I Beg To Differ: Emotional Consequences of Being disagreed With and Socially Excluded.

Alvin Lim (14016718)

Department of Psychology, James Cook University (Singapore)

Thesis submitted in partial fulfilment of the requirements for the Degree of Bachelor Psychology with Honours of James Cook University

STATEMENT OF ACCESS

I, the undersigned, the author of this thesis, understand that James Cook University will make this thesis available for use within the University Library and allow access to users in other approved libraries.

I understand that, as an unpublished work, a thesis has significant protection under the Copyright Act and;

I do not wish to place any further restriction on access to this work.

Alvin Lim Digitally signed by Alvin Lim Date: 2021.03.05 11:37:02 +08'00'

Signature

March 5, 2021

Date

Alvin Lim

Name

Ownership Declaration

Declaration:

I declare that these works are my own and have not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been. acknowledged in the text and a list of references is given.

Alvin Lim Digitally signed by Alvin Lim Date: 2021.03.05 11:37:18 +08'00'

Signature

March 5, 2021

Date

Alvin Lim

Name

Acknowledgements

I would like to first thank my supervisor, Dr. Adam for his continued guidance and support throughout this research project. I am grateful that he took the time to answer my queries as well as providing me with feedback. I would also like to extend my gratitude to Dr. Patrick Lin for clarifying my doubts.

Table of Contents

Abstract

In everyday life, individuals commonly experience situations where they are being socially excluded. Studies have shown that both social exclusion and disagreement can threaten the fundamental need of belonging, which can trigger negative emotions. Both concepts of social exclusion and disagreement to date have been studied in isolation. In this present study, we made the following predictions: 1) Being excluded evokes stronger feelings of hurt and sadness as compared to being disagreed with; 2) Being disagreed with evokes higher levels of anger compared to being excluded. We also analysed if participants who feel strongly towards the discussion topic will influence their anger intensity. A total of 32 participants were led to believe the study consisted of a chatroom discussion of controversial topics and a subsequent ostensible task. Prior to entering the chatroom, participants had to write their opinions on their chosen discussion topic. Subsequently, participants received a series of preprogramed responses from confederates who were either unresponsive (social exclusion), disagreeable (disagreed with), or agreeable (control). Following the discussion, participants completed a questionnaire that measured their emotions and beliefs towards their discussion topic. Our results showed that there were no emotional differences between individuals who were being socially excluded, disagreed with, or being accepted. In addition, we found that regardless of whether participants were socially excluded, or disagreed with, or agreed with, their anger intensity was not influenced by how strongly they felt towards their discussion topic. Alternative interpretations and possible limitations of this current research were discussed at length.

Keywords: social exclusion, disagreement, emotions, beliefs, controversial topics, interpersonal rejection

Receiving silent treatment, getting the cold shoulder, being ignored – having to experience these situations will often leave you with a slew of unanswered questions and uncomfortable emotions. Social exclusion is a universal phenomenon whereby individuals would experience it at least once a day (Nezlek et al., 2012). Social exclusion denotes the experience of being excluded and ignored in a social context by an individual or a group of individuals (Carter-Sowell et al., 2008; Williams, 1997). Within the societal level, social exclusion is socially sanctioned as punishments such as time-outs, expulsion, and prison social isolation (Williams & Zadro, 2006). Social exclusion might take forms of or be labelled as rejection and ostracism (Goodacre & Zadro, 2010; Smart Richman & Leary, 2009; Williams, 2007). We collectively refer to these experiences as social exclusion.

From an evolutionary perspective, adaption for the fundamental need to belong might be derived from the interdependent nature of human ancestors (Baumeister & Dewall, 2005). Forming and belonging to a social group would mean that individuals are more likely to survive and preserve their own genetic lineage (Buss & Kenrick, 1998; MacDonald & Leary, 2005). Thus, humans are motivated to avoid social exclusion at all costs, given that it threatens the fundamental need to belong (Maner et al., 2007; Williams, 2007, 2009). The desire to be accepted and belong to a social group is so strong that individuals might choose to disregard their preferences to remain in the social group (Baumeister & Leary, 1995; Williams et al., 2000)

Most importantly, the negative effects of social exclusion are immediate (Williams, 2007), and can evoke negative emotions (Baumeister & Leary, 1995; Leary, Kowalski, et al., 2003). In a similar line of research, being disagreed with can be unpleasant, given that it signals that one's arguments may be fundamentally incorrect (Denson et al., 2011; Matz & Wood, 2005; Newcomb, 1953; Wranik & Scherer, 2009). Moreover, this negative feedback of one's opinion caused individuals to feel as though they had failed to understand the issue

objectively. Subsequently, this can result in the individual who is being disagreed with to experience anger and annoyance (Jehn & Mannix, 2001; Karen A. Jehn, 1995; Meier et al., 2013; Traş et al., 2019). Both of these concepts to date have only been studied in isolation. Thus, it is important to ascertain the emotional consequences of being socially excluded and being disagreed with, given that both of these experiences can have detrimental effects on individuals' mental well-being (Baumeister & Leary, 1995; Matz & Wood, 2005).

In the paper, we will examine the immediate consequences of social exclusion and disagreement on specific emotions such as anger, hurt, and sadness. Specifically, the primary aim of this study is to investigate the difference in emotional consequences between being socially excluded and being disagreed with. In addition, this study examines whether the intensity of anger is influenced by the participants' beliefs when they are in the context of social exclusion, disagreement, and acceptance.

Consequences of social exclusion

Based on the current findings, social exclusion can have many negative consequences. For example, it has been shown that individuals who are alone are more likely to develop some forms of physical or mental illness (Cacioppo et al., 2003; Williams, 2001). In some extreme cases being socially excluded can set in motion the development of aggression and violence. For example, children who are social outcasts would develop aggressive behaviour (Coie et al., 1993; Newcomb et al., 1993). Case studies have revealed that perpetrators of school shootings tend to be victims of social exclusion (Leary, Kowalski, et al., 2003). Research has also demonstrated that the negative effects of social exclusion can also extend to physiological, behavioural, cognition, and psychological levels (Williams, 2009; Williams et al., 2013).

Psychological consequences of social exclusion

Pioneering studies have found that individuals experienced negative emotions after being socially excluded (Baumeister & Tice, 1990; Geller et al., 1974; Leary, 1990; Pepitone & Wilpizeski, 1960). Accordingly, several conceptual accounts indicate that after social exclusion, individuals would experience sadness (Buckley et al., 2004; Chow et al., 2008; van Beest & Williams, 2006), feelings of hurt (Chen et al., 2008; Eisenberger, 2003; Leary & Springer, 2001; MacDonald & Leary, 2005; Snapp & Leary, 2001; van Beest & Williams, 2006), anger (Buckley et al., 2004; Chow et al., 2008; Williams et al., 2000, 2002; Zadro et al., 2004), anxiety (Baumeister & Tice, 1990; A. Smith & Williams, 2004; Williams, 2007) and loneliness (Leary, 1990, 2015; Williams & Zadro, 2006). Social exclusion is so powerful that even with instances of monetary incentives attached to being socially excluded, participants still experience emotional distress (Van Beest et al., 2011; van Beest & Williams, 2006). Interestingly, even when social exclusion is performed by computerized partners it would still cause the same levels of emotional distress (Zadro et al., 2004). However, there are a few exceptions where some studies failed to find any emotional changes in participants after social exclusion. (Baumeister et al., 2005; DeWall & Baumeister, 2006; Twenge et al., 2001, 2002, 2007).

Physiological consequences of social exclusion

Social exclusion can trigger the activation of the brain region known as the anterior cingulate cortex which is commonly associated with the experience of physical pain (Eisenberger, 2003; Kross et al., 2011). Accordingly, studies have observed that excluded individuals would report an increase in pain sensation (Eisenberger, 2003; Kross et al., 2011). Excluded individuals are also more likely to experience an accelerated heart rate (Iffland et al., 2014), lowered body temperature (IJzerman et al., 2012; Zhong & Leonardelli, 2008), increased blood pressure, and increased plasma cortisol (Stroud et al., 2000).

Behavioural consequences of social exclusion

Social exclusion can result in behavioural changes, which act as a form of compensatory mechanism to be potentially included again. For instance, socially excluded individuals are likely to conform (Williams et al., 2000), comply (Carter-Sowell et al., 2008), and obey (Riva et al., 2014). They are also more likely to notice insincere emotional displays (Bernstein et al., 2010), increased selective attention to smiling faces (DeWall et al., 2009), remember social information (Gardner et al., 2000) unconsciously mimic others' behaviours (Lakin & Chartrand, 2003). However, when inclusion is unlikely, social exclusion can lead to aggressive behaviours (Chow et al., 2008; Twenge & Campbell, 2003; Wesselmann et al., 2010).

Taken altogether, previous research has investigated thoroughly how social exclusion affects an individual in different ways. However, relatively little empirical attention has been paid to distinguish whether being disagreed with would cause more negative emotions as compared to being socially excluded.

Disagreement

Disagreement can occur in everyday life such as during discussions, work meetings, or discussing different political views (Angouri & Locher, 2012; Kennedy & Pronin, 2008; Rahim, 2017). It is proposed that to be disagreed with is unpleasant as not only a threat to the validity of one's ideas but it also signals the possibility of one's arguments to be wrong (Denson et al., 2011; Matz & Wood, 2005; Newcomb, 1953; Wranik & Scherer, 2009). When individuals are being disagreed with, they would feel that their ideas are obstructed (Matz & Wood, 2005; Van de Vliert, 1997). Thus, individuals would often try to validate their pre-existing beliefs when encountering opposing views (De Dreu & van Knippenberg, 2005; Kennedy & Pronin, 2008). Individuals would try to validate their stance by challenging each other's views (Angouri & Locher, 2012; Barki & Hartwick, 2004; De Dreu & van Knippenberg, 2005). This would inevitably result in verbal conflicts (Kennedy & Pronin,

2008), and would evoke negative emotions (De Dreu & van Knippenberg, 2005; Denson et al., 2011; Kennedy & Pronin, 2008; Rios et al., 2014).

Humans tend to be naïve realists, believing that others would see the world based on their perceptions and ideas (Kennedy & Pronin, 2008). This tendency to rely too heavily on one's perspective may lead to divergence of ideas causing disagreements to occur (Angouri & Locher, 2012; Barki & Hartwick, 2004). In addition, it is proposed that individuals feel a sense of ownership towards their own arguments, attitudes, and beliefs (De Dreu & van Knippenberg, 2005; Rios et al., 2014). This results in individuals being in favour of their own arguments and be opposed to counter attitudinal ideas, given that any opposing arguments can be threatening to one's ego (De Dreu & van Knippenberg, 2005; Kennedy & Pronin, 2008). Moreover, it can be difficult for one's ego to admit the possibility of being wrong, given that individuals believe that they perceive issues objectively (Reeder et al., 2005; Robinson et al., 1995). Ego can also result in self-serving bias such that individuals who fail to see from one's point of view may be deemed as irrational and biased (Kennedy & Pronin, 2008; Pronin et al., 2002). Hence, the role of ego can sometimes interfere with one's ability to see the whole picture and consider both sides of the arguments (De Dreu & van Knippenberg, 2005; Inhelder & Piaget, 1958; Pronin et al., 2002; Reeder et al., 2005).

Disagreement is viewed as a form of impoliteness and can threaten an individual's need for social harmony (Matz & Wood, 2005; Meier et al., 2013). Thus, individuals generally avoided disagreeing with others as it is an aversive social experience (Domínguez D et al., 2016; Rios et al., 2014). Building from previous insights from social exclusion, disagreeing with someone can potentially deprive an individual of their need to belong (Baumeister & Leary, 1995; Buckley et al., 2004; Williams et al., 2002). Previous research demonstrates that individuals who are being disagreed with would experience feelings of anger (Angouri & Locher, 2012; Meier et al., 2013).

Therefore, the concepts of social exclusion and disagreement should not be studied separately. Being disagreed with deprives an individual's need to belong as well as producing emotional negative consequences similar to social exclusion. Studies have demonstrated that negative emotions evoked by disagreement would determine subsequent interactions within the group (Christenson et al., 2012). More importantly, understanding how disagreement affect individuals can better recognise what type of emotions are involved in interpersonal and workplace conflicts (Mao et al., 2017; Smith et al., 1998). Although disagreeing with others generally avoided, but in some cases individuals may choose to disagree with others if they are confronted with opposing arguments on topics they strongly believe in (De Dreu & van Knippenberg, 2005; Rios et al., 2014).

Beliefs

To our knowledge, no research has examined whether beliefs play a role in emotions in the context of disagreement and social exclusion. According to Richardson (1996) beliefs can be defined as "psychologically held understandings, premises or propositions about the world that are felt to be true" (p.106). Strongly held beliefs are important sources of identity (Cohen et al., 2000; Rios et al., 2014) and are strongly connected to one's emotions (De Dreu & van Knippenberg, 2005; Green, 1971; Kennedy & Pronin, 2008).

