confusion between the *nature* of contact (e.g., familial, professional, direct, indirect) and the *frequency* of contact. Thus, the link between stigmatisation and these different aspects of contact with SZ individuals needs to be further investigated. Furthermore, contact – whether direct (e.g., interacting with a SZ individual) or indirect (e.g., watching a documentary film) – has been used as a strategy to diminish stigmatisation and has shown to be the most efficient strategy (Corrigan, Larson, Sells, Niessen, & Watson, 2007). It would be important to determine what actual aspect of contact is most effective in transforming stereotypical attitudes and to which degree (i.e., how much contact) it has a positive effect.

This study is limited by the socio-demographic characteristics of the sample: a higher proportion of women participated, the average age was relatively low (around 30 years old), and the level of education was rather high. Although effects of these characteristics on stigmatisation are not consistent, it would be important to have a more diverse population in order to determine which groups of people should be the target of anti-stigma campaigns. Indeed, it is recommended that these campaigns be tailored to the kind of stigmatisation specific to a particular group. Furthermore, as global surveys have revealed (Pescosolido et al., 2013) that there are differences between countries regarding stigmatisation, findings from our French-speaking Belgian sample might differ from other samples. This further emphasises the importance of building anti-stigma campaigns that take into consideration national or local idiosyncrasies of stigmatisation. On another level, this study is based on explicit measures, which could be affected by a desirability bias. However, the impression management scale used to examine this bias showed no contribution to any of the components

of stigmatisation. Further, the online and anonymous procedure limits the potential of the social desirability bias. Nevertheless, it cannot be excluded that reported thoughts, attitudes and reactions diverge somewhat from real thoughts, attitudes and reactions.

The major strength of this study is that prediction analyses were carried out, allowing to better understand what prompts or attenuates different affective and behavioural reactions, i.e., what could be targeted in order to diminish stigmatisation and develop more positive attitudes towards SZ individuals. In order to better explain predictors of stigmatisation, longitudinal designs should be used in future studies.

**Practical implications**

In sum, although most respondents reported they would have positive behavioural reactions (active and passive facilitation) if they met a SZ individual, one out of four would still flee and one out of three would prefer to keep the individual at a certain distance. This means that there is still an important probability that SZ individuals are stigmatised in the general population. Developing anti-stigma campaigns thus remains a necessity, and furthermore they are largely lacking. Anti-stigma campaigns should target what provokes prejudicial reactions: in this study the emotion of fear and the stereotypes of dangerousness and incompetence were the best predictors of fleeing and avoiding reactions. Fear was also explained by the beliefs that SZ individuals are dangerous and unpredictable. Besides, anti-stigma campaigns could also prompt more positive behavioural reactions (active and passive facilitation) by diminishing contempt and augmenting admiration. Finally, a large amount of people indicated that the only contact they had with SZ individuals was through various media such as Internet and television. Based on this, these media should be used to reach as large a portion of the general population as possible. The interactive aspect of Internet could even individualise anti-stigma campaigns, i.e., the information provided would differ depending on the stereotypes, emotions and behavioural tendencies reported by the Internet user.

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