Shifting Perceptions: Using Social Norms to Reduce Depression Stigma Among Asian Students

Ethan J. Carter1, Rachel L. Foster2, & Daniel P. Harrison3*

Western University

Abstract

In North America, Asians reliably report higher levels of stigma towards people with depression than do Europeans. Possible methods of reducing this discrepancy have rarely been explored. Asian undergraduate students (n = 132) were presented with one of four anti-stigma videos with two actresses: one portraying a student with depression and the other a professor. The videos used the concept of social proof, presenting either positive or negative descriptive norms, to effect change in stigma, measured by social distance. It was hypothesized that the positive descriptive norms intervention would show significantly greater positive change in social distance compared to the negative descriptive norms intervention. All videos were effective in reducing preferred social distance towards people with depression relative to the control condition. The effectiveness of the positive descriptive norm video was mediated through descriptive norms and self-efficacy. The effectiveness of the negative descriptive norm video was mediated through injunctive norms and perceived value of support. The findings can help guide interventions that aim to encourage social engagement with people with depression among Asian student populations. Manipulating social norms and increasing self-efficacy may be especially effective.

Keywords: Asians, Attitudes, Collectivism, Major Depression, Self-efficacy, Social Influence, Social Norms, Stigma

Reducing the Stigma of Depression among Asian Students: A Social Norm Approach

Canadian Asians show similar rates of mental disorders as Europeans yet are less likely to utilize mental health services and are more likely to terminate involvement with these services compared to Europeans (Uba, 1994; U.S. Public Health Service, 2001). A key barrier to seeking health care services is stigma, defined as a mark of disgrace associated with a particular individual or circumstance (Corrigan & Wassel, 2008; Link & Phelan, 2001). As a result of the cultural emphasis on upholding social reputation, or saving "face," Canadian Asians may feel particularly stigmatized as a result of mental health problems (Gary, 2005; Leong & Lau, 2001). Stigma is one of the main reasons why Asians in North America delay seeking treatment for mental health concerns (Ihara, Chae, Cummings, & Lee, 2013).

In recent years, there has been an increase in initiatives to reduce stigma towards individuals with mental disorders due to the realization that stigma is a barrier to recovery (Barney, Griffiths, Jorm, & Christensen, 2006). Anti-stigma campaigns have utilized social proof interventions, which are focused on manipulating the perception of stigmatizing social norms (Cialdini, 2009). The primary means of manipulating perceived norms in anti-stigma campaigns has been by presenting individuals with a non-desirable (lower) level of contact with stigmatized individuals (i.e., negative norms such as an image of a stigmatized individual feeling hurt by disengaging friends). A second approach to manipulating perceived norms presents individuals with a desirable (higher) level of contact with stigmatized individuals (i.e., positive norms such as an image of people socializing with the stigmatized individual).

According to social identity theory, people internalize the social norms of the group as they assimilate into the group, constructing meaning of the world through their interactions with others (Rieber & Robinson, 2004). As the group norms are internalized, they become interchangeable with an individual's own personal attitudes and behaviours (Smith & Hogg, 2008). Group norms therefore act through a process of cognitive internalization (Hogg & Smith, 2007). In a recent study conducted in our lab (Shamblaw, Botha, & Dozois, 2015), we found that the perception of stigmatizing norms was the strongest predictor of depression stigma among Canadian Asians, over and above other relevant predictors, including conservative values (Schwartz, 1992; 1994) and a social dominance orientation (Phelan & Basow, 2007). As such, reducing the perception of stigmatizing norms may be a particularly effective anti-stigma intervention among North American Asians.

In collectivist cultures, such as Asian cultures, the self is often defined in terms of the group and cohesion and interdependence is emphasized (Lam, Tsang, Chan, & Corrigan, 2006), increasing the importance of group norms for the individual (Hsu et al., 2008). As such, anti-stigma efforts that emphasize a non-stigmatizing norm (i.e., positive norms) would likely result in greater stigma change (i.e., a reduction of stigma) compared to those that emphasize stigmatizing norms (i.e., negative norms), regardless of the overall message of the campaign. To our knowledge, these two approaches to stigma reduction have not been directly compared in North American Asians. For the current study, anti-stigma videos focusing on depression were created to manipulate the perception of stigmatizing norms among a dominant social group (i.e., a university context) for North American Asian university students. The goal of the current study was to directly compare the two perceived norms approaches and to understand mechanisms by which each approach works to create stigma change.

Depression Stigma among Asians in North America

Stigma towards mental disorders is prevalent in all cultures, although to a much greater extent among North American Asian and ethnic minority cultures compared to European cultures (Hsu et al., 2008). Previous research has found that Asians hold certain attitudes and beliefs towards mental illness that may account for greater stigma among this group. Asian Americans perceive mentally ill individuals as significantly more dangerous compared to their European counterparts (Whaley, 1997). Although individuals with depression are often not feared to be physically dangerous, they may be regarded as socially "dangerous" if acting in ways that deviate from cultural norms. Depression may ignite a fear of bringing shame and disharmony to one's family.

In collectivistic cultures, such as Asian cultures, a strong emphasis is placed on the family, and individual achievements and failures are often evaluated in terms of their reflection on the family as a whole (Sue & Sue, 2008; Triandis, 1995). The goals of the individual are usually held subordinate to the goals of the family and family members are expected to conform to stereotypic family roles as well as to cultural values, beliefs and behaviours (Triandis, 1995). Lam et al. (2006) indicated that research usually shows less tolerance among Asians for mental disorders than among Europeans, and suggests that the collectivistic focus on maintaining group harmony does not allow for deviance from social norms. Diagnoses of mental disorders largely reflect deviations from these cultural norms (Kim, Atkinson, & Yang, 1999; Rao, Feinglass, & Corrigan, 2007). Harmony and social order form the foundation of Confucianism and unpredictable or disturbing behavior from people with depression may be unacceptable to Asians who believe in this philosophy (Yang, 2007).

Depression can be considered a failure or a weakness in character (Norman, Windell, & Manchanda, 2010), associated with academic and work productivity difficulties. Being labelled as weak or different reflects a state of disharmony in which the entire family is held responsible. This brings considerable shame to the individual and can carry significant stigma in collectivist cultures (Lam et al., 2006; Shea & Yeh, 2008; Yang, 2007). American Asians presented with genetic explanations for depression showed negative stigma outcomes, including increased fear and desired social distance from a person with depression (Cheng, 2015). The genetic component of depression suggests that the illness can be passed on through generations which threatens social harmony and family reputation, the very factors that matter most in Asian cultures (Yang, 2007).