Studies have demonstrated that people take a sense of ownership to their own beliefs and it is considered as part of one's extended self (Baumeister, 1998; De Dreu & van Knippenberg, 2005; Rios et al., 2014). Individuals would tend to view themselves in a positive light and any opposing views induce the idea of one being wrong can be unpleasant (Campbell & Sedikides, 1999; De Dreu & van Knippenberg, 2005; Denson et al., 2011; Matz & Wood, 2005). Thus, to be disagreed with on matters that one held with conviction can trigger competitive communication and high levels of anger (Clore & Gasper, 2000; De Dreu & van Knippenberg, 2005; Kaasila et al., 2008). Taken together, the role of beliefs could

potentially play a role in the anger intensity of disagreement and social exclusion. Hence, the secondary aim of this study focuses on whether the strength of pre-existing beliefs towards a topic would influence the relationship between the anger intensity of being disagreed with and being socially excluded.

To date, only one study looked at the emotional consequences of disagreement and social exclusion (Williams et al., 2002). They compared the effects of social exclusion vs. social inclusion (exclude or include) against the opinion discrepancy (agree or disagree) in a chatroom with two confederates (Williams et al., 2002). In the study, they focused on a discussion of the Sydney Olympics (Williams et al., 2002). The study showed that participants who were socially excluded had the worst negative moods as compared to participants who were being disagreed or accepted (Williams et al., 2002). Moreover, individuals reported more negative moods when they were disagreed with than when they were agreed with (Williams et al., 2002). However, their primary focus was not on the emotional outcomes of social exclusion and disagreement, but rather on how would social exclusion affect individuals' fundamental needs (Williams et al., 2002). In addition, their sample size was severely underpowered, with an average of nine participants found within each of their conditions. Furthermore, the opinions towards the discussion of the Sydney Olympics do not include any strongly held beliefs and is unlikely to be connected to any forms of strong emotions. However, we do acknowledge that this study serves as preliminary and indirect evidence for our current study. Hence, our study seeks to fill in the gap within the literature, given that both being socially excluded and being disagreed with are ubiquitous experiences that have detrimental effects on an individual's mental well-being (Baumeister & Leary, 1995; Matz & Wood, 2005).

The present study

Research suggests that being socially excluded can produce negative emotional consequences (Williams, 2007, 2009). However, the present literature leaves open the question of whether individuals would respond differently in terms of being socially excluded and disagree with. Hence, the present study aims to explore whether there are differences in emotional responses caused by social exclusion, disagreement, and acceptance. Specifically, our study would focus primarily on negative emotional responses such as hurt, sadness, and anger. In addition, the secondary goal of this study is to explore how the intensity of anger caused by disagreement or social exclusion can be influenced by pre-existing beliefs towards the discussion topics.

This current study aims to address the following predictions: 1) Social exclusion evokes stronger feelings of hurt and sadness as compared to being disagreed with; 2) Being disagreed with causes greater feelings of anger compared to social exclusion; 3) Participants who feel strongly towards the discussion topic will influence the intensity of anger in the context of social exclusion, disagreement, and acceptance.

Method

Ethics Statement

The project was approved by the University of James Cook University Human Research Ethics Committee (HREC), H8069. All participants provided written informed consent.

Participants

Our sample consists of both undergraduate psychology students (N = 13) who participated for course credits, and members of the public (N = 22) who were recruited via snowball sampling and volunteered out of goodwill. A G*Power a priori test indicated that a total of 153 participants were required to detect a small effect size with 80% power (Faul et al., 2007). Given the limited data collection window, a total of 35 participants participated in

this study, of which two participants were identified as multivariate outliers and one participant successfully guessed the true intent. These participants were excluded from the analyses, leaving a final sample size of 32 participants (16 females; M_{age} = 23.47 years, SD_{age} = 4.64).

Design

A single way three level between group design was used where participants were randomly assigned to either one of the following conditions: social exclusion (N = 10) vs. disagreed with (N = 11) vs. control (N = 11).

Measures and materials

Chatroom

A pre-programmed graphical user interface was created via HTML programming language to create an experience of online chatroom discussion. This pre-programmed graphical user interface was hosted on a web page. In addition, all the interactive elements and computerized participants were simulated through a predefined HTML script. The online chatroom discussion involved one actual participant and two other computerized participants (CPs). Both CPs' responses with the actual participant were pre-written. The CPs were programmed to be either unresponsive (social exclusion) or disagreeable (disagree with) or agreeable (control) to the participant. In addition, it is important to note that in all conditions, the experimenter's interaction with the participants was based on a pre-written script.

Discussion topics

The list of topics that were used in the discussion was based on prior research on controversial topics that are relevant to individuals living in Singapore. The seven topics were chosen because the beliefs toward or against were relatively firm (e.g., "Is there freedom of speech in Singapore?"). Participants had to choose one topic of their choice to discuss. Participants were given seven topics to choose from, however, only five topics can be

selected by the participant. The other two topics appeared to be selected by "other participants" (CPs). To ensure consistency across all conditions, the same two questions were selected (i.e., "Does racial discrimination exist in Singapore?" and "Should there be more than two genders?"). Moreover, it prevented the participants from selecting the same topic and having the same stance as the confederates.

Measure of emotions

Participants had to fill up various outcome measures which were hosted on Qualtrics. The questions were presented in the following sequential order: 14 self-reported emotions, three other outcome measures, participant's demographics, and hypothesis guessing. Participants were asked to rate their current mood on a seven-point likert scale ranging from 1 (*not at all*) to 7 (*extremely*). These mood items such as mad, anger, irritated, happy, cheerful, pleased, sad, depressed, down, and hurt (Leary, Gallagher, et al., 2003) anxious, tense, nervous (Buckley et al., 2004) lonely (Harmon-Jones & Harmon-Jones, 2010) were adapted from previous studies. These emotion items were randomised. The list of emotions consists of anger (i.e., anger, irritated, and mad), anxiety (i.e., anxious, tense, and nervous), happiness (i.e., happy, cheerful, and pleased), sadness (i.e., sad, depressed, and down), hurt, and lonely. Higher scores on the measure of emotions indicated higher levels of that specific emotions (e.g., higher scores on the item "lonely" would indicate high levels of loneliness). Apart from the single measure of emotions (i.e., hurt and lonely), the composite scores for each emotion type were created by averaging scores of the three items representing each emotion such as happiness (α = .93); anxiety (α = .80); anger (α = .95); sadness (α = .80).

Additional measures

Participants were asked to respond to three other outcome measures, all these items were rated on a seven-point scale. Participants were asked to rate how strongly they felt towards their discussion topic (1 = *Not at all important*, 7 = *Extremely important*). The

question “how strongly do you feel about your topic that you have discussed?” served as our moderator. A higher score indicated that participants had strong pre-existing beliefs towards their discussion topic. Participants had to rate an ancillary item (i.e., “How controversial were the topics discussed?”), this question was included to minimize participants’ suspicion levels (1 = *Not at all controversial*, 7 = *Extremely controversial*). Participants were also asked to rate “How enthusiastic were the other participants with regards to your topic?” (1 = *Not at all enthusiastic*, 7 = *Extremely enthusiastic*). This item was used as a manipulation check, to ensure chatroom discussion successfully manipulate the effect of being socially excluded or disagreed with or being accepted. Higher scores indicated that the participant felt that the “other participants” (CPs) were very enthusiastic towards their discussion topic. (e.g., in the control condition, participants would be more likely to report CPs to be more enthusiastic towards their chosen discussion topic.)

Hypothesis guessing

Lastly, a suspicion probe item was used to check if they knew the hypothesis or the true intention of the study.

Procedure

Upon arrival at the laboratory, participants were asked to provide informed consent and read through the information sheet. Participants were given a cover story that the research focused on how young and older generations differ in opinions towards current issues. In addition, the participants were also led to believe that the experiment consisted of a group discussion in an online chatroom and a subsequent ostensible task.

After informed consent was received, participants were then brought into a computerised booth. Following this, participants began what they believed was a networked discussion with two other individuals in the adjoining computerised booth (whose doors had

already been closed when the participants arrived, giving the impression that the other individuals had arrived earlier). The other group members were computerised.

Inside the computerised booth, the computer screen displayed the first page of the pre-programmed graphical user interface which was viewed on a web browser in full-screen mode. Participants were instructed by the experimenter to read the instructions on the computer screen and proceed when ready. On the next page, the participants were verbally instructed to key in the participant ID as the number "2" and proceed accordingly. The experimenter told participants that they need to attend to other participants and would come back afterwards.

On the next page, participants had to choose one of 82 personal avatars (Wolf et al., 2015). This selection of avatars was incorporated to allow participants to feel personalized in the discussion. More importantly, this allowed participants to distinguish and identify themselves through their chosen avatars. The gender, age, and skin colour of these avatars had been fully crossed to create several avatars of each combination. After selecting the avatar, participants would proceed to the next page.

The next page presented the following instructions: "Please select your topic/question (you will need to state your opinion on the selected topic)". There were seven questions to choose from, but two questions appeared as strikethrough and appear to be selected by other participants. With the five remaining topics to choose from, participants had to select one topic.

After selecting the topic, participants arrived at an interactive page. Participants had to decide whether they agree or disagree with their discussion topic. After participants click on the buttons "agree" or "disagree", a textbox would appear. It instructed participants to state at least one reason why they agree or disagree with their discussion. Participants had to submit their opinions once they completed writing.

After submitting their opinions, the researcher slammed the adjoining door before entering the computerised booth (this procedure is to give the illusion that there are participants in the other booth). The experimenter ensured that the participants had finished reading instructions displayed on this page and delivered additional verbal instructions. The participants were told that they were only allowed to comment once on each participants' discussion topic. Participants were able to respond to the other participants (CPs) by pressing a comment button underneath each of their profiles. The participants were told that other participants were already in the chatroom and were explicitly instructed to proceed with the group discussion.

Participants then arrived at the "group discussion" page, which was set up to resemble a chatroom, and displayed three individualised columns. Each of the columns was evenly aligned. This page displayed the participants' chosen discussion topics and opinions. It included two other topics and opinions that ostensibly belonged to the other two participants, but which were in fact pre-programmed (i.e., "Participant 1", and "Participant 3"). Regardless of which condition it was, the participants' column was always in the middle. The participants were told to proceed with the discussion.

Shortly after the experimenter left the room, CPs began typing out their comments, this was indicated by the text "typing…". For all conditions, CPs (i.e., *"*Participant 1*" and "*Participant 3*"*) would first comment on each other's opinions and agree with each other's opinions. Once completed, the CPs would either ignore (social exclusion) or disagreed with (disagree) or agreed with (control) the participant's opinions. All the comments were pre-written by the experimenter and followed a maximally fixed format (i.e., "I agree" or "I disagree" followed by the reason for the stance). The comments were similar in terms of length and grammatical errors were inserted within the comments to increase realism.

For the social exclusion condition, both CPs ignored the participants' opinions (not post any comments). For the disagreed condition, both CPs disagreed with the participants' opinions (e.g., "I disagree that there should be freedom of speech in Singapore. freedom of speech can result in the spread of false information."). For the control group, both CPs agreed with the participants' opinions. (e.g., I agree that freedom of speech should be allowed in Singapore. Freedom of speech promotes the free exchange of ideas and ideas will not be suppressed.).

Once the discussion was completed, the experimenter entered the room. The participants had to fill in a 'baseline' mood measure before starting the subsequent task. By pressing the button "Continue", the participants were led to a questionnaire hosted on Qualtrics. The questionnaire was completed in the absence of the experimenter. Upon completion of the questionnaire, the experimenter entered the room and verbally debriefed the participants. The experimenter ensured that the participants had understood that the other two chat room members were not actual participants but artificial intelligence. In addition, participants were told that the responses of other participants (CPs) were scripts that were pre-programmed to be either unresponsive or disagreeable, or responsive. Participants had the chance to comment on the study and were thanked for their participation. The entire experiment took approximately 15 minutes. All materials are appended in Appendices B – Q.

Results

Preliminary analyses

Assumption testing

Prior to analysing the data, several assumptions were evaluated. Specifically, the data were tested for normality, multicollinearity, homogeneity of variance. The assumption of normality was violated for loneliness, hurt, anger, and sadness as shown by the significant value of the Shapiro-Wilk statistic ($p < .05$). However, it must be acknowledged that Shapiro-

Wilk tests are known to be excessively stringent (Tabachnick & Fidell, 2007). Further visual inspection of normal Q-Q plots indicated no violations of normality.

The assumption of multicollinearity was met, as it appeared that the dependent variables had correlation collinearity between 0.3 and 0.8. The assumption of homogeneity of covariance was violated, as Box's M value of 129.79 was significant at alpha 0.001. Given that the sample size consists of more than 30 subjects, and MANOVA is robust against violations of homogeneity of variance-covariance matrices assumption (Allen & Bennett, 2008). Thus, further assumption of testing was conducted. The homogeneity of variance was violated, as Levene's test revealed that hurt and sadness were significant ($p < .05$). Therefore, we cannot assume that our data had equality of all variances. Both violations were subsequently addressed.