Asian Americans tend to emphasize somatic symptoms of depression (e.g., lack of appetite, sleep disturbances) rather than affective symptoms (e.g., depressed mood, hopelessness), possibly because they show greater stigma towards mental illness compared to physical illness (Hsu & Folstein, 2007; Hsu et al., 2008; Miresco & Kirmayer, 2006). In healthcare settings, stigma towards affective symptoms manifests in greater reporting of somatic symptoms and decreased acknowledgment of affective symptoms among Asians making accurate diagnosis and treatment recommendations difficult (Kalibatseva & Leong, 2011; Zhou et al, 2011). Canadian Asians are more likely to acknowledge affective symptoms if they have built a relationship with the relevant clinician (see Dere et al., 2013, for review). As such, reporting somatic symptoms may be expected to result in medical treatment, whereas reporting affective symptoms may be expected to result in stigma. Symptom reporting can be seen as a type of cultural script for communication of distress based on expectations of the outcome of the

reporting (Ryder, Sun, Zhu, Yao, & Chentsova-Dutton, 2012). This cultural script is influenced by cultural norms relevant to a particular generation (Chentsova-Dutton, Tsai, & Gotlib, 2010).

Although Asians show greater levels of depression stigma compared to Europeans (Shamblaw, Botha, & Dozois, 2015), there is a paucity of research on the effectiveness of anti-stigma reduction efforts for depression among Asians in North America. Further, there is limited research that identifies mechanisms that underlie stigma change in North American Asians.

Anti-Stigma Interventions: Using Social Proof to Manipulate Perceived Norms

As described above, interventions that manipulate perceived norms are termed social proof interventions (Cialdini, 2009). The perception of social norms involves two related but distinct components: descriptive norms and injunctive norms, both of which are manipulated by social proof interventions. Descriptive norms are the beliefs one holds about the desired social distance others would want from a stigmatized individual. Injunctive norms are beliefs regarding whether others would approve of one's own behavior towards this individual. Presenting individuals with proof that others in similar situations behave in positive ways tends to increase positive behaviors. Similarly, marginalizing others who engage in negative behaviors or reporting low base rate negative behaviors tends to decrease negative behaviors (Cialdini, Goldstein, & Griskevicius, 2011). The degree in which the social proof intervention is effective depends on the following four factors:

The influence of similarity. The persuasion effect of social proof has been shown to be more effective, and to function more through changing perceived norms, if the person being influenced strongly associates with the group that is portrayed as having the specific norms (Bandura, 2011; Terry, Hogg, & White, 1999). As ethnicity is a factor that influences association with a group, the current study manipulated the ethnicity of the messengers as either the same

ethnicity (Asian) or a different ethnicity (European). Specifically, each video contained two actresses, a student and a professor, who matched ethnicities (i.e., one set of videos contained Asian actresses and the other European actresses). It is important to understand the influence of ethnicity on the effectiveness of the intervention in order to appropriately disseminate the anti-stigma campaign in North America.

The influence of expertise. Research has shown that expertise increases the credibility of information provided (Crano, Siegel, Alvaro, & Patel, 2007). Given that the target audience was university students, a "Professor" at the university was selected as the expert to provide information regarding research findings on depression in the videos.

The influence of descriptive and injunctive norms. Goldstein and Mortensen (2012) conducted a review of the merit of influencing either descriptive or injunctive norms as well as the interaction between these norms (also called the focus theory of normative conduct; Cialdini, Reno, & Kallgren, 1990). Emphasizing descriptive norms produces a change effect similar to the regression to the mean phenomenon. In general, people tend to view the degree to which others engage in a behavior as a measure of what the effective or adaptive level of behavior is for a certain situation (Cialdini, 2009). In a study by Schultz and Colleagues (2007), households who were informed that they conserved more energy than the average household (descriptive norm) increased their consumption, whereas households who were informed that they used more energy than the average household decreased their consumption. Anti-stigma campaigns that use negative descriptive norms, such as by highlighting that stigma is a societal problem, in an attempt to reduce stigma may in fact be creating a diffusion of responsibility and a reduced likelihood of change by implying that the societal norm is to stigmatize individuals with depression. On the other hand, presenting a positive descriptive norm, such as by highlighting

that most people do not stigmatize individuals with depression, creates a societal pressure to "conform" and thus not stigmatize.

Injunctive norms function through calling people's attention to informal social rewards and punishments for compliance with a behavior. In Schultz et al. (2007), households who conserved more energy and received an injunctive norm (i.e., were informed that their behavior was seen as desirable by others through a smiley face on their usage report) maintained their lower level of consumption regardless of the descriptive norm they received.

The current study sought to evaluate the use of positive versus negative descriptive norms within the context of an anti-stigma intervention. A desirable (higher) level of contact was presented in one condition (positive descriptive norm) and a non-desirable (lower) level of contact presented in another (negative descriptive norm). In order to avoid the effect where those individuals who currently engage with people with depression reduce their level of engagement, we included an injunctive norm reflecting the desirability of engaging with people with depression in both conditions. As such, only descriptive norms were manipulated.

The influence of collectivism. The behavior of individuals with more collectivist values is more easily influenced by perceived norms than that of individuals with fewer collectivist values (Bond & Smith, 1996; Ybarra & Trafimow, 1998). In two studies, Polish participants (more collectivist) were more influenced by a social proof intervention compared to American participants (less collectivist; Bond & Smith, 1996; Cialdini, Wosinska, Barrett, Butner, & Gornik-Durose, 1999). Given that North American Asians endorse more collectivist values (Sue & Sue, 2008), we investigated if collectivism served as a moderator for the effectiveness of the social proof interventions.

Evaluating Anti-Stigma Interventions: The Reasoned Action Approach

The reasoned action approach (see Figure 1), a model of human behavior change, was used to examine mechanisms of stigma change in the current study. This approach posits that people form an intention to engage in behavior based on three proximal factors: (1) the perception of social norms: the likely approval or disproval of a behavior by the individual's relatives, friends, professional people, and the like; (2) attitude towards a behavior: reflects the net cost or benefit that is associated with performing the specific behavior; and (3) perceived behavioral control: a person's self-efficacy related to a behavior. These three proximal factors have been shown to explain a significant amount of variance in behavioral intention, which is believed to be the primary determinant of actual behavior (Fishbein & Ajzen, 2010). The three proximal factors are described below in reference to the goals of the current study.

The Perception of Social Norms. Social identity theory posits that behaviour change among one's group has a strong influence on the behavioural intent of the individual (Rieber & Robinson, 2004). Collectivist cultures emphasize interdependence and maintaining group harmony (Sue & Sue, 2008). In our previous study, Canadian Asians reported greater stigmatizing beliefs among significant others compared to Europeans which, in turn, lead to greater stigma towards depression (Shamblaw et al., 2015). As such, an intervention targeting social norms among Asians has the potential to substantially reduce depression stigma.