The assumption of multivariate outliers was violated, as the Mahalanobis Distance coefficient was larger than the critical chi-square value. Next, an inspection of the Maximum Mahalanobis Distance coefficient found two multivariate outliers, which were subsequently removed from further analyses, resulting in a Maximum Mahalanobis distance ($MD = 25.05$) larger than the critical chi-square for all dependent variables, at an alpha level of .001.

A scatterplot was used to test the assumption of linearity amongst the variables. This scatterplot indicates that there was a strong linear relationship between all the dependent variables, it is worth noting that some of the ellipses were on top of one another. Thus, linearity can be assumed. Pillai's trace was reported as part of our MANOVA, given that this test was the most appropriate test as the sample size was relatively small. Moreover, Pillai's trace would be robust against the violation for homogeneity of variance (Field, 2013).

There were no observable patterns in the scatterplot. This means that the assumption of linearity, homoscedasticity, and normality of residuals was met. The testing for the assumption of multicollinearity was conducted using linear regression analysis. The analysis

assumption of multicollinearity was met as indicated by the Variance Inflation Factor (< 10) and the tolerance value (> 0.1).

To explore how social exclusion and being disagreed with can differentially influence specific emotions, A Multivariate analysis of variance (MANOVA) was conducted. Although the initial predictions focused on emotions such as hurt, sadness, and anger, all the emotions measured were included in the MANOVA. The conditions were categorised and were dummy coded as "0" = Social exclusion"; "1" = Disagreement", "2" = "Control". One of the participants had raised suspicion about the true intent of the study while two of the participants were identified as multivariate outliers. Thus, the final sample size was 32. All analyses were conducted using SPSS version 26.

Manipulation check

To test whether the chatroom discussion successfully manipulated the effect of being socially excluded or disagreed with or being accepted, a one-way repeated ANOVA was conducted on the conditions (socially excluded vs. disagreed with vs. control) and the participant's perception of how enthusiastic the "other participants" (CPs) were. The results revealed that there was a non-significant effect of conditions on the participants' perception towards the other participants' enthusiasm, $F(2, 32) = 3.05$, $p = .06$, partial $\eta 2 = .17$. This manipulation check suggested that the group discussion did not manage to induce the desired perception of being accepted or disagreed with or socially excluded.

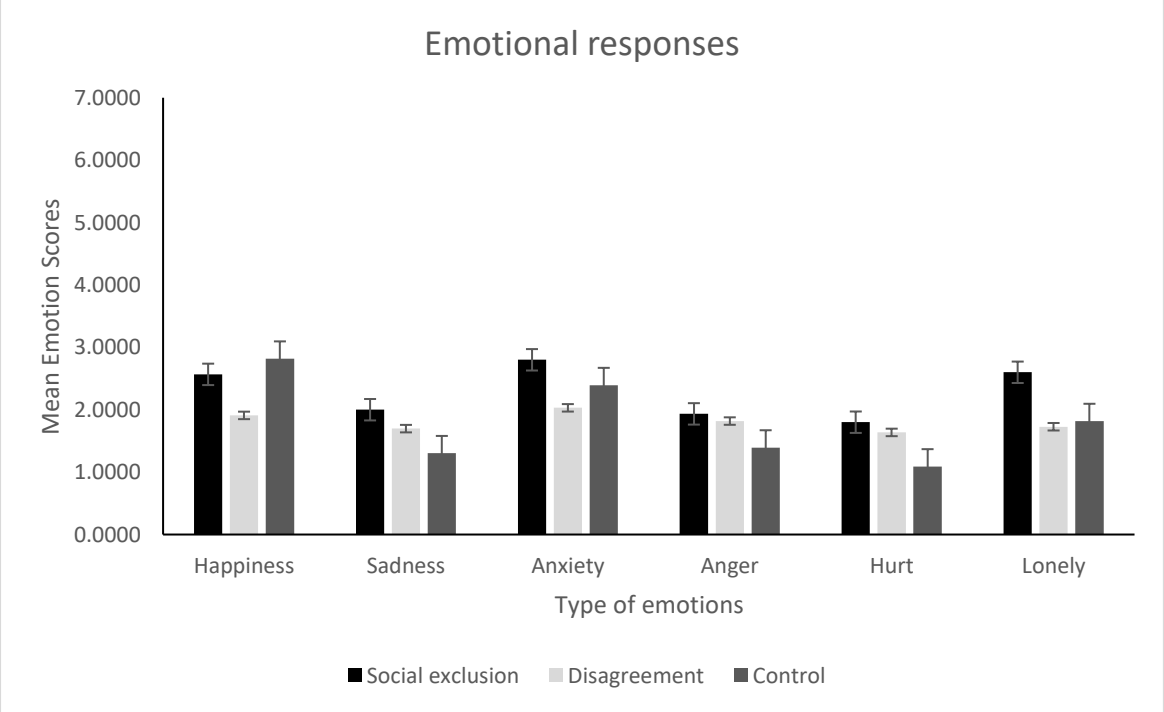
Main analysis

A MANOVA was conducted on the experimental condition (social exclusion or disagreement or control) and each of the emotions (happiness, sadness, anxiety, anger, hurt, lonely) as dependent variables. Hence, A 3 (condition) X 6 (emotion) MANOVA was conducted.

A non-statistically significant MANOVA was obtained, Pillais' Trace = .83, F (12, 50) = 0.83, p = 62. The multivariate effect size was estimated at .17, which implies that 17% of the variance in the canonically derived dependent variable was accounted for by the group discussion condition. In addition, the univariate main effect of emotions revealed that none of the emotions were significant, happiness, F (2, 29) = 1.01, p = 0.38, partial η2 = .07; sadness, F (2, 29) = 1.46, p = 0.25, partial η2 = .09; anxiety, F (2, 29) = 1.33, p = 0.28, partial η2 = .08; anger, F (2 ,29) = 0.59, p = 0.56, partial η2 = .04; hurt, F (2, 29) = 1.47, p = 0.25, partial η2 = .09; lonely, F (2, 29) = 1.43, p = 0.26, partial η2 = .09. The results indicated that participants did not experience any difference in emotional responses regardless of which condition they were in. Even though none of the analysis were significant, a bar graph was used to illustrate the trends of all emotions in different conditions (Figure 1).

Figure 1

Mean Scores for Emotional Response of Participants in Social Exclusion or Disagreement or Control Condition.



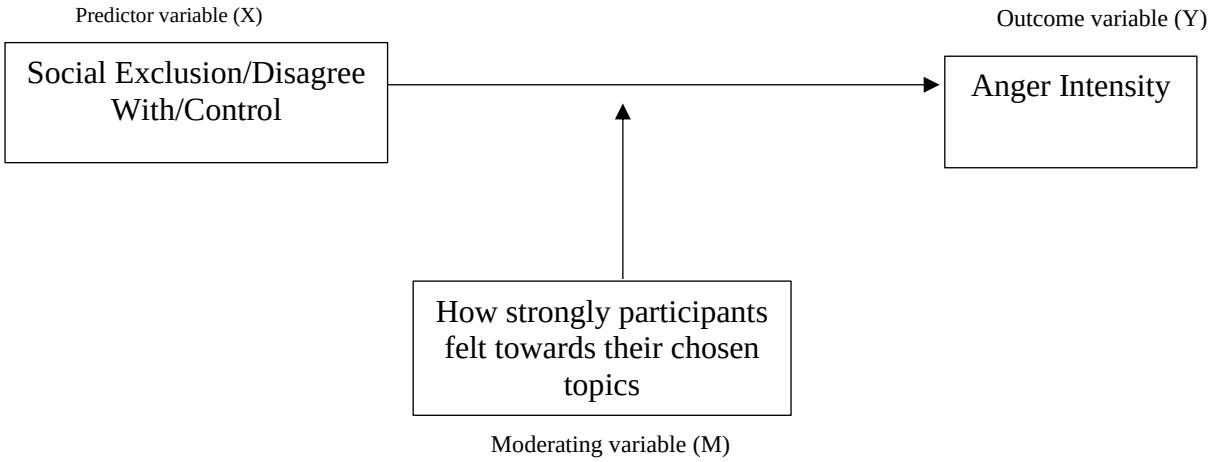
Note. Error bars represent +/-1 standard error.

To address both of our hypotheses, a pairwise comparison was used between conditions. Specifically, it was revealed that being socially excluded did not evoke high levels of hurt compared to disagreement condition *CI* [-0.73, 1.06], $p = 0.71$, the non-significant relationship was also found for sadness *CI* [-0.54, 1.14], $p = 0.47$. This meant that individuals who were being socially excluded did not report higher levels of feelings of hurt and sadness as compared to participants who were being disagreed with (hypothesis 1). Moreover, the pairwise comparisons reveal that levels of anger in the disagreement condition did not significantly differ from social exclusion, *CI* [-1.20, 0.97], $p = 0.83$. In other words, being disagreed with did not cause participants to display greater feelings of anger compared to being socially excluded (hypothesis 2).

Exploratory Analysis

Figure 2

Proposed theoretical Framework for Moderating Effects of How Strongly Participants Felt Towards Their Chosen Topics on the Relationship Between Conditions and the Intensity of Emotions Felt.

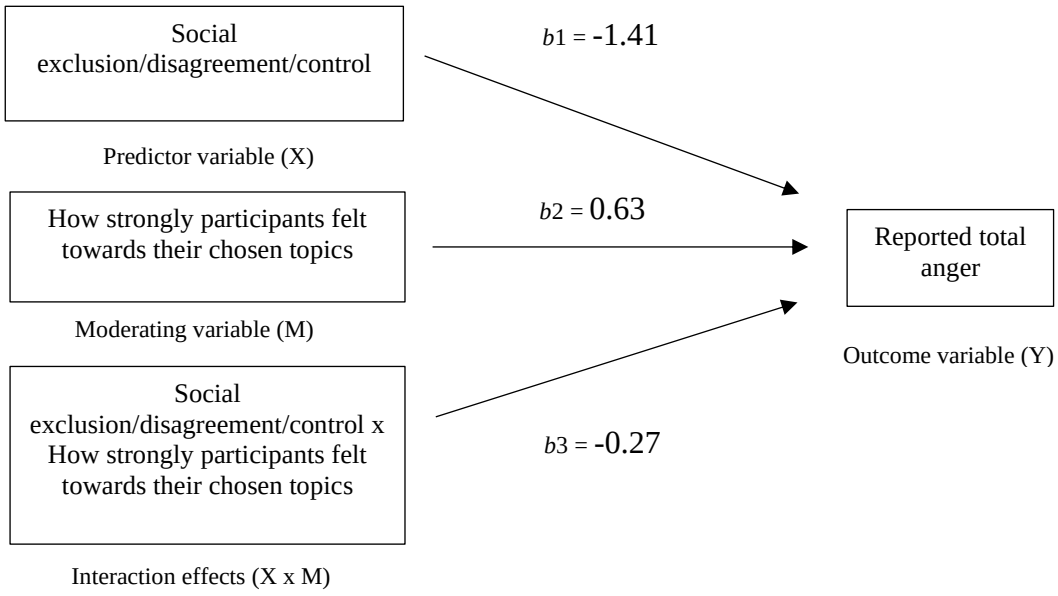


Apart from the main analysis, an exploratory analysis was included. Specifically, whether participants who felt more strongly about the discussion topics (enthusiasm) would moderate the anger intensity in the context of being disagreed with, socially excluded, and

accepted (Figure 2). To test this hypothesis, simple moderation analysis was conducted. The moderation analysis was conducted with the PROCESS macro model 1, with bootstrapping of 5000 (Hayes, 2018), with condition (i.e., socially excluded or disagreed with or accepted) as the independent variable, how strongly participants felt towards their topics as the moderator, and total anger scores as the mediator.

Figure 3

Unstandardized Regression Coefficient for the Relationship Between Conditions and Reported Total Anger as Moderated by How Strongly Participants Felt Towards Their Chosen Topic



Note. *$p < 0.05$

As shown in Figure 3, the moderation analysis revealed an overall model which was non-significant. Specifically, the anger scores and whether the participants who were socially excluded or disagreed with or control were not moderated by enthusiasm (i.e., how strongly they felt towards their chosen topic), $F (3, 28) = 1.59$, $p = 0.21$, the model explained 14.59% of the variance in total anger. As shown in table 1, the results revealed that the variable,

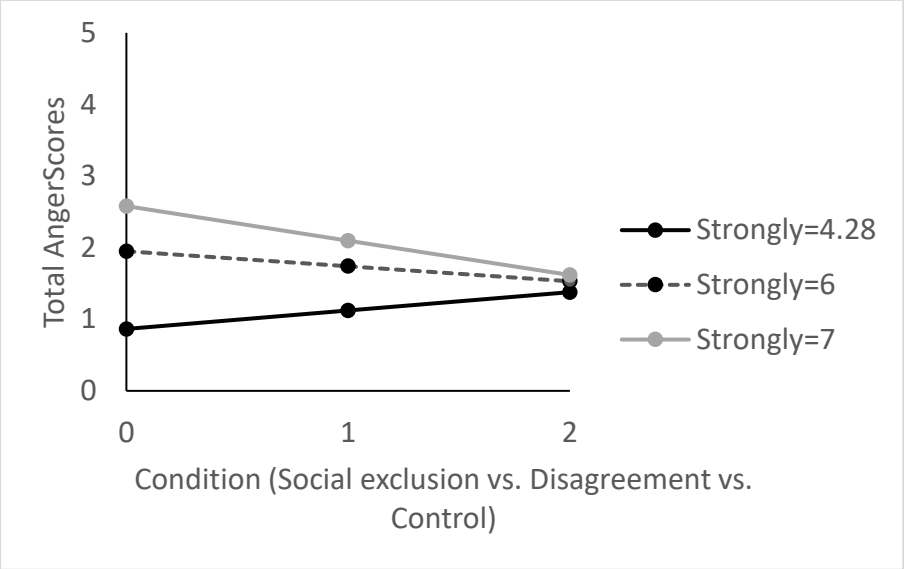
condition (B = 1.42, 95% *CI* [-1.58, 4.41], $t = 0.97$, $p = 0.34$) did not predict the total anger scores significantly. In other words, these results suggest that regardless of which conditions the participants were in, it did not predict the total anger scores.

The analysis also revealed that enthusiasm (i.e., how strongly participants felt towards their chosen topic) (B = 0.63, 95% *CI* [-0.11, 1.37], $t = 1.74$, $p = 0.09$) did not significantly predict the total anger scores. This means participants who had stronger beliefs towards the discussion topic would report higher levels of anger. However, when the two variables interact, condition and how strongly participants felt towards the topic (B = -0.27, 95% *CI* [-0.78, 0.24], $t = -1.09$, $p = 0.28$) yielded a non-significant prediction of the total anger scores. In other words, participants who feel strongly towards the discussion topic did not influence the intensity of anger in the context of social exclusion, disagreement, and acceptance (hypothesis 3). Specifically, how strongly participants felt towards the topic and condition explained an additional 3.8% of the variance in the anger total scores $\Delta R2 = .0363$, F-changed (1, 28) = 1.19, $p = 0.28$. This implies that 3.84% of the additional variance in the canonically derived anger scores was accounted for when the moderator was introduced to the independent variable.

Even though our proposed theoretical framework did not reach the conventional levels of significance (i.e., $p < .05$), a line graph was constructed. As shown in Figure 4, the line graph showed the interaction between the condition and enthusiasm (i.e., how strongly they felt towards their discussion topic). The simple slopes revealed that individuals who felt more strongly about their discussion topic in the social exclusion and disagreement condition were more likely to report high levels of anger. However, this trend was not seen in participants in the control condition who felt strongly about their topic.

Figure 4

Simple Slopes of the Regression of Total Anger Scores on How Strongly Participants Felt Towards the Topic at Different Conditions, Social exclusion vs. Disagreement vs. Accepted.



Note. Condition has 3 levels coded as follows: 0 = social excluded, 1 = disagreed with, 2 = accepted (control)

Discussion

The goal of the study is to understand to what extent does being socially excluded and disagree with differ in terms of negative emotional responses. The present findings suggest none of the predictions were supported. Specifically, we did not find that individuals who were socially excluded experienced higher levels of hurt and sadness as compared to individuals who were disagreed with (hypothesis 1). Next, individuals who were being disagreed with did not report greater feelings of anger as compared to individuals who were socially excluded (hypothesis 2). In addition, the exploratory analysis suggests that regardless of being socially excluded or being disagreed or agreed with, the intensity of anger was not influenced by how strongly participants felt towards the discussion topic.

The failure to reach significance may be attributed to the fact that our sample size was severely underpowered to detect any hypothetical effect sizes of interest. Even though our results do not reach conventional levels of significance (i.e., $p < .05$), the following findings were found. Firstly, there was a trend that suggests socially excluded participants experienced more negative emotions compared to participants who were disagreed with and agreed with (accepted). Previous social exclusion studies that utilised chatroom paradigm found that compared to accepted participants, socially excluded participants were more likely to be tensed (Molden et al., 2009), angry (Donate et al., 2017; Smith & Williams, 2004), sad (Williams et al., 2002), and experienced greater negative affect (Filipkowski & Smyth, 2012). This restated that the need to belong can be so powerful that individuals would be more emotionally distressed by social exclusion as compared to the experience of disagreement (Williams, 2007, 2009; Williams et al., 2002). Participants were emotionally affected even though there was no direct evidence that suggested they were deliberately ignored. This reinforces how aversive social exclusion can be, even in the context of online interaction.

Next, a post-hoc qualitative analysis was conducted on the comments left by the participants. Specifically, there was only one participant within our sample who chose to disagree with other participants. It is proposed that individuals have a reduced inclination to disagree with others, given that they would experience a heightened state of mental stress and discomfort (Domínguez D et al., 2016; Rios et al., 2014). However, this would go against the literature of disagreement, given that individuals who are being disagreed with would often try to validate their opinions and challenge any opposing views (Angouri & Locher, 2012; Barki & Hartwick, 2004; De Dreu & van Knippenberg, 2005; Kennedy & Pronin, 2008). Moreover, it is proposed that under the anonymity of electronic communication, socially excluded individuals would usually respond angrily and sarcastically (Wesselmann & Williams, 2011; Williams, 2001; Williams et al., 2002). However, we speculate that our participants were not overly eager to disagree with other participants because they were led to believe that there was a subsequent task that may include or may not include the participants they had the discussion with. Hence, our participants might have chosen not to disagree with others to avoid any awkward and unwanted tension during their potential future interactions.

Alternative interpretations

The weight of evidence from these analyses suggested that there was an absence of emotional distress following social exclusion. However, three alternative explanations exist that warrant further consideration. Firstly, social exclusion and disagreement produce emotional numbness rather than emotional distress (Twenge et al., 2001, 2003). It is proposed that emotional numbness is a form of physiologically based defence against social exclusion (DeWall & Baumeister, 2006; Twenge et al., 2003). By being in a state of emotional numbness, any negative feelings will be kept out of the individual's awareness (Twenge et al., 2003). Paradoxical though it may seem, studies have demonstrated that participants report

being in a neutral or numb emotional state after social exclusion (Baumeister et al., 2005; DeWall & Baumeister, 2006; Twenge et al., 2001, 2002, 2007).

But upon further examining the literature, a more plausible explanation is that our experimental manipulation perhaps was too brief to create a painful social experience capable of inducing high levels of emotional distress (Gardner et al., 2000; Nezlek et al., 1997). It is suggested that after experiencing psychological or physical trauma, individuals would enter a state of emotional numbness (Allen, 1995; Updegraff et al., 2008). Moreover, some social exclusion paradigms are more effective in putting participants into a state of emotional numbness (Bernstein & Claypool, 2012; DeWall & Baumeister, 2006). Hence, the delineation between emotional numbness and emotional distress boils down to the intensity of the social exclusion and disagreement experience.

In recent years, two meta-analyses were published to determine whether emotional distress is associated with being socially excluded (Blackhart et al., 2009; Gerber & Wheeler, 2009). Gerber and Wheeler (2009) suggested that socially excluded individuals would experience a decrease in positive emotions and an increase in negative emotions. However, it is important to note that Gerber and Wheeler (2009) omitted papers that support the theoretical framework of emotional numbness after social exclusion. The issue of omitting papers for their meta-analysis was discussed extensively (Baumeister et al., 2009). In contrast, Blackhart and colleagues (2009) concluded that social exclusion does result in emotional states that differ, compared to the accepted and control participants. However, when there are no contrasting groups, it was revealed that excluded individuals do not report having experienced emotional distress, but instead reported feeling neutral. As a case in point, Blackhart and colleagues (2009) concluded that “being rejected causes a slight shift away from the baseline of positive mood” (p. 301). Thus, it is possible that the experimental

manipulation of disagreement and social exclusion may not evoke any forms of negative emotions.

Another alternative interpretation of the current findings is that the influence of culture can have on the experience of social exclusion and disagreement. Given that our participants were recruited from a collectivistic country, Singapore. The influence of culture could take the effect in the following ways. Specifically, there is convergent evidence that social exclusion affects individuals from individualistic and collectivistic cultures differently (Kimel et al., 2017; Over & Uskul, 2016; Yaakobi & Williams, 2016). Firstly, culture can influence how we view ourselves (Markus & Kitayama, 1991; Ren et al., 2013). Westerners tend to perceive the self as fundamentally individual and separate from others (Markus & Kitayama, 1991; Ren et al., 2013). On the other hand, Eastern individuals tend to construe themselves as connected to others and define the self by relationships with others, such as nationality, family role, and group membership (Markus & Kitayama, 1991; Ren et al., 2013; Uskul & Over, 2017; Yaakobi & Williams, 2016).

It is proposed that collectivistic individuals tend to view themselves as a collective whole relative to others, rather than distinct relations (Mao et al., 2017; Markus & Kitayama, 1991; Ren et al., 2013). As such, social representation of oneself might act as an active buffer against the negative effects of exclusion (Markus & Kitayama, 1991; Ren et al., 2013), and social exclusion would be less threatening (Ahmed et al., 2014; Ren et al., 2013). Hence, by viewing themselves as being part of a close-knit group, collectivistic individuals are protected and can recover quickly against a single social exclusion, given that social exclusion does not affect their core interdependent self (Pfundmair, Aydin, et al., 2015; Ren et al., 2013; Way & Lieberman, 2010). More importantly, collectivistic individuals might only be emotional distress if they are socially excluded by individuals who have strong ties with them (Pfundmair, Graupmann, et al., 2015).

A series of studies demonstrated that collectivistic participants were less negatively affected by social exclusion than participants from individualistic culture (Pfundmair, Aydin, et al., 2015; Pfundmair, Graupmann, et al., 2015). Unlike individuals from individualistic cultures, collectivistic individuals did not report aggressive behavioural intentions (Pfundmair, Graupmann, et al., 2015) and had no changes in heart rate (Pfundmair, Aydin, et al., 2015). Other studies also found that when comparing social exclusion against individualistic individuals, collectivistic individuals were less threatened (Graupmann et al., 2016), felt less pain (Over & Uskul, 2016), recovered faster from negative effects of social exclusion (Ren et al., 2013), and felt less disappointed (Fiske and Yamamoto, 2005). One possible explanation as to why culture plays a major role in making sense of social exclusion is prior expectations for social relationships. It was observed that individualistic individuals would be presume intimacy and expect intimacy to be reciprocated (Fiske and Yamamoto, 2005). On the other hand, collectivistic individuals held cautious expectations and were less emotionally invested (Fiske and Yamamoto, 2005).

Next, culture can also systematically affect how one thinks about emotions and expresses one's emotion (Mauss et al., 2011; Over & Uskul, 2016). Outwardly expressing negative emotions is considered unacceptable in collectivistic culture (Cousins, 1989; Smith et al., 1998). A study revealed that individuals from collectivistic backgrounds would choose to suppress any negative emotions as a means to preserve their social connections (Gray et al., 2011). The reason for this is that collectivism is associated with avoiding and obliging styles of handling conflicts to maintain relational harmony in conflict situations (Pfundmair, Graupmann, et al., 2015; Smith et al., 1998). This may results in individuals from collectivistic backgrounds to be less likely to disagree with others to preserve the ingroup harmony (Sato et al., 2014; Smith et al., 1998). In some instances, these individuals would

rather adapt their views accordingly rather than seek overt confirmation (Kitayama et al., 2004; Smith et al., 1998).

By comparison, individuals with a more individualistic orientation are more inclined to achieve independence and are highly motivated to express themselves (Cousins, 1989; Kimel et al., 2017). To be disagreed with might be more threatening given that individualism is associated with dominating styles of handling conflict and emphasising the values of autonomy (Kleinknecht et al., 1997; Smith et al., 1998). Given this cultural convention as well as the pursuit of positivity to oneself, individuals from individualistic backgrounds are more likely to explicitly express their displeasure (Heine et al., 1999; Kimel et al., 2017; Robinson et al., 2013; Sato et al., 2014). Hence, this could potentially explain why the conventional negative emotional consequences of social exclusion and disagreement were not found in our study, given that our participants were from a collectivistic background. Moreover, the majority of the studies in domains have thus far been conducted on participants from individualistic cultures (Pfundmair, Aydin, et al., 2015; Pfundmair, Graupmann, et al., 2015; Williams, 2007; Williams et al., 2013), in which these findings may not be relevant to individuals from collectivistic cultures.

Taken together, the current findings could have been confounded by an unforeseeable variable: culture. Thus, it may be that our collectivist participants are not as affected by social exclusion or disagreement because of their social representations. More importantly, disagreement and expressing negative emotions are frowned upon in a collectivistic culture. Thus, this could potentially explain the reason why our participants may have chosen to suppress their negative emotions, which is to preserve social connections and maintain relational harmony.

Limitations

Our findings being inconsistent with the literature on social exclusion could be explained by how our chatroom was designed. In contrast, the studies that chose chatroom paradigm as part of experimental manipulation varies from our design in a few subtle ways (Donate et al., 2017; Filipkowski & Smyth, 2012; Gardner et al., 2000; Molden et al., 2009; Smith & Williams, 2004; Williams et al., 2002; Wolf et al., 2015).

Firstly, our chatroom discussion was designed in such a way that it only allowed for the actual and computerised participants to interact only once. In order to experimentally manipulate social exclusion, individuals have to experience an interaction where they are socially excluded repeatedly or continuously over time (van Beest & Williams, 2006; Williams et al., 2000). Studies that utilised chatrooms to experimentally manipulate social exclusion found participants felt excluded after being repeatedly ignored for an extended period of time (Donate et al., 2017; Filipkowski & Smyth, 2012; Gardner et al., 2000; Molden et al., 2009; Smith & Williams, 2004; Williams et al., 2002; Wolf et al., 2015).

Next, we speculate that participants may have been unaware that they were being socially excluded or disagreed with. During our debriefing, some participants reported they have no idea what other participants had written as they assumed that the study was focused on their comments. Hence, our participants were focused writing their comments on other participants' opinions rather than reading what other participants wrote. Future studies could incorporate a cover story that focuses on impression formation. The cover story of impression formation has been shown to make participants curious about the other participants and focused on what they have written (Buckley et al., 2004; Cohen et al., 2000; Filipkowski & Smyth, 2012; Gardner et al., 2000).

Next, our pre-programmed comments written by the computerized participants may not have made participants feel as though they were being disagreed with, given that it was based on a fixed format (i.e., "I disagree" followed by the reason for their stance). It was

proposed that computer mediated communication lacks non-verbal cues which makes it difficult to decipher the overall tone of a written message (Filipkowski & Smyth, 2012; Kruger et al., 2005; Williams et al., 2000). Studies that experimentally manipulate disagreement would ensure that the disagreement were made explicit. For example, "No way, really? I don't 'get' people like you" (Gardner et al., 2000; Molden et al., 2009) or matching counter-attitudinal arguments to the participants' stance through an extended period (Denson et al., 2011) or "Really, you're kidding right?" and "Are you for real?" (Molden et al., 2009). These forms of disagreement not only are more effective in signalling disagreement but also evoke negative emotions (De Dreu & van Knippenberg, 2005; Denson et al., 2011; Kennedy & Pronin, 2008; Rios et al., 2014). Meanwhile, our pre-programmed response would appear as though the other participants were only sharing their opinions (e.g., "I disagree that there is racial discrimination in Singapore. In Singapore, we are multicultural and all races are being accepted"). Studies have illustrated that the communication style of our pre-programmed responses used in our study resembles more of intentions to share ideas rather than to disagree with someone (Akhtar et al., 2013; Cheatham & Tormala, 2015). To disagree with someone, the disagreement has to be targeted towards the person and criticised that their ideas are fundamentally wrong (Cheatham & Tormala, 2015; De Dreu & van Knippenberg, 2005; Denson et al., 2011; Kennedy & Pronin, 2008). Moreover, to disagree with someone involves asserting their views and convincing others to adopt one's viewpoint (Cheatham & Tormala, 2015; Denson et al., 2011; Rios et al., 2014). Simply then just mentioning that "I disagree", does not bring across the message that the disagreement is directed at the person who wrote the comment. Thus, future studies that wish to employ pre-programmed responses should use a more emotionally charged response so that the disagreement is made explicit to the participant. Alternatively, future research could operationalise disagreement using the anticipation of disagreement. Anticipating that other participants would disagree with them

was shown to create the idea of being disagree with and would result in more negative emotions (Kennedy & Pronin, 2008; Ross & Ward, 1995).

Lastly, given that the experimenter's interaction with the participant was based on a prewritten script, it may have partially contributed to why our experimental manipulation of social exclusion failed (i.e., "You can comment on their opinions if you wish to"). Specifically, our participants were given the option of commenting or not to comment at all. It is proposed that when participants are led to believe that the social exclusion was performed due to the conformity of norms or instructions, they would be less likely to experience negative effects of social exclusion (Rudert & Greifeneder, 2016). All in all, our design of the experiment may have diminished the experience of being socially excluded or disagreed with. Hence, future research should attempt to design a chatroom paradigm with the aforementioned considerations.

Future directions

Although we attempted to create a highly controlled designed chatroom that resembles key elements of real-life online interaction, some constraints in the design of the chatroom may have contributed to our results failing to support our hypotheses. Nevertheless, the possible effect of culture on emotional consequences caused by social exclusion thus remains an opportunity for further research. However, we must be mindful that any research on social exclusion or disagreement must clearly distinguish between an absence of an emotional response from emotional numbing.

Future research should continue to examine the consequences of being socially excluded or disagreed with across the internet and online chatrooms, given that this form of communication represents an increasingly convenient opportunity for interactions (Putnam, 2000). This low-cost communication mode like emailing, texting, chatting through social media platforms enables an individual to establish a sense of belonging (Schneider et al.,

2017; Wolf et al., 2015). On the other hand, these forms of communication channels can allow anonymity, which can potentially allow individuals to engage in deviant behaviour such as cyber-bullying (Segovia & Bailenson, 2012; Wesselmann & Williams, 2011; Williams & Nida, 2011). Thus, the knowledge gained from this field of research could aid practitioners and policy-makers in developing programmes and interventions to safeguard individuals who communicate with others over electronic-based channels (Wesselmann & Williams, 2011). Moreover, understanding the consequences of social exclusion and disagreement is crucial, given that it can detrimentally affect an individual's mental well-being (Baumeister & Leary, 1995; Matz & Wood, 2005). Moreover, the underlying effects of disagreement and social exclusion have important practical implications such as preventing disagreement from turning into interpersonal and workplace conflict (Mao et al., 2017; Smith et al., 1998)

Even though the current results failed to show how one's strength of beliefs can influence the anger intensity after being socially excluded and disagreed with, future research should explore this concept of pre-existing belief. Based on existing literature, individual's pre-existing beliefs play a central role in their handling of disagreements with others (De Dreu & van Knippenberg, 2005). In addition, the use of discussion topics followed by social exclusion is commonly found within the social exclusion literature. For example, some of the discussion topics as follows: favourite movies, clothing style, and music (Gardner et al., 2000); exercise (A. Smith & Williams, 2004); opinions on the smoking ban (Molden et al., 2009); opinions on abortion (Twenge et al., 2001); questions related to own beliefs (Donate et al., 2017); sharing opinions about themselves (Wolf et al., 2015). Individuals may hold strong views towards these topics, thus if one were to be socially excluded or disagreed with when discussing these topics may induce negative emotions. Hence, the role of pre-existing beliefs remains an interesting domain to study alongside social exclusion or disagreement as it may

potentially influence emotions felt. Similarly, another type of interpersonal rejection that could be explored in future studies is disrespect. It is proposed that individuals of collectivistic cultures feel socially excluded if they are disrespected rather than the conventional social exclusion (DeBono & Muraven, 2014).

Concluding remarks

The phrase *I beg to differ* may conjure the ideas of being politely disagreed with. The present findings suggest the possibility that participants who are being disagreed with may have perceived the absence of disagreement. Likewise, our results suggest that socially excluded participants produce emotional responses similar to the individuals who were disagreed with. Do the present findings suggest disagreement and social exclusion produces an absence of emotional distress or emotional numbness or neutral feelings? The present finding does not provide a clear-cut answer. It is certainly plausible that failure to find an answer was due to the issue of a small sample size.

At first, our results present a challenge to the conventional understanding of social exclusion. However, accumulated evidence points to the conclusion that other potentially mitigating factors such as culture could also influence the emotional consequences of social exclusion and disagreement. Our participants faced a dilemma when they were being socially excluded or disagreed with. Specifically, whether they should suppress their emotions or express their true emotions. The latter choice can cause our participants to pay the costly price of losing social relationships and destroy ingroup harmony. Thus, opting to suppress emotions can avoid the possibility for the need of belonging to be threatened. Further study of the emotional responses to social exclusion or disagreement may build on these conclusions to shed further light on interpersonal rejection.

References

Ahmed, I., Khairuzzaman Wan Ismail, W., & Mohamad Amin, S. (2014). Overcoming ostracism at work: The remedial role of positive exchange relations. *Nankai Business Review International*, *5*(3), 275–289. https://doi.org/10.1108/NBRI-02-2013-0002

Akhtar, O., Paunesku, D., & Tormala, Z. L. (2013). Weak > Strong: The Ironic Effect of Argument Strength on Supportive Advocacy. *Personality and Social Psychology Bulletin*, *39*(9), 1214–1226. https://doi.org/10.1177/0146167213492430

Allen, J. G. (1995). *Coping with trauma: A guide to self-understanding* (1st ed). American Psychiatric Press.

Allen, P. J., & Bennett, K. (2008). *SPSS for the health & behavioural sciences*. Thomson.

Angouri, J., & Locher, M. A. (2012). Theorising disagreement. *Journal of Pragmatics*, *44*(12), 1549–1553. https://doi.org/10.1016/j.pragma.2012.06.011

Barki, H., & Hartwick, J. (2004). Conceptualising the Construct of Interpersonal Conflict. *International Journal of Conflict Management*, *15*(3), 216–244. https://doi.org/10.1108/eb022913

Baumeister, R. F. (1998). The self. In D. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), Handbook of social psychology (4th ed., Vol. 1, pp. 680–740). New York: McGraw-Hill.

Baumeister, R. F., & DeWall, C. N. (2005). The Inner Dimension of Social Exclusion: Intelligent Thought and Self-Regulation Among Rejected Persons. In K. D. Williams, J. P. Forgas, & W. von Hippel (Eds.), Sydney Symposium of Social Psychology series. The social outcast: Ostracism, social exclusion, rejection, and bullying (p. 53–73). Psychology Press.

Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Twenge, J. M. (2005). Social exclusion impairs self-regulation. *Journal of Personality and Social Psychology*, *88*(4), 589–604. https://doi.org/10.1037/0022-3514.88.4.589

Baumeister, R. F., DeWall, C. N., & Vohs, K. D. (2009). Social Rejection, Control, Numbness, and Emotion: How Not to be Fooled by Gerber and Wheeler (2009). *Perspectives on Psychological Science*, *4*(5), 489–493. https://doi.org/10.1111/j.1745-6924.2009.01159.x

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*(3), 497–529. https://doi.org/10.1037/0033-2909.117.3.497

Baumeister, R. F., & Tice, D. M. (1990). Point-Counterpoints: Anxiety and Social Exclusion. *Journal of Social and Clinical Psychology*, *9*(2), 165–195. https://doi.org/10.1521/jscp.1990.9.2.165

Bernstein, M. J., & Claypool, H. M. (2012). Social Exclusion and Pain Sensitivity: Why Exclusion Sometimes Hurts and Sometimes Numbs. *Personality and Social Psychology Bulletin*, *38*(2), 185–196. https://doi.org/10.1177/0146167211422449

Bernstein, M. J., Sacco, D. F., Brown, C. M., Young, S. G., & Claypool, H. M. (2010). A preference for genuine smiles following social exclusion. *Journal of Experimental Social Psychology*, *46*(1), 196–199. https://doi.org/10.1016/j.jesp.2009.08.010

Blackhart, G. C., Nelson, B. C., Knowles, M. L., & Baumeister, R. F. (2009). Rejection Elicits Emotional Reactions but Neither Causes Immediate Distress nor Lowers Self-Esteem: A Meta-Analytic Review of 192 Studies on Social Exclusion. *Personality and Social Psychology Review*, *13*(4), 269–309. https://doi.org/10.1177/1088868309346065

Buckley, K. E., Winkel, R. E., & Leary, M. R. (2004). Reactions to acceptance and rejection: Effects of level and sequence of relational evaluation. *Journal of Experimental Social Psychology*, *40*(1), 14–28. https://doi.org/10.1016/S0022-1031(03)00064-7

Buss, D. M., & Kenrick, D. T. (1998). Evolutionary social psychology. In *The handbook of social psychology, Vols. 1-2, 4th ed.* (pp. 982–1026). McGraw-Hill.

Cacioppo, J. T., Hawkley, L. C., & Berntson, G. G. (2003). The Anatomy of Loneliness. *Current Directions in Psychological Science*, *12*(3), 71–74. https://doi.org/10.1111/1467-8721.01232

Campbell, W. K., & Sedikides, C. (1999). Self-Threat Magnifies the Self-Serving Bias: A Meta-Analytic Integration. *Review of General Psychology*, *3*(1), 23–43. https://doi.org/10.1037/1089-2680.3.1.23

Carter-Sowell, A. R., Chen, Z., & Williams, K. D. (2008). Ostracism increases social susceptibility. *Social Influence*, *3*(3), 143–153. https://doi.org/10.1080/15534510802204868

Cheatham, L., & Tormala, Z. L. (2015). Attitude Certainty and Attitudinal Advocacy: The Unique Roles of Clarity and Correctness. *Personality and Social Psychology Bulletin*, *41*(11), 1537–1550. https://doi.org/10.1177/0146167215601406

Chen, Z., Williams, K. D., Fitness, J., & Newton, N. C. (2008). When Hurt Will Not Heal: Exploring the Capacity to Relive Social and Physical Pain. *Psychological Science*, *19*(8), 789–795. https://doi.org/10.1111/j.1467-9280.2008.02158.x

Chow, R. M., Tiedens, L. Z., & Govan, C. L. (2008). Excluded emotions: The role of anger in antisocial responses to ostracism. *Journal of Experimental Social Psychology*, *44*(3), 896–903. https://doi.org/10.1016/j.jesp.2007.09.004

Christenson, S. L., Reschly, A. L., & Wylie, C. (Eds.). (2012). *Handbook of research on student engagement.* Springer.

Clore, G. L., & Gasper, K. (2000). Feeling is believing: Some affective influences on belief. In N. H. Frijda, A. S. R. Manstead, & S. Bem (Eds.), Studies in emotion and social interaction. Emotions and belief: How feelings influence thoughts (p. 10–44). Cambridge University Press.

Cohen, G. L., Aronson, J., & Steele, C. M. (2000). When Beliefs Yield to Evidence: Reducing Biased Evaluation by Affirming the Self. *Personality and Social Psychology Bulletin, 26*(9), 1151–1164. https://doi.org/10.1177/01461672002611011

Coie, J. D., Dodge, K. A., & Kupersmidt (1990). Group behavior and social status. In S. R. Asher, & J. D. Coie (Eds.), Peer rejection in childhood: Origins, consequences, and intervention (pp. 17–59). New York: Cambridge University Press.

Cousins, S. D. (1989). Culture and self-perception in Japan and the United States. *Journal of Personality and Social Psychology, 56*(1), 124–131. https://doi.org/10.1037/0022-3514.56.1.124

De Dreu, C. K. W., & van Knippenberg, D. (2005). The possessive self as a barrier to conflict resolution: Effects of mere ownership, process accountability, and self-concept clarity on competitive cognitions and behavior. *Journal of Personality and Social Psychology, 89*(3), 345–357. https://doi.org/10.1037/0022-3514.89.3.345

DeBono, A., & Muraven, M. (2014). Rejection perceptions: Feeling disrespected leads to greater aggression than feeling disliked. *Journal of Experimental Social Psychology, 55*, 43–52. https://doi.org/10.1016/j.jesp.2014.05.014

Denson, T. F., Grisham, J. R., & Moulds, M. L. (2011). Cognitive reappraisal increases heart rate variability in response to an anger provocation. *Motivation and Emotion*, *35*(1), 14–22. https://doi.org/10.1007/s11031-011-9201-5

DeWall, C. N., & Baumeister, R. F. (2006). Alone but feeling no pain: Effects of social exclusion on physical pain tolerance and pain threshold, affective forecasting, and interpersonal empathy. *Journal of Personality and Social Psychology*, *91*(1), 1–15. https://doi.org/10.1037/0022-3514.91.1.1

DeWall, C. N., Maner, J. K., & Rouby, D. A. (2009). Social exclusion and early-stage interpersonal perception: Selective attention to signs of acceptance. *Journal of Personality and Social Psychology*, *96*(4), 729–741. https://doi.org/10.1037/a0014634

Domínguez D, J. F., Taing, S. A., & Molenberghs, P. (2016). Why Do Some Find it Hard to Disagree? An fMRI Study. *Frontiers in Human Neuroscience*, *9*. https://doi.org/10.3389/fnhum.2015.00718

Donate, A. P. G., Marques, L. M., Lapenta, O. M., Asthana, M. K., Amodio, D., & Boggio, P. S. (2017). Ostracism via virtual chat room—Effects on basic needs, anger and pain. *PLOS ONE*, *12*(9), e0184215. https://doi.org/10.1371/journal.pone.0184215

Eisenberger, N. I. (2003). Does Rejection Hurt? An fMRI Study of Social Exclusion. *Science*, *302*(5643), 290–292. https://doi.org/10.1126/science.1089134

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*(2), 175–191. https://doi.org/10.3758/BF03193146

Field, A. P. (2013). *Discovering statistics using IBM SPSS statistics: And sex and drugs and rock ‘n’ roll* (4th edition). Sage.

Filipkowski, K. B., & Smyth, J. M. (2012). Plugged in but not connected: Individuals' views of and responses to online and in-person ostracism. *Computers in Human Behavior*, *28*(4), 1241–1253. https://doi.org/10.1016/j.chb.2012.02.007

Fiske, S. T., & Yamamoto, M. (2005). Coping with exclusion. Core social motives across cultures. In K. D. Williams, J. P. Forgas, & W. von Hippel (Eds.), The social outcast: Exclusion, social exclusion, exclusion, and bullying (pp. 185-198). New York, NY: Psychology Press.

Gardner, W. L., Pickett, C. L., & Brewer, M. B. (2000). Social Exclusion and Selective Memory: How the Need to belong Influences Memory for Social Events. *Personality and Social Psychology Bulletin*, *26*(4), 486–496. https://doi.org/10.1177/0146167200266007

Geller, D. M., Goodstein, L., Silver, M., & Sternberg, W. C. (1974). On Being Ignored: The Effects of the Violation of Implicit Rules of Social Interaction. *Sociometry*, *37*(4), 541. https://doi.org/10.2307/2786426

Gerber, J., & Wheeler, L. (2009). On Being Rejected: A Meta-Analysis of Experimental Research on Rejection. *Perspectives on Psychological Science*, *4*(5), 468–488. https://doi.org/10.1111/j.1745-6924.2009.01158.x

Goodacre, R., & Zadro, L. (2010). O-Cam: A new paradigm for investigating the effects of ostracism. *Behavior Research Methods*, *42*(3), 768–774. https://doi.org/10.3758/BRM.42.3.768

Graupmann, V., Pfundmair, M., Matsoukas, P., & Erber, R. (2016). Rejection Via Video: The Impact of Observed Group and Individual Rejection. *Social Psychology*, *47*(6), 345–350. https://doi.org/10.1027/1864-9335/a000283

Gray, H. M., Ishii, K., & Ambady, N. (2011). Misery Loves Company: When Sadness Increases the Desire for Social Connectedness. *Personality and Social Psychology Bulletin*, *37*(11), 1438–1448. https://doi.org/10.1177/0146167211420167

Green, T. F. (1971). *The activities of teaching*. McGraw-Hill.

Harmon-Jones, E., & Harmon-Jones, C. (2010). On the relationship of trait PANAS positive activation and trait anger: Evidence of a suppressor relationship. *Journal of Research in Personality*, *44*(1), 120–123. https://doi.org/10.1016/j.jrp.2009.09.001

Heine, S. J., Lehman, D. R., Markus, H. R., & Kitayama, S. (1999). Is there a universal need for positive self-regard? *Psychological Review*, *106*(4), 766–794. https://doi.org/10.1037/0033-295X.106.4.766

Iffland, B., Sansen, L. M., Catani, C., & Neuner, F. (2014). Rapid heartbeat, but dry palms: Reactions of heart rate and skin conductance levels to social rejection. *Frontiers in Psychology*, *5*. https://doi.org/10.3389/fpsyg.2014.00956

IJzerman, H., Gallucci, M., Pouw, W. T. J. L., Weiβgerber, S. C., Van Doesum, N. J., & Williams, K. D. (2012). Cold-blooded loneliness: Social exclusion leads to lower skin temperatures. *Acta Psychologica*, *140*(3), 283–288. https://doi.org/10.1016/j.actpsy.2012.05.002

Inhelder, B., & Piaget, J. (1958). *The growth of logical thinking: From childhood to adolescence.* (A. Parsons & S. Milgram, Trans.). Basic Books. https://doi.org/10.1037/10034-000

Jehn, K. A., & Mannix, E. A. (2001). The Dynamic Nature of Conflict: A Longitudinal Study of Intragroup Conflict and Group Performance. *Academy of Management Journal*, *44*(2), 238–251. https://doi.org/10.2307/3069453

Jehn, Karen A. (1995). A Multimethod Examination of the Benefits and Detriments of Intragroup Conflict. *Administrative Science Quarterly*, *40*(2), 256. https://doi.org/10.2307/2393638

Kaasila, R., Hannula, M. S., Laine, A., & Pehkonen, E. (2008). Socio-emotional orientations and teacher change. *Educational Studies in Mathematics*, *67*(2), 111–123. https://doi.org/10.1007/s10649-007-9094-0

Kennedy, K. A., & Pronin, E. (2008). When Disagreement Gets Ugly: Perceptions of Bias and the Escalation of Conflict. *Personality and Social Psychology Bulletin*, *34*(6), 833–848. https://doi.org/10.1177/0146167208315158

Kimel, S. Y., Mischkowski, D., Kitayama, S., & Uchida, Y. (2017). Culture, Emotions, and the Cold Shoulder: Cultural Differences in the Anger and Sadness Response to Ostracism. *Journal of Cross-Cultural Psychology*, *48*(9), 1307–1319. https://doi.org/10.1177/0022022117724900

Kitayama, S., Snibbe, A. C., Markus, H. R., & Suzuki, T. (2004). Is There Any "Free" Choice?: Self and Dissonance in Two Cultures. *Psychological Science*, *15*(8), 527–533. https://doi.org/10.1111/j.0956-7976.2004.00714.x

Kleinknecht, R. A., Dinnel, D. L., Kleinknecht, E. E., Hiruma, N., & Harada, N. (1997). Cultural factors in social anxiety: A comparison of social phobia symptoms and Taijin Kyofusho. *Journal of Anxiety Disorders*, *11*(2), 157–177. https://doi.org/10.1016/S0887-6185(97)00004-2

Kross, E., Berman, M. G., Mischel, W., Smith, E. E., & Wager, T. D. (2011). Social rejection shares somatosensory representations with physical pain. *Proceedings of the National Academy of Sciences*, *108*(15), 6270–6275. https://doi.org/10.1073/pnas.1102693108

Kruger, J., Epley, N., Parker, J., & Ng, Z.-W. (2005). Egocentrism over e-mail: Can we communicate as well as we think? *Journal of Personality and Social Psychology*, *89*(6), 925–936. https://doi.org/10.1037/0022-3514.89.6.925

Lakin, J. L., & Chartrand, T. L. (2003). Using Nonconscious Behavioral Mimicry to Create Affiliation and Rapport. *Psychological Science*, *14*(4), 334–339. https://doi.org/10.1111/1467-9280.14481

Leary, M. R. (1990). Responses to Social Exclusion: Social Anxiety, Jealousy, Loneliness, Depression, and Low Self-Esteem. *Journal of Social and Clinical Psychology*, *9*(2), 221–229. https://doi.org/10.1521/jscp.1990.9.2.221

Leary, M. R. (2015). Emotional responses to interpersonal rejection. *Dialogues in Clinical Neuroscience*, *17*(4), 435–441.

Leary, M. R., Gallagher, B., Fors, E., Buttermore, N., Baldwin, E., Kennedy, K., & Mills, A. (2003). The Invalidity of Disclaimers about the Effects of Social Feedback on Self-Esteem. *Personality and Social Psychology Bulletin*, *29*(5), 623–636. https://doi.org/10.1177/0146167203029005007

Leary, M. R., Kowalski, R. M., Smith, L., & Phillips, S. (2003). Teasing, rejection, and violence: Case studies of the school shootings. *Aggressive Behavior*, *29*(3), 202–214. https://doi.org/10.1002/ab.10061

Leary, M. R., & Springer, C. A. (2001). Hurt feelings: The neglected emotion. In R. M. Kowalski (Ed.), *Behaving badly: Aversive behaviors in interpersonal relationships.* (pp. 151–175). American Psychological Association. https://doi.org/10.1037/10365-006

MacDonald, G., & Leary, M. R. (2005). Why Does Social Exclusion Hurt? The Relationship Between Social and Physical Pain. *Psychological Bulletin*, *131*(2), 202–223. https://doi.org/10.1037/0033-2909.131.2.202

Maner, J. K., DeWall, C. N., Baumeister, R. F., & Schaller, M. (2007). Does social exclusion motivate interpersonal reconnection? Resolving the 'porcupine problem.' *Journal of Personality and Social Psychology*, *92*(1), 42–55. https://doi.org/10.1037/0022-3514.92.1.42

Mao, Y., Liu, Y., Jiang, C., & Zhang, I. D. (2017). Why am I ostracized and how would I react? — A review of workplace ostracism research. *Asia Pacific Journal of Management*. https://doi.org/10.1007/s10490-017-9538-8

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*(2), 224–253. https://doi.org/10.1037/0033-295X.98.2.224

Matz, D. C., & Wood, W. (2005). Cognitive Dissonance in Groups: The Consequences of Disagreement. *Journal of Personality and Social Psychology*, *88*(1), 22–37. https://doi.org/10.1037/0022-3514.88.1.22

Mauss, I. B., Shallcross, A. J., Troy, A. S., John, O. P., Ferrer, E., Wilhelm, F. H., & Gross, J. J. (2011). Don't hide your happiness! Positive emotion dissociation, social connectedness, and psychological functioning. *Journal of Personality and Social Psychology*, *100*(4), 738–748. https://doi.org/10.1037/a0022410

Meier, L. L., Gross, S., Spector, P. E., & Semmer, N. K. (2013). Relationship and task conflict at work: Interactive short-term effects on angry mood and somatic complaints. *Journal of Occupational Health Psychology*, *18*(2), 144–156. https://doi.org/10.1037/a0032090

Molden, D. C., Lucas, G. M., Gardner, W. L., Dean, K., & Knowles, M. L. (2009). Motivations for prevention or promotion following social exclusion: Being rejected versus being ignored. *Journal of Personality and Social Psychology*, *96*(2), 415–431. https://doi.org/10.1037/a0012958

Newcomb, A. F., Bukowski, W. M., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological Bulletin*, *113*(1), 99–128. https://doi.org/10.1037/0033-2909.113.1.99

Newcomb, T. M. (1953). An approach to the study of communicative acts. *Psychological Review*, *60*(6), 393–404. https://doi.org/10.1037/h0063098

Nezlek, J. B., Kowalski, R. M., Leary, M. R., Blevins, T., & Holgate, S. (1997). Personality Moderators of Reactions to Interpersonal Rejection: Depression and Trait Self-Esteem. *Personality and Social Psychology Bulletin*, *23*(12), 1235–1244. https://doi.org/10.1177/01461672972312001

Nezlek, J. B., Wesselmann, E. D., Wheeler, L., & Williams, K. D. (2012). Ostracism in everyday life. *Group Dynamics: Theory, Research, and Practice*, *16*(2), 91–104. https://doi.org/10.1037/a0028029

Over, H., & Uskul, A. K. (2016). Culture moderates children's responses to ostracism situations. *Journal of Personality and Social Psychology*, *110*(5), 710–724. https://doi.org/10.1037/pspi0000050

Pepitone, A., & Wilpizeski, C. (1960). Some consequences of experimental rejection. *The Journal of Abnormal and Social Psychology*, *60*(3), 359–364. https://doi.org/10.1037/h0042405

Pfundmair, M., Aydin, N., Du, H., Yeung, S., Frey, D., & Graupmann, V. (2015). Exclude Me If You Can: Cultural Effects on the Outcomes of Social Exclusion. *Journal of Cross-Cultural Psychology, 46*(4), 579–596. https://doi.org/10.1177/0022022115571203

Pfundmair, M., Graupmann, V., Frey, D., & Aydin, N. (2015). The Different Behavioral Intentions of Collectivists and Individualists in Response to Social Exclusion. *Personality and Social Psychology Bulletin*, *41*(3), 363–378. https://doi.org/10.1177/0146167214566186

Pronin, E., Lin, D. Y., & Ross, L. (2002). The Bias Blind Spot: Perceptions of Bias in Self Versus Others. *Personality and Social Psychology Bulletin*, *28*(3), 369–381. https://doi.org/10.1177/0146167202286008

Putnam, R. D. (2000). Bowling alone: The collapse and revival of American community. *Proceedings of the 2000 ACM Conference on Computer Supported Cooperative Work - CSCW '00*, 357. https://doi.org/10.1145/358916.361990

Rahim, M. A. (2017). *Managing Conflict in Organizations.* https://www.taylorfrancis.com/books/e/9780203786482

Reeder, G. D., Pryor, J. B., Wohl, M. J. A., & Griswell, M. L. (2005). On Attributing Negative Motives to Others Who Disagree With Our Opinions. *Personality and Social Psychology Bulletin*, *31*(11), 1498–1510. https://doi.org/10.1177/0146167205277093

Ren, D., Wesselmann, E. D., & Williams, K. D. (2013). Interdependent self-construal moderates coping with (but not the initial pain of) ostracism: Self-construal and reactions to ostracism. *Asian Journal of Social Psychology, 16*(4), 320–326. https://doi.org/10.1111/ajsp.12037

Richardson, V. (1996). The role of attitudes and beliefs in learning to teach. In J. Sikula, T. J. Buttery & E. Guyton (Eds.), Handbook of research on teacher education (2 ed., pp. 102-119). New York: Simon & Schuster Macmillan.

Rios, K., DeMarree, K. G., & Statzer, J. (2014). Attitude Certainty and Conflict Style: Divergent Effects of Correctness and Clarity. *Personality and Social Psychology Bulletin*, *40*(7), 819–830. https://doi.org/10.1177/0146167214528991

Riva, P., Williams, K. D., Torstrick, A. M., & Montali, L. (2014). Orders to Shoot (a Camera): Effects of Ostracism on Obedience. *The Journal of Social Psychology*, *154*(3), 208–216. https://doi.org/10.1080/00224545.2014.883354

Robinson, R. J., Keltner, D., Ward, A., & Ross, L. (1995). Actual versus assumed differences in construal: 'Naive realism' in intergroup perception and conflict. *Journal of Personality and Social Psychology*, *68*(3), 404–417. https://doi.org/10.1037/0022-3514.68.3.404

Robinson, S. L., O'Reilly, J., & Wang, W. (2013). Invisible at Work: An Integrated Model of Workplace Ostracism. *Journal of Management*, *39*(1), 203–231. https://doi.org/10.1177/0149206312466141

Ross, L., & Ward, A. (1995). Psychological Barriers to Dispute Resolution. In *Advances in Experimental Social Psychology* (Vol. 27, pp. 255–304). Elsevier. https://doi.org/10.1016/S0065-2601(08)60407-4

Rudert, S. C., & Greifeneder, R. (2016). When It's Okay That I Don't Play: Social Norms and the Situated Construal of Social Exclusion. *Personality and Social Psychology Bulletin*, *42*(7), 955–969. https://doi.org/10.1177/0146167216649606

Sato, K., Yuki, M., & Norasakkunkit, V. (2014). A Socio-Ecological Approach to Cross-Cultural Differences in the Sensitivity to Social Rejection: The Partially Mediating Role of

Relational Mobility. *Journal of Cross-Cultural Psychology*, *45*(10), 1549–1560. https://doi.org/10.1177/0022022114544320

Schneider, F. M., Zwillich, B., Bindl, M. J., Hopp, F. R., Reich, S., & Vorderer, P. (2017). Social media ostracism: The effects of being excluded online. *Computers in Human Behavior*, *73*, 385–393. https://doi.org/10.1016/j.chb.2017.03.052

Segovia, K. Y., & Bailenson, J. N. (2012). Virtual imposters: Responses to avatars that do not look like their controllers. *Social Influence*, *7*(4), 285–303. https://doi.org/10.1080/15534510.2012.670906

Smart Richman, L., & Leary, M. R. (2009). Reactions to discrimination, stigmatization, ostracism, and other forms of interpersonal rejection: A multimotive model. *Psychological Review*, *116*(2), 365–383. https://doi.org/10.1037/a0015250

Smith, A., & Williams, K. D. (2004). R U There? Ostracism by Cell Phone Text Messages. *Group Dynamics: Theory, Research, and Practice*, *8*(4), 291–301. https://doi.org/10.1037/1089-2699.8.4.291

Smith, P. B., Dugan, S., Peterson, A. F., & Leung, W. (1998). Individualism: Collectivism and the handling of disagreement. A 23 country study. *International Journal of Intercultural Relations*, *22*(3), 351–367. https://doi.org/10.1016/S0147-1767(98)00012-1

Snapp, C. M., & Leary, M. R. (2001). Hurt Feelings among New Acquaintances: Moderating Effects of Interpersonal Familiarity. *Journal of Social and Personal Relationships*, *18*(3), 315–326. https://doi.org/10.1177/0265407501183001

Stroud, L. R., Tanofsky-Kraff, M., Wilfley, D. E., & Salovey, P. (2000). The Yale Interpersonal Stressor (YIPS): Affective, physiological, and behavioral responses to a novel

interpersonal rejection paradigm. *Annals of Behavioral Medicine*, *22*(3), 204–213. https://doi.org/10.1007/BF02895115

Tabachnick, B. G., & Fidell, L. S. (2007). *Experimental designs using ANOVA*. Thomson/Brooks/Cole.

Traş, Z., Öztemel, K., & Kağnıcı, E. (2019). A Review on University Students' Resilience and Levels of Social Exclusion and Forgiveness. *International Education Studies*, *12*(10), 50. https://doi.org/10.5539/ies.v12n10p50

Twenge, J. M., Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Bartels, J. M. (2007). Social exclusion decreases prosocial behavior. *Journal of Personality and Social Psychology*, *92*(1), 56–66. https://doi.org/10.1037/0022-3514.92.1.56

Twenge, J. M., Baumeister, R. F., Tice, D. M., & Stucke, T. S. (2001). If you can't join them, beat them: Effects of social exclusion on aggressive behavior. *Journal of Personality and Social Psychology*, *81*(6), 1058–1069. https://doi.org/10.1037/0022-3514.81.6.1058

Twenge, J. M., & Campbell, W. K. (2003). "Isn't It Fun to Get the Respect That We're Going to Deserve?" Narcissism, Social Rejection, and Aggression. *Personality and Social Psychology Bulletin*, *29*(2), 261–272. https://doi.org/10.1177/0146167202239051

Twenge, J. M., Catanese, K. R., & Baumeister, R. F. (2002). Social exclusion causes self-defeating behavior. *Journal of Personality and Social Psychology*, *83*(3), 606–615. https://doi.org/10.1037/0022-3514.83.3.606

Twenge, J. M., Catanese, K. R., & Baumeister, R. F. (2003). Social Exclusion and the Deconstructed State: Time Perception, Meaninglessness, Lethargy, Lack of Emotion, and Self-Awareness. *Journal of Personality and Social Psychology*, *85*(3), 409–423. https://doi.org/10.1037/0022-3514.85.3.409

Updegraff, J. A., Silver, R. C., & Holman, E. A. (2008). Searching for and finding meaning in collective trauma: Results from a national longitudinal study of the 9/11 terrorist attacks. *Journal of Personality and Social Psychology, 95*(3), 709–722. https://doi.org/10.1037/0022-3514.95.3.709

Uskul, A. K., & Over, H. (2017). Culture, Social Interdependence, and Ostracism. *Current Directions in Psychological Science, 26*(4), 371–376. https://doi.org/10.1177/0963721417699300

van Beest, I., & Williams, K. D. (2006). When inclusion costs and ostracism pays, ostracism still hurts. *Journal of Personality and Social Psychology, 91*(5), 918–928. https://doi.org/10.1037/0022-3514.91.5.918

Van Beest, I., Williams, K. D., & Van Dijk, E. (2011). Cyberbomb: Effects of being ostracized from a death game. *Group Processes & Intergroup Relations, 14*(4), 581–596. https://doi.org/10.1177/1368430210389084

Van de Vliert, E. (1997). Essays in social psychology. Complex interpersonal conflict behaviour: Theoretical frontiers. Psychology Press/Erlbaum (UK) Taylor & Francis.

Way, B. M., & Lieberman, M. D. (2010). Is there a genetic contribution to cultural differences? Collectivism, individualism and genetic markers of social sensitivity. *Social Cognitive and Affective Neuroscience, 5*(2–3), 203–211. https://doi.org/10.1093/scan/nsq059

Wesselmann, E. D., Butler, F. A., Williams, K. D., & Pickett, C. L. (2010). Adding injury to insult: Unexpected rejection leads to more aggressive responses. *Aggressive Behavior, 36*(4), 232–237. https://doi.org/10.1002/ab.20347

Wesselmann, E. D., & Williams, K. D. (2011). Ostracism in cyberspace. In Z. Birchmeier, B. Dietz-Uhler, & G. Stasser (Eds.), *Strategic Uses of Social Technology* (pp. 127–144). Cambridge University Press. https://doi.org/10.1017/CBO9781139042802.007

Williams, K. D. (1997). Social Ostracism. In R. M. Kowalski (Ed.), *Aversive Interpersonal Behaviors* (pp. 133–170). Springer US. https://doi.org/10.1007/978-1-4757-9354-3_7

Williams, K. D. (2001). *Ostracism: The power of silence*. Guilford.

Williams, K. D. (2007). Ostracism. *Annual Review of Psychology*, *58*(1), 425–452. https://doi.org/10.1146/annurev.psych.58.110405.085641

Williams, K. D. (2009). Chapter 6 Ostracism. In *Advances in Experimental Social Psychology* (Vol. 41, pp. 275–314). Elsevier. https://doi.org/10.1016/S0065-2601(08)00406-1

Williams, K. D., Cheung, C. K. T., & Choi, W. (2000). Cyberostracism: Effects of being ignored over the Internet. *Journal of Personality and Social Psychology*, *79*(5), 748–762. https://doi.org/10.1037/0022-3514.79.5.748

Williams, K. D., Forgas, J. P., Forgas, S. P. of P. J. P., & Hippel, W. V. (2013). *The Social Outcast Ostracism, Social Exclusion, Rejection, and Bullying*.

Williams, K. D., Govan, C. L., Croker, V., Tynan, D., Cruickshank, M., & Lam, A. (2002). Investigations into differences between social- and cyberostracism. *Group Dynamics: Theory, Research, and Practice*, *6*(1), 65–77. https://doi.org/10.1037/1089-2699.6.1.65

Williams, K. D., & Nida, S. A. (2011). Ostracism: Consequences and Coping. *Current Directions in Psychological Science*, *20*(2), 71–75. https://doi.org/10.1177/0963721411402480

Williams, K. D., & Zadro, L. (2006). Ostracism. In M. R. Leary (Ed.), *Interpersonal Rejection* (pp. 21–53). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195130157.003.0002

Wolf, W., Levordashka, A., Ruff, J. R., Kraaijeveld, S., Lueckmann, J.-M., & Williams, K. D. (2015). Ostracism Online: A social media ostracism paradigm. *Behavior Research Methods*, *47*(2), 361–373. https://doi.org/10.3758/s13428-014-0475-x

Wranik, T., & Scherer, K. R. (2009). Why Do I Get Angry? A Componential Appraisal Approach. In *International Handbook of Anger* (Vol. 1–Book, Section, pp. 243–266). Springer New York. https://doi.org/10.1007/978-0-387-89676-2_15

Yaakobi, E., & Williams, K. D. (2016). Recalling an Attachment Event Moderates Distress after Ostracism. *European Journal of Personality*, *30*(3), 258–273. https://doi.org/10.1002/per.2050

Zadro, L., Williams, K. D., & Richardson, R. (2004). How low can you go? Ostracism by a computer is sufficient to lower self-reported levels of belonging, control, self-esteem, and meaningful existence. *Journal of Experimental Social Psychology*, *40*(4), 560–567. https://doi.org/10.1016/j.jesp.2003.11.006

Zhong, C.-B., & Leonardelli, G. J. (2008). Cold and Lonely: Does Social Exclusion Literally Feel Cold? *Psychological Science*, *19*(9), 838–842. https://doi.org/10.1111/j.1467-9280.2008.02165.x

Appendix A

JAMES COOK UNIVERSITY AUSTRALIA

James Cook University
Townsville Qld. 4811 Australia
Human Research Ethics Committee
JCU Connect Ph: 47815011; Fax: 47815521
email: ethics@jcu.edu.au

Human Research Ethics Committee *APPROVAL FOR RESEARCH OR TEACHING INVOLVING HUMAN SUBJECTS*	Application ID H8069

PRINCIPAL INVESTIGATOR	Adam Wang
COLLEGE	Psychology
CO-INVESTIGATOR(S	Fathimath Nabaha Naseer, Chow Siong Galvin Tay, Prancer Louis Devapragasam, Jonathan Ramsay and Alvin Huan Hao Lim
SUPERVISOR(S)	
PROJECT TITLE	Being ignored hurts more than being disagreed with

APPROVAL DATE:	**14/04/2020**	**EXPIRY DATE:**	**31/03/2021**	**CATEGORY:**	**3**

This project has been allocated Ethics Approval Number H8069, with the following conditions:

1. All subsequent records and correspondence relating to this project must refer to this number.

2. That there is NO departure from the approved protocols unless prior approval has been sought from the Human Research Ethics Committee.

3. The Principal Investigator must advise the responsible Human Ethics Advisor:
   - periodically of the progress of the project,
   - when the project is completed, suspended or prematurely terminated for any reason,
   - within 48 hours of any adverse effects on participants,
   - of any unforeseen events that might affect continued ethical acceptability of the project.

4. In compliance with the National Health and Medical Research Council (NHMRC) "National Statement on Ethical Conduct in Human Research" (2007), it is MANDATORY that you provide an annual report and a final report on the progress and conduct of your project. This report must detail compliance with approvals granted and any unexpected events or serious adverse effects that may have occurred during the study.

Human Ethics Advisor :	McConnell, Bridget
Email :	bridget.mcconnell@jcu.edu.au

This project was Approved by Meeting on 14 Apr 2020

Prof Cate Nagle
Chair, Human Research Ethics Committee

Appendix B

INFORMATION SHEET

PROJECT TITLE: Do younger generations care more about current issues compared to older generations?

You are invited to take part in a research project that aims to study how opinionated younger generations are to current issues as compared to older generations. The study is being conducted by Dr. Adam Wang, Alvin Lim, Galvin Tay, Nabaha Naseer, Prancer Louis Devapragasam, and Dr Jonathan Ramsay, and will contribute to Alvin Lim's Bachelor of Psychological Science – Honours program research component at James Cook University.

If you agree to be involved in the study, you will be invited to a laboratory task on campus (JCU Singapore) that will take approximately 15 minutes to complete, after which you will receive 2 research participation credit points. During this experiment, in addition to providing some quick demographic and mood information, you will be asked to complete an opinion sharing task online, followed by some related questions, as well as an additional evaluation task.

Taking part in this study is completely voluntary and you can stop taking part in the study at any time without explanation or prejudice.

During this experiment, the opinion sharing task and the evaluation task has the potential to cause mild psychological distress. If at any point throughout the experiment you feel discomfort, please inform the investigator and the experiment will cease immediately. If required, counselling services are available at James Cook University Singapore and can be contacted by calling +65 6709 3762 or emailing psyclinic-singapore@jcu.edu.au. Alternatively, you may contact Care Corner Counselling Center by calling 1800-353-5800.

Your responses will be strictly anonymous. Once collected, your responses will immediately be tabulated electronically using only your participant number while your consent form (containing your name) will be stored separately from other responses/questionnaires. Both the consent form and other responses will be stored at JCU – Singapore in a locked cabinet and will only be accessible by the primary researcher. The data from the study will be used in research publications and reports. You will not be identified in any way in these publications.

If you have any questions about the study, please contact Dr Adam Wang

Principal Investigator:
Dr. Adam Wang
College of Healthcare Sciences
James Cook University
Email: adam.wang@jcu.edu.au

Co-Investigator 1:
Alvin Lim
College of Healthcare Sciences
James Cook University
Email: alvinhuanhao.lim@my.jcu.edu.au

Co-Investigator 2:
Galvin Tay
College of Healthcare Sciences
James Cook University
Email: chowsionggalvin.tay@my.jcu.edu.au

Co-Investigator 3:
Nabaha Naseer
College of Healthcare Sciences
James Cook University
Email: fathimathnabahanaseer@my.jcu.edu.au

Co-Investigator 4:
Prancer Devapragasam
College of Healthcare Sciences
James Cook University
Email: prancerlouis.devapragasam@my.jcu.edu.au

Co-Investigator 5:
Dr Jonathan Ramsay
College of Healthcare Sciences
James Cook University
Email: jonathan.ramsay@jcu.edu.au

If you have any concerns regarding the ethical conduct of the study, please contact:
Human Ethics, Research Office
James Cook University, Townsville, Qld, 4811
Phone: (07) 4781 5011 (ethics@jcu.edu.au)

Appendix C

INFORMED CONSENT FORM

PRINCIPAL INVESTIGATOR	Dr Deming (Adam) Wang
PROJECT TITLE:	Do younger generations care more about current issues compared to older generations?
COLLEGE:	College of Healthcare Sciences (James Cook University – Singapore)

I understand that the aim of this research is to study how how opinionated younger generations are to current issues as compared to older generations. I consent to participate in this project, the details of which have been explained to me, and I have been provided with a written information sheet to keep.

I understand that my participation will involve a laboratory task on campus (JCU Singapore) that will take approximately 15 minutes to complete, during which I will be asked to provide some quick demographic and mood information, complete an opinion sharing task online, some related questions, as well as an additional evaluation task.

I acknowledge that:

- any risks and possible effects of participating in the opinion sharing task and the evaluation task have been explained to my satisfaction;
- taking part in this study is voluntary and I am aware that I can stop taking part in it at any time without explanation or prejudice and to withdraw any unprocessed data I have provided;
- that any information I give will be kept strictly confidential and that no names will be used to identify me with this study without my approval;

(Please tick to indicate consent)

I consent to complete the Demographics Form		**Yes**		**No**
I consent to complete the Mood Questionnaire		**Yes**		**No**
I consent to complete the Opinion Sharing Task and its related questions		**Yes**		**No**
I consent to complete an Evaluation Task		**Yes**		**No**

Name: *(printed)*	
Signature:	**Date:**

Appendix D

To what extent are you experiencing these emotions?

		Not at all	Slightly	Somewhat	Moderately	Quite a bit	Very Much	Extremely
1	Happy (H) ……	1	2	3	4	5	6	7
2	Cheerful (H)…..	1	2	3	4	5	6	7
3	Pleased (H) ……	1	2	3	4	5	6	7
4	Sad (S) ……	1	2	3	4	5	6	7
5	Depressed (S) …	1	2	3	4	5	6	7
6	Down (S) …….	1	2	3	4	5	6	7
7	Anxious (Ax) …	1	2	3	4	5	6	7
8	Tense (Ax) …..	1	2	3	4	5	6	7
9	Nervous (Ax) ….	1	2	3	4	5	6	7
10	Mad (Ag) ……..	1	2	3	4	5	6	7
11	Angry (Ag) …..	1	2	3	4	5	6	7
12	Irritated (Ag) …	1	2	3	4	5	6	7
13	Hurt (Hurt)…….	1	2	3	4	5	6	7
14	Lonely (Loneliness)	1	2	3	4	5	6	7

Code
H - Happiness
S - Sadness
Ax - Anxiety
Ag - Anger

Appendix E

Please answer the following questions that best represents your thoughts (Circle where appropriate):

15 **[Moderator]** How strongly do you feel about your topic that you have discussed?

Not at all Important			Neutral			Extremely important
1	2	3	4	5	6	7

16 **[Distraction]** How controversial were the topics discussed?

Not at all controversial			Neutral			Extremely controversial
1	2	3	4	5	6	7

17 **[Deception Check]** How enthusiastic were the other participants with regards to your topic?

Not at all enthusiastic			Neutral			Extremely enthusiastic
1	2	3	4	5	6	7

Please fill in your details:

Age: _____

Gender : Male/ Female

Ethnicity: _____

Before we move on, please answer the question below: if you think you know the study's hypothesis already (for example if you have participated in a study in the same series), please write below what you think the hypothesis is. If you are unaware or not sure, simply write 'n/a' or leave blank

_____

_____

_____

_____

Thank you!

Please pass this form back to the researcher before continuing the next segment.

Appendix F

When participant enters room

Hi, thanks for taking part in the experiment. And as previously mentioned, the experiment will be looking at how the younger generation and older generation differ in opinions regarding the current issues. This experiment consists of 2 parts: first task would be an opinion sharing task via an online chatroom and the second task will be an evaluation task. Please have a read through the consent form and demographics form and fill it up. The experiment will be around 15 minutes.

After filling up consent form (instructions for stormboard & opinion sharing/feedback phase)

Alright, please follow me (bring him into his room). So, for the first task, you will be discussing with other participants who are in the other rooms about controversial issues. Please read the instructions on the screen when you are done reading the instructions. Please click on continue.

You are participant 2. Please follow the instructions as stated, I will attend to other participants first and I will come back to you shortly.

(Once participant has arrived at group discussion page, slam opposite door and enter room)

Have you finish reading the instructions? Other participants have connected into the chatroom already, in this chatroom you will be able to read other participants' opinions and read their selected topics. You will be able to comment on participants' opinions by clicking on the "click here to comment" button. You can only comment on other participants' comments once.

You can comment on their opinions if you wish to. Since I brief other participants and chatroom you can use their comments as a form of references.

After you are done with the discussion with other participants, do not press continue and please wait for me to come back the room and I will give you further instructions.

Are there any questions you would like to ask before we begin the discussion?

After discussion is over

Before we begin with the 2nd part of the experiment, please fill in the baseline measures. (if participants ask whether if the measure to pertaining to the discussion or my current baseline measures – research would reply, report what you are feeling now, as this is just a baseline measure used for the part 2 of the experiment.

After the experiment

Okay, so there is not going to be another task and that is the end of the experiment. I will debrief you on the experiment.

Debrief

Alright, so once again thanks for participating in the experiment. So basically, our experiment consists of 3 different groups, and you were in the _____ group. So, the main part of our experiment is actually to look at how different emotions will be affected based on whichever group that we have decided to put the participant in. Our hypothesis is that basically being ignored would be the group that evokes the highest amount of negative emotions, followed by the disagree group and then the control group. And since we are working with controversial topics, we have also decided to add that in as a potential moderator as the intensity of certain topics might fuel the negative emotions that are felt during the experiment based on the individual. Do you have any other questions about the study?

Appendix G

1. Do you agree that freedom of speech should be allowed in Singapore?

Agree

I completely agree that there should be freedom of speech. It is a fundamental human right which allows allowing society to develop and progress.

I agree that freedom of speech should be allowed in singapore. Freedom of speech promotes the free exchange of ideas and ideas will not be suppressed.

Disagree

I disagree that there should be freedom of speech in singapore. freedom of speech can result in the spread of false information.

I disagree I think that freedom of speech is not a good idea. Freedom of speech result in hate speech which can incite violence against other people.

2. Do you agree that racial discrimination exist in Singapore?

Agree