Attitudes. Certain attitudes and beliefs that represent a direct cost or benefit of interacting with a person with depression are considered to be proximal in explaining behavioral intention (Fishbein & Ajzen, 2010). With a specific focus on depression, the following four beliefs have been shown to have direct importance in determining attitudes toward engaging socially with people with depression: (1) beliefs that people with depression are dangerous (Hsu

et al., 2008), (2) that they may act in a socially inappropriate manner (Norman, Sorrentino, Windell, & Manchanda, 2008), (3) that interacting with them may cause emotional contagion, and (4) that supporting them will promote their recovery (Corrigan, Roe, & Tsang, 2011). These beliefs have the potential to be largely influenced by one's cultural group through socialization and internalization of these attitudes and beliefs. As such, it is possible that an intervention aimed at changing social norms related to depression stigma may work through changing the perception of attitudes that people hold towards individuals with depression.

Certain other beliefs have been found to relate to depression stigma but do not reflect a direct cost or benefit of interacting with people with depression and thus are considered distal factors in predicting behavioral intent (Fishbein & Ajzen, 2010). These beliefs include: (1) the idea that individuals with depression bring shame to their families, (2) that depression is continuous with normal experience, (3) that depression is due to personal responsibility or a divine cause, and (4) concepts related to the prevalence of depression and illness change expectancy (Corrigan et al., 2011; Feldman & Crandall, 2007; Hsu et al., 2008; Norman et al., 2008; 2010). We measured the above stated beliefs to assess the relative importance of proximal versus distal beliefs in facilitating depression stigma change.

Perceived behavioral control: **Self-efficacy.** An individual's perceived ability to perform an action effectively (i.e., to accomplish a specific goal) and the perception that the individual controls whether or not he or she will perform the action, affects the decision to perform the action (Bandura, 1997). Anti-stigma messages that promote interaction with stigmatized individuals may promote self-efficacy by demonstrating to individuals that they are capable of this interaction and that this interaction is in fact desired. A social norm intervention that promotes interacting with individuals with depression may be particularly effective for

individuals of collectivist cultures in which the self is often defined in terms of the group (Lam et al., 2006).

Current Study

The primary aim of the present study was to understand the relative effectiveness of two anti-stigma interventions using social proof to decrease stigma towards individuals with depression. The current study included contact (through watching a video) with both a purported university student who claimed to have had a major depressive episode in the past and a purported university clinical psychology professor who provided education regarding depression. The university student and professor either posited positive descriptive norms in the environment (the student was engaged by others and the professor indicated that engaging people with depression is increasing) or negative descriptive norms (the student was rejected by others and the professor indicated that rejecting people with depression is increasing). We biased injunctive norms towards the promotion of interacting with people with depression by having the student actress with depression either praising those who engaged with her (social reward) in the positive descriptive norm condition or noting how much it hurt her when others did not engage with her (social punishment) in the negative descriptive norm condition. Two sets of videos were created, one set with Asian actresses and one set with European actresses to assess the importance of ethnicity on the effectiveness of the intervention.

Main Hypotheses

(1) The positive descriptive norms intervention would show significantly greater positive change in social distance compared to the negative descriptive norms intervention.

(2) Videos depicting Asian actresses would show significantly greater positive change in social distance compared to videos depicting European actresses.

(3) Consistent with the reasoned action approach, positive change in social distance ratings would be accounted for by proximal factors: changes in attitudes, perceived norms, and perceived behavioral control. Further, distal beliefs would not significantly increase the overall variance explained in social distance, because their contribution would be captured by the more proximal variables.

(4) A multiple mediation model including changes in attitudes, perceived norms, and perceived behavioral control would show that changes in perceived norms was a significant component of the overall intervention for the positive descriptive norms intervention compared to the negative descriptive norms intervention.

(5) Collectivism would be a significant moderator such that participants higher in collectivism would respond stronger to the descriptive norm intervention (positively or negatively).

Methods

Participants

The sample consisted of 132 Asian undergraduate students (79 females and 53 males) attending a University in London, Ontario, Canada[1]. Participants ranged in age from 17 to 24 years (M= 18.34, SD = 1.11) with 55% of participants born outside of Canada (i.e., first generation), 39% second generation, 3% third generation, and 3% fourth generation or higher. First generation participants spent an average of 6 years in Canada and 69% reported their country of origin as China, 11% reported originating from other East-Asian countries, and 20% reported originating from South-Asian countries. No significant differences were found on key

[1] Participants were asked to indicate which ethnicity they identified with and those who choose Asian from a list of options were included in the sample. Participants who selected generational status as First Generation were asked to indicate their country of origin.

variables between these Asian sub-groups (similarly, no significant differences on key variables were reported in Shamblaw et al., 2015).

Measures[2]

Depression Attribution Questionnaire-27 (DAQ-27; Kanter, Rusch, & Brondino, 2008). Participants were presented with a vignette depicting an individual with severe depressive symptoms prior to completing the DAQ-27. In the current study, we altered the measure and questions by giving the individual the initials M. L. to make both gender and race ambiguous. The DAQ-27 is a 27-item self-report measure of public stigma toward people with depression, each rated on a 9-point scale. Items include stereotypical views of people with depression (e.g., unpredictable), affective responses towards people with depression (e.g., feeling anger or fear), and behavioral intentions (e.g., renting an apartment to the depressed individual). This measure can be broken down into 9 factors (blame, anger, pity, help, dangerousness, fear, avoidance, segregation, and coercion). Internal consistency was $\alpha = .87$ in the present study. In addition to the total stigma score, we created a variable labeled DAQ-behavior by combining the 4 factors (help, avoidance, segregation, and coercion) that reflect behavioral intentions ($\alpha = .77$ in the present study). The DAQ-27 has been used in prior stigma reduction research (Rusch, Kanter, & Brondino, 2009) permitting the assessment of concurrent validity of the social distance measure and an additional measure of behavioral intentions.

Social Distance Scale. The Social Distance Scale was adopted from Norman et al. (2010). The scale consists of 12 items representing behavioral intentions towards the person introduced in the DAQ-27 vignette (e.g., "How likely is it that you would do school work with

[2] We included a Level of Familiarity with Depression measure to evaluate the possibility that this variable may be of importance in influence participant response to the manipulation. This variable was, however, not correlated with our outcome measures and was not found to be influential as a moderator of participants' response to the videos. It is therefore not discussed any further in this paper.

M. L.?"). Items are measured on a five-point scale of behavior likelihood ("I certainly would" to "I certainly would not") and are summed to provide an index of social distance (with lower scores indicating greater desired distance). The internal consistency of the scale was α = .92 for the current study. Research has shown that social distance scales and actual avoidance in social situations are significantly associated (Fishbein & Ajzen, 2010; Jorm & Oh, 2009).

Asian American Values Scale – Multidimensional (AAVS-M; Kim, Li, & Ng, 2005). The collectivism scale of the AAVS-M consists of seven items related to the importance of putting the interests of the group above that of the individual. Participants rate their agreement with each value on a seven-point scale (1 = strongly disagree; 7 = strongly agree). Internal consistency was α = .72 in the current study.

Perceived norms. The measure of perceived norms was adopted from Norman et al. (2008) who altered six items from the social distance scale to reflect descriptive (what others would be expected to do) and injunctive (whether others would approve of the participant's decisions) norms. For example, for the item "How likely is it that you would recommended M. L. for a job?", an item was created which read "If you recommend M. L. for a job, people who are important to you (e.g., family and friends) would…" rated on a seven-point scale from “strongly approve” to “strongly disapprove”. A second item was created which read "How likely is it that people who are important to you (e.g., family and friends), would recommend M. L., for a job, if they were in your position?" rated on a seven-point scale from “very likely” to “very unlikely”. The items were summed to compute a score for perceived norms with higher scores indicating a perception of stigmatizing attitudes among people who are important to the participant. Internal consistency for the overall scale was α = .94 in the present study.

Self-Efficacy Scale. This scale was derived from items suggested in Fishbein & Ajzen (2010) for measuring proximal factors relevant to the reasoned action approach to predicting behavior. This scale related to factors implied in the reasoned action approach measured the self-efficacy of participants in engaging with people with depression. The items on the scale were rated on a seven-point scale ranging from "strongly disagree" to "strongly agree". The scale consisted of 4 items and had an internal consistency of $\alpha = .75$.

Attitude and Belief Scales. The attitude and belief scales were constructed from items adopted from previous research that explored attitudes and beliefs involved in the stigmatization of depression. Scales representing proximal factors relevant to the reasoned action approach were derived from Fishbein and Ajzen (2010; emotional contagion scale and the expected benefit of support scale), Hsu et al. (2008; dangerousness scale), and Norman et al. (2010; social inappropriateness scale). Scales representing distal factors were derived from Hsu et al. (items related to shame and disharmony), Norman et al. (items related to continuity with normal experience, personal responsibility and weakness, and change expectancy), and Eddington, Dozois and Backs-Dermott (2014; items related to change expectancy). Two items related to beliefs regarding divine punishment as the cause of depression as well as a two items related to beliefs regarding the prevalence of depression were included. The items from each these scales were rated on a 7-point scale ranging from "strongly disagree" to "strongly agree".

Internal consistency was computed for the various scales used in the current study. The number of items and internal consistencies for the scales were: Proximal factors: expected benefit of support (4; $\alpha = .78$), emotional contagion (4; $\alpha = .74$), social inappropriateness (3; $\alpha = .67$), dangerousness (4; $\alpha = .59$); Distal factors: shame and disharmony (4; $\alpha = .84$), continuity

with normal experience (3; α = .63), personal responsibility and weakness (5; α = .81), change expectancy (8; α = .66), divine cause (2; α = .78), and prevalence of depression (2; α = .68).

Procedure

Participants were randomly assigned to the one of the five conditions (4 video conditions and the control condition). Participants watched one anti-stigma program in the form of 15-minute video. A professional videographer and four actresses were recruited to shoot these videos. Two factors were manipulated in these four videos: (1) the ethnicities of both the student and professor were either Asian or European; and (2) the student and professor reported positive or negative social norms. The videos were all recorded in the same locations and were of equal length. The professor provided information regarding depression while the student described her experience of depression. No interactions between actors were suggested in the videos. The DAQ-27, SDS, PNO, and Attitude and Belief scales were then administered to the participants. At the end of the study, participants were debriefed on the actual objectives of the study and they re-consented to have their data used.

Results

Variables Related to Outcome Measures

Table 1 displays the correlation coefficients among the outcome variables and the variables considered proximal in the reasoned action approach across all conditions. The social distance and DAQ-behavior outcome variables were strongly correlated. Variables that represented proximal factors of intentions for the reasoned action approach (perceived norms [*M* = 44.18, *SD* = 15.09], self-efficacy [*M* = 20.11, *SD* = 4.42], and attitudes including dangerousness [*M* = 17.72, *SD* = 3.84], social inappropriateness [*M* = 13.17, *SD* = 3.39], expectations of emotional contagion [*M* = 16.70, *SD* = 4.86], and perceived value of support [*M*

= 24.89, *SD* = 3.70]) showed medium to very strong correlations with social distance. As expected, other beliefs which are seen as distal had low to medium correlations with social distance: familial shame (*M* = 11.06, *SD* = 5.43, *r* = -.23), continuity with normal experience (*M* = 15.89, *SD* = 3.17, *r* = .17), responsibility and weakness (*M* = 20.50, *SD* = 5.40, *r* = -.27), change expectancy (*M* = 38.10, *SD* = 5.46, *r* = .30), divine cause (*M* = 4.89, *SD* = 3.08, *r* = -.09), and prevalence (*M* = 10.78, *SD* = 2.47, *r* = .19).

Effectiveness of Perceived Norms Approaches

The effectiveness of the interventions is shown in Table 2. A one-way ANOVA (factor: two interventions and a control condition) was used to analyze the effectiveness of the approaches. The main effect for interventions was significant, $F(2, 128) = 5.24$, $p = .007$. Planned comparisons revealed that the positive norms approach, $t(1, 128) = 3.10$, $p = .002$, had a positive effect on preferred social distance compared to the control condition, but not compared to the negative norms approach, $t(1, 128) = 0.56$, $p = .578$. A post-hoc comparison (using Bonferonni adjustment) showed that the negative norms approach, $t(1, 128) = 2.69$, $p = .024$, also had a positive effect on preferred social distance compared to the control condition. Significance was also obtained with DAQ-behavior as the outcome measure.

A second one-way ANOVA (factor: 2 x actress ethnicity and a control condition), conducted to evaluate the influence of actress ethnicity, revealed a significant main effect for the ethnicity of the actresses, $F(2, 128) = 5.42$, $p = .006$. Planned comparisons revealed no significant difference, $t(1, 128) = 0.80$, $p = .423$, when comparing social distance between participants who saw the videos featuring the Asian actresses and those who saw the videos featuring the European actresses.

Test of Reasoned Action Approach using Hierarchical Multiple Regression

A two-step hierarchical multiple regression (see Table 3) was conducted to determine the amount of change explained by the proximal and distal factors of the reasoned action approach. Proximal factors related to changing behavioral intention were entered into the equation first and explained 60% of the variance in social distance. Perceived norms, self-efficacy, and perceived value of support emerged as significant unique predictors of variance. The distal beliefs related to changing behavioral intention were entered second, explaining only an additional 0.004% of variance. Perceived norms and self-efficacy remained significant unique predictors of variance.

Mediation of Intervention Outcome Measure Differences

In line with the reasoned action approach perceived norms, attitudes, and perceived behavioral control could each act as mediators for the differences in social distance ratings between the experimental conditions and the control condition. The variable perceived norms (consisting of descriptive [M = 21.44, SD = 7.87] and injunctive [M = 22.74, SD = 7.72] norms), in particular, was expected to be a significant mediator. This hypothesis was examined using the PROCESS module for SPSS (Hayes, 2013) with the significance of the mediation paths evaluated by using 10,000 bootstrap iterations (95% confidence interval). Results of the multiple mediation analysis between the norm manipulations and the control condition are displayed in Table 4. Indirect effects were estimated by multiplying the effect of the intervention on each mediator with the effect of each mediator on social distance (while holding all other mediators constant). The direct effect of the interventions on social distance was calculated while holding all other mediators constant.

With social distance as the outcome measure, descriptive norms and self-efficacy emerged as significant mediators for the positive norms manipulation, whereas injunctive norms and value of support emerged as significant mediators when considering the negative norms

manipulation (although it should be noted that the confidence interval for descriptive norms was very close to significance).

Collectivism as a Moderator

Collectivism was considered as a potential moderator for the norm manipulation. The PROCESS module for moderation in SPSS (Hayes, 2013) was used. Collectivism (M = 31.70, SD = 5.98) emerged as a moderator of the model, $F(1,98) = 5.48$, $p = .021$, such that Asians high in collectivism showed positive outcomes in social distance compared to Asians low in collectivism in the positive norms manipulation. In contrast, Asians high in collectivism showed similar outcomes in social distance compared to Asians low in collectivism in the negative norms manipulation.

Discussion

The goal of the current study was to evaluate two different social norm manipulations on reducing depression stigma among Canadian Asians and to understand mechanisms of change for the two interventions. The anti-stigma interventions were evaluated using the reasoned action approach, which has been used extensively to predict behavior intention and subsequent change.

Efficacy of Perceived Norm Interventions

Contrary to hypotheses, the positive descriptive norms intervention was not significantly more effective in producing positive outcomes in social distance than the negative descriptive norms intervention. Both interventions were superior to the control condition. These results are discussed further in the mediation analyses section.

Contrary to the second hypothesis, the ethnicity of the actresses did not significantly influence desired social distance. It is possible that the salient university context in the video allowed participants to identify with the actress regardless of ethnicity. In this case, participants

perceived themselves as similar to the European actresses because these individuals are prevalent in their social environment (i.e., university). Alternatively, it is possible that ethnic similarity was less important in motivating change in the context of an anti-stigma intervention that emphasized wide societal changes in depression stigma. Future research is needed to discern the importance of similarity in Asians who are not socialized to the university environment.

The Reasoned Action Approach

Consistent with meta-analytic studies on the reasoned action approach (Fishbein & Ajzen, 2010), the perception of stigmatizing norms, self-efficacy for interacting with an individual with depression, and certain attitudes related to the consequences of interacting with an individual with depression (i.e., the three proximal factors) were all significantly correlated (medium to strong) with the social distance scale, a measure of stigma reflecting behavioral intent to interact with a person with depression.

Consistent with the third hypothesis, the current study found support for the reasoned action approach as it applies to changing depression stigma in Canadian Asians. The proximal factors of the reasoned action approach (perceived norms, attitudes, and perceived behavioral control) explained 60% of the variance in social distance. The current study found a multiple regression coefficient of .78, which compares well to the prediction of behavioral intent found in other domains (.77 across 12 studies; Fishbein & Ajzen, 2010). Perceived norms, self-efficacy, and perceived value of support were significant independent predictors of desired social distance from an individual with depression.

In the current study, the addition of six distal beliefs (change expectancy, personal responsibility, familial shame, divine causes, prevalence, and continuity with normal experience) explained less than 1% of the variation in behavioral intent. This provides support for the

sufficiency of the reasoned action approach which posits that distal beliefs add significant, but minor, additional predictive power to behavioral intentions (Fishbein & Ajzen, 2010).

Mediation Analysis

A multiple mediation analysis revealed that the positive norm intervention largely worked through improved perceived norms (specifically descriptive norms, the belief one holds about the desired social distance others would want from a stigmatized individual) and higher self-efficacy. The influence of attitudes for changing behavioral intent was less relevant. For the negative norm intervention, the influence through perceived norms (specifically injunctive norms, the belief regarding whether others would approve of one's own behavior towards the individual) was still significant as was the belief that engaging with the person with depression would be beneficial. Interestingly, however, in the negative norm intervention, participants did not feel more efficacious in actually being able to successfully engage people with depression.

It seems straightforward that the video showing positive descriptive and injunctive norms would influence social distance through a social proof mechanism. The positive effect through perceived norms for the video showing negative descriptive norms was, however, more puzzling. One possibility is that, although the base rate for engaging with people with depression was posited to be lower in the negative norms video, no actual rate was ever specified. Participants may have believed that the average rate of interaction with a person with depression was higher than what they perceived themselves to engage in, even in the negative norms condition. Injunctive norms, which were positive in both conditions, were more influential than expected with regard to social distance. Cialdini et al. (1990) stated that injunctive norms might overrule descriptive norms when the injunctive norms are made salient. Injunctive norms were emphasized in the negative norms condition by highlighting that the student with depression

disproved of the behaviors of those who avoided her. It is possible that the emotional salience of social punishment in this condition may have influenced the participants, especially those for whom the opinions and approval of their peers were of significance.

The finding that self-efficacy was a mediator in the positive norms manipulation but not the negative norms manipulation, has substantial implications. Previous research has found that self-efficacy not only influences behavioral intent, but may also moderate whether intentions actually lead to behavior (Fishbein & Ajzen, 2010). Specifically, when people are confronted with obstacles to performing a given behavior, their confidence that these obstacles can be overcome, as well as their perseverance with any difficulties, is important in determining whether they will perform the behavior. Reassurance that interacting with people with depression is beneficial, despite the individual displaying social withdrawal and rejecting attempts to influence his or her mood, may therefore be of critical importance for anti-stigma campaigns.

The belief that interacting with people with depression would support their recovery was a significant mediator for the negative norms condition. One possibility is that by emphasizing how much social isolation hurt her, the student in the video directed participants' attention to the importance of social interaction. This emphasis may have made the potential benefit of social interaction more salient in the negative norms condition than in the positive norms condition.

Collectivism as a Moderator

Participants' collectivist attitudes did not influence the efficacy of the negative descriptive norm manipulation but did when a contrasting descriptive norm was presented, such that participants high in collectivism responded more positively. This finding is consistent with previous research indicating that that people who are relatively new to a culture are more likely

to adopt the behaviors of those in the culture under conditions of uncertainty (Goldstein & Mortensen, 2012).

Implications of Findings for Current and Future Anti-Stigma Programs

This is the first study to implement an anti-stigma intervention and measure resulting behavioral intentions towards individuals with depression among Canadian Asians. Our results highlight the importance of focusing on perceived norms and self-efficacy when designing anti-stigma programs for Asian populations. Perceived norms could be communicated through a direct statement of descriptive and injunctive norms, providing social approval and disapproval (injunctive) cues, or implying positive descriptive norms through environmental and behavioral cues. Self-efficacy could be improved through actual practice of the behavior, social modeling (e.g., including the person interacting with the person with depression in a video), or education. Fishbein and Ajzen (2010) highlighted that because change in a single factor is sometimes compensated for by an opposing change in another factor, targeting multiple factors at the same time would also be of importance. The current intervention may also be compared to stigma interventions that focus on different beliefs regarding depression, for example, that depression reflects behavior that is outside of normal societal expectations.

Although some of these findings may be applicable to all mental disorders, it is also important to emphasize that mental disorders may differ in their influence on people's attitudes, perceived norms, and self-efficacy. Disorders such as schizophrenia, which have been the target of increased stigma, may require a different approach from that highlighted in this study.

Limitations

The current study aimed to manipulate descriptive norms in order to influence behavioral intention. The use of videos (with some differences in script) reflected how anti-stigma messages

may be delivered in practice, but did, however, increase the likelihood that other variables may have been unintentionally influenced as well. The mediational analysis showed that variables that were not specifically targeted, e.g., value of support, might have been influenced through the video. A more focused experimental design can help to elucidate the influence of individual factors in future studies.

Although behavioral intentions are strongly correlated with actual behavior, this relation does not hold equally true for all behaviors (Fishbein & Ajzen, 2010), and the current study did not measure the strength of this relationship for engaging socially with someone with depression. Intentions were not measured temporally and the possibility exists that intentions to engage someone with depression may reduce over time without continuous intervention. The level of exposure to the intervention was also kept constant; therefore, it is not possible to ascertain whether a longer intervention (as is often used in actual anti-stigma programs) with similar material would have produced stronger effects.

Participants were mostly young adults in their first year of university. Although the age of participants in this study is very close to adolescents who are the focus of many anti-stigma interventions for mental disorders, the findings may not be applicable to an older sample. For example, Asians in the general community may differ in their level of acculturation compared to the Asian university students and may respond differently to the interventions. Considering the influence of similarity in context, it is in fact quite probable that the intervention would have to be modified to be effective in such a population.

Contribution and Conclusion

The current study considered an anti-stigma intervention that was similar to interventions currently used in practice (external validity), but which also maintained methodical rigor in the

testing of its operation and its experimental control (internal validity). The perceived norms manipulation was effective as expected. Although presenting different descriptive norms did not produce differences in overall effectiveness, a mediational analysis revealed that the positive norms manipulation might have certain advantages over a negative norms manipulation. Perceived norms and self-efficacy emerged as significant factors influencing social distance, with attitudes playing a less significant role. Anti-stigma campaigns can benefit from an increased focus on the importance of self-efficacy and perceived norms.

References

Bandura, A. (1997). *Self-efficacy. The exercise of control.* New York: Freeman.

Bandura, A. (2011). The social and policy impact of social cognitive theory. In M. M. Mark, S. I. Donaldson, & B. Campbell (Eds.), *Social psychology and evaluation* (pp. 33-70). New York: Guilford.

Barney, L. J., Griffiths, K. M., Jorm, A. F., & Christensen, H. (2006). Stigma about depression and its impact on help-seeking intentions. *Australian and New Zealand Journal of Psychiatry, 40*, 51-54.

Bond, M. H., & Smith, P. B. (1996). Culture and conformity: A meta-analysis of studies using Asch's (1952b, 1956) line judgment task. *Psychological Bulletin, 119*, 111-137.

Cheng, Z. H. (2015). Asian Americans and European Americans' stigma levels in response to biological and social explanations of depression. *Social Psychiatry and Psychiatric Epidemiology, 50*(5), 767-776.

Chentsova-Dutton, Y. E., Tsai, J. L., & Gotlib, I. H. (2010). Further evidence for the Cultural Norm Hypothesis: Positive Emotion in Depressed and Control European American and

Asian American Women. *Cultural Diversity and Ethnic Minority Psychology, 16*(2), 284-295.

Cialdini, R. B. (2009). *Influence: Science and practice* (5th ed.). Boston: Pearson.

Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2011). What social psychologists can learn from evaluations of environmental interventions. In M. M. Mark, S. I. Donaldson, & B. Campbell (Eds.), *Social psychology and evaluation* (pp. 269-283). New York: Guilford.

Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology, 58,* 1015- 1026.

Cialdini, R. B., Wosinska, W., Barrett, D. W., Butner, J., & Gornik-Durose, M. (1999). Compliance with a request in two cultures: The differential influence of social proof and commitment/consistency on collectivists and individualists. *Personality and Social Psychology Bulletin, 25,* 1242-1253.

Corrigan, P. W., Roe, D., & Tsang, H. W. H. (2011). *Challenging the stigma of mental illness: Lessons for therapists and advocates.* Oxford, UK: Wiley-Blackwell.

Corrigan, P. W., & Wassel, A. (2008). Understanding and influencing the stigma of mental illness. *Journal of Psychosocial Nursing, 46,* 42-48.

Crano, W. D., Siegel, J. T., Alvaro, E. M., & Patel, N. M. (2007). Overcoming adolescents' resistance to anti-inhalant messages. *Psychology of Addictive Behaviors, 21*, 516-524.

Dere, J., Sun, Z., Zhao, Y., Persson, T. J., Zhu, X., Yao, S., Bagby, R. M., & Ryder, A. G. (2013). Beyond "somatization" and "psychologization": Symptom-level variation in depressed Han Chinese and Euro-Canadian outpatients. *Frontiers in Psychology, 4, 377.*

Eddington, K. M., & Dozois, D. J. A., & Backs-Dermott, B. (2014). The internal consistency, factor structure and construct validity of the Depression Change Expectancy Scale. *Assessment, 21,* 607-617.

Fishbein, M, & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach.* New York: Psychology Press.

Feldman, D. B., & Crandall, C. S. (2007). Dimensions of mental illness stigma: What about mental illness causes social rejection. *Journal of Social and Clinical Psychology, 26,* 137-154.

Gary, F. A. (2005). Stigma: Barrier to mental health care among ethnic minorities. *Issues in Mental Health Nursing, 26,* 979-999.

Goldstein, N. J. & Mortensen, C. R. (2012). Social norms: A how-to (and how-not-to) guide. In D. T. Kendrick, N. J. Goldstein, & S. L. Braver (Eds.), *Six degrees of social influence: Science, application, and the psychology of Robert Cialdini* (pp. 68-78). New York: Oxford.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. New York: The Guilford Press.

Hogg, M. A., & Smith, J. R. (2007). Attitudes in social context: A social identity perspective. *European Review of Social Psychology, 18*(1), 89-131.

Hsu, L. K. G., & Folstein, M. (1997). Somatoform disorders in Chinese and Caucasian Americans. *Journal of Nervous and Mental Disease, 185,* 382-387.

Hsu, L. K. G., Wan, Y. M., Change, H., Summergrad, P., Tsang, B. Y. P., & Chen, H. (2008). Stigma of depression is more severe in Chinese Americans than Caucasian Americans. *Psychiatry, 71*(3), 210-218.

Ihara, E., Chae, D., Cummings, J., & Lee, S. (2014). Correlates of mental health service use and type among Asian Americans. *Administration and Policy in Mental Health, 41*, 543–551.

Jorm, A. F., & Oh, E. (2009). Desire for social distance from people with mental disorders: a review. *Australian and New Zealand Journal of Psychiatry, 43*, 183-200.

Kalibatseva, Z., & Leong, F. T. L. (2011). Depression among Asian Americans: Review and recommendations. *Depression Research and Treatment*. Article ID 320902. doi:10.1155/2011/320902

Kanter, J. W., Rusch, L. C., & Brondino, M. J. (2008). Depression self-stigma: A new measure and preliminary findings. *The Journal of Nervous and Mental Disease, 196*(9), 663-670.

Kim, B. S. K., Atkinson, D. R., & Yang, P. H. (1999). The Asian Values Scale: Development, factor analysis, validation, and reliability. *Journal of Counseling Psychology, 46,* 342-352.

Kim, B. S. K., Li, L. C., & Ng, G. F. (2005). The Asian American Values Scale—Multidimensional: Development, reliability, and validity. *Cultural Diversity and Ethnic Minority Psychology, 11*(3), 187-201.

Lam, C. S., Tsang, H., Chan, F., & Corrigan, P. W. (2006). Chinese and American perspectives on stigma. *Rehabilitation Education, 20*(4), 269-276.

Leung, A. K., & Lau, A. S. L. (2001). Barriers to providing effective mental health services to Asian Americans. *Mental Health Services Research, 3*, 201-214.

Link, B., & Phelan, J. (2001) Conceptualizing Stigma. *Annual Review of Sociology, 27*, 363-85.

Miresco, M. J., & Kirmayer, L. J. (2006). The persistence of mind-brain dualism in psychiatric reasoning about clinical scenarios. *American Journal of Psychiatry, 163*, 913-918.

Norman, R. M. G., Sorrentino, R. M., Windell, D., & Manchanda, R. (2008). The role of perceived norms in the stigmatization of mental illness. *Social Psychiatry and Psychiatric Epidemiology, 43*, 851-859.

Norman, R. M. G., Windell, D., & Manchanda, R. (2010). Examining differences in the stigma of depression and schizophrenia. *International Journal of Social Psychiatry*, *58*(1), 69-78.

Phelan, J. E., & Baslow, S. A. (2007). College students' attitudes toward mental illness: An examination of the stigma process. *Journal of Applied Social Psychology, 37*, 2877-2902.

Rao, D., Feinglass, J., & Corrigan, P. (2007). Racial and ethnic disparities in mental illness stigma. *The Journal of Nervous and Mental Disease, 195*, 1020-1023.

Rieber, R. W., & Robinson, D. K. (2004). *The essential Vygotsky (1896-1934).* New York: Kluwer Academic/Plenum.

Rusch, L. C., Kanter, J. W., & Brondino, M. J. (2009). A comparison of contextual and biomedical models of stigma reduction for depression with a nonclinical undergraduate sample. *The Journal of Nervous and Mental Disease, 197*, 104-110.

Ryder, A. G., Sun, J., Zhu, X., Yao, S., & Chentsova-Dutton, Y. (2012). Depression in China: Integrating development psychopathology and cultural-clinical psychology. *Journal of Clinical Child and Adolescent Psychology, 41*, 682-694.

Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological Science, 18*, 429-434.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1-65). San Diego, CA: Academic Press.

Schwartz, S. H. (1994). Beyond individualism/collectivism: New dimensions of values. In U. Kim, H. C. Triandis, C. Kagitcibasi, S. C. Choi, & G. Yoon (Eds.), *Individualism and collectivism: Theory application and methods* (pp. 85-119). Newbury Park, CA: Sage.

Shamblaw, A. L., Botha, F. B., & Dozois, D. J. A. (2015). Accounting for differences in depression stigma between Canadian Asians and Europeans. *Journal of Cross-Cultural Psychology, 46,* 597-611.

Shea, M., & Yeh, C. J. (2008). Asian American students' cultural values, stigma, and relational self-construal: Correlates of attitudes towards professional help seeking. *Journal of Mental Health Counseling, 30,* 157-172.

Smith, J. R., & Hogg, M. A. (2008). Social identity and attitudes. In W. Crano & R. Prislin (Eds.), *Attitudes and attitude change* (pp. 337-360). New York: Psychology Press.

Sue, D. W., & Sue, D. (2008). *Counseling the culturally diverse. Theory and practice.* (5th ed.). Hoboken, NJ: Wiley.

Terry, D. J., Hogg, M. A., & White, K. M. (1999). The theory of planned behavior: Self-identity, social identity and group norms. *British Journal of Social Psychology, 38*, 225-244.

Triandis, H. C. (1995). *Individualism and collectivism.* Boulder, CO: Westview Press.

Uba, L. (1994). *Asian Americans: Personality patterns, identity, and mental health.* New York: Guilford.

U. S. Public Health Service. (2001). *A report of the surgeon general on minority mental health.* Rockville, MD: U. S. Department of Health and Human Services.

Whaley, A. L. (1997). Ethnic and racial differences in perceptions of dangerousness of persons with mental illness. *Psychiatric Services, 48,* 1328-1330.

Yang, L. H. (2007). Application of mental illness stigma theory to Chinese societies: synthesis and new directions. *Singapore Medical Journal, 48,* 977-985.

Ybarra, O., & Trafimow, D. (1998). How priming the private self or collective self affects the relative weights of attitudes and subjective norms. *Personality and Social Psychology Bulletin, 24,* 362-370.

Zhou, X., Dere, J., Zhu, X., Yao, S., Chentsova-Dutton, Y., & Ryder, A. G. (2011). Anxiety symptom presentations in Han Chinese and Euro-Canadian outpatients: Is distress always somatized in China? *Journal of Affective Disorders, 135,* 111-114.

Table 1.

Correlation Coefficients of Key Variables

	2	3	4	5	6	7	8
Outcome Variables							
1 Social Distance	-.68**	.71**	.46**	-.25**	-.24**	-.38**	.25**
2 DAQ-Behavior		-.38**	-.49**	.39**	.13	.49**	-.42**
Proximal Factors of the Reasoned Action Approach							
3 Perceived Norms			.27**	-.13	-.25**	-.29**	.03
4 Self-Efficacy				-.12	-.10	-.34**	.52**
Attitudes/Beliefs							
5 Dangerousness					.11	.57**	-.01
6 Social Inappropriate						.12	.22*
7 Emotional Contagion							-.20*
8 Value of Support							

* = $p < .05$; ** = $p < .01$

Social Distance	Positive Norms		Negative Norms		Total	
Actresses Ethnicity	*M (SD)*	*n*	*M (SD)*	*n*	*M (SD)*	*n*
European Actresses	44.33 (9.23)	24	41.80 (10.26)	30	42.93 (9.81) **	54
Asian Actresses	41.21 (10.40)	24	41.62 (8.27)	24	41.42 (9.29) *	48
Total Experimental	42.77 (9.85) **	48	41.72 (9.34) **	54	42.22 (9.55)	102
Control Condition					35.86 (9.06)	29
All Participants					40.81 (9.78)	131

DAQ-Behavior	Positive Norms		Negative Norms		Total	
Actresses Ethnicity	*M (SD)*	*n*	*M (SD)*	*n*	*M (SD)*	*n*
European Actresses	47.83 (11.12)	24	51.00 (11.86)	31	49.62 (11.55) *	55
Asian Actresses	44.63 (14.13)	24	48.83 (12.98)	24	46.73 (13.59) **	48
Total Experimental	46.23 (12.68) **	48	50.05 (12.29) *	55	48.27 (12.56)	103
Control Condition					56.45 (11.40)	29
All Participants					50.07 (12.74)	132

Table 2.

Outcomes for Perceived Norms Intervention Approaches

* = $p < .05$; ** = $p < .01$ (difference from contro

Table 3.

Hierarchical Multiple Regression Analysis for Reasoned Action Approach indicating change explained in Social Distance

* = $p < .05$; ** = $p < .01$

Predictors	Adjusted R^2 Change	F	B	p
Step 1: Proximal Factors	.60	33.95		<.001**
Perceived Norms			.61	<.001**
Self-efficacy			.18	.010**
Dangerousness			-.13	.066
Social Inappropriateness			-.08	.179
Emotional Contagion			-.04	.585
Value of Support			.14	.050*
Step 2: Distal Factors	.00	1.18		.317
Perceived Norms			.62	<.001**
Self-efficacy			.17	.022*
Dangerousness			-.11	.147
Social Inappropriateness			-.10	.129
Emotional Contagion			-.08	.338
Value of Support			.04	.624
Collectivism			.02	.721
Familial Shame			.10	.234
Normal Continuity			.08	.250
Responsibility and Weakness			.00	.978
Change Expectancy			.04	.638
Divine Cause			-.12	.175
Prevalence			.08	.210

Adjusted R^2 = .607**

Table 4.

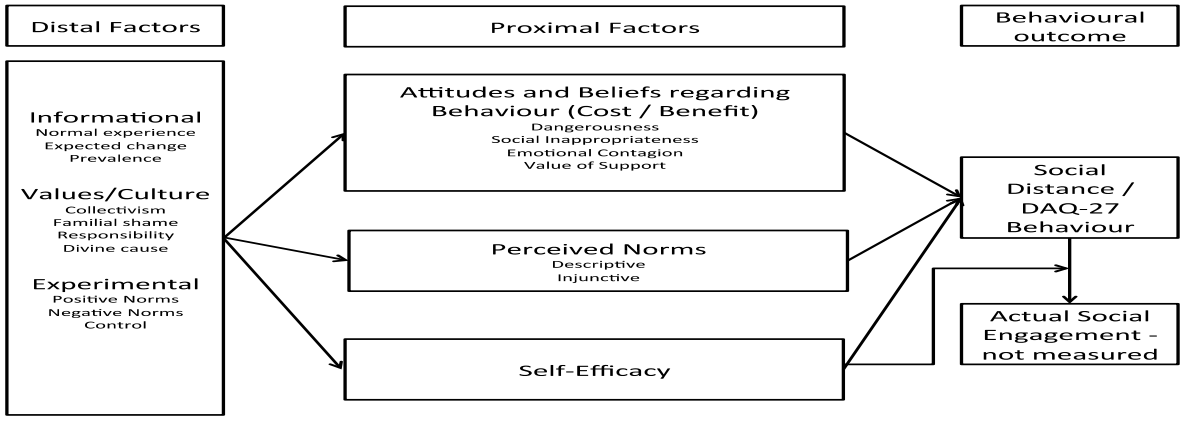
Multiple Mediation Analysis Results indicating influence of Proximal Factors on change in Social Distance

Mediators	Unstandardized Estimate	Lower Limit	Upper Limit
Social Distance - Positive norms vs. Control			
Perceived Norms			
(1) Descriptive Norms	-2.405*	-6.055	-.249
(2) Injunctive Norms	-.575	-3.096	.669
Attitudes and Beliefs			
(3) Value of Support	-.095	-1.165	1.234
(4) Dangerousness	-.570	-2.352	.209
(5) Social Inappropriateness	.139	-.389	1.149
(6) Emotional Contagion	.041	-.968	1.109
Self-efficacy			
(7) Self-efficacy	-2.157*	-4.794	-.645
Direct Effect	-1.286	-4.410	1.839
Total Effect	-6.909*	-11.390	-2.428
Social Distance - Negative norms vs. Control			
Perceived Norms			
(1) Descriptive Norms	-1.670	-4.360	.003
(2) Injunctive Norms	-1.517*	-4.322	-.229
Attitudes and Beliefs			
(3) Value of Support	-.921*	-2.592	-.098
(4) Dangerousness	-.239	-1.383	.161
(5) Social Inappropriateness	-.364	-1.551	.102
(6) Emotional Contagion	-.198	-1.258	.223
Self-efficacy			
(7) Self-efficacy	-.729	-2.905	.417
Direct Effect	-.224	-3.527	3.079
Total Effect	-5.860*	-10.094	-1.626

* = statistically significant (95% Bias-corrected Confidence Intervals)

Figure 1.

The Reasoned Action Approach with Variables Relevant to the Current Study



Adapted from "Schematic presentation of the reasoned action model" by M. Fishbein and I. Ajzen, 2010, *Predicting and changing behavior*, p.22. Copyright 2010 by Psychology Press.

Appendix

Depression Attribution Questionnaire-27 (Kanter, Rusch, & Brondino, 2008) vignette adapted for the present study:

ML is 18 years old and has had severe depression for the last year. ML feels hopeless about life and no longer feels pleasure from any of the activities ML used to enjoy. Even good experiences fail to lift ML's mood. ML has trouble concentrating and feels very tired, but often wakes early in the morning without being able to get back to sleep. This has caused ML to fall behind in coursework at the university. ML lives in an apartment. Lately ML has been thinking that being dead would be better than the current condition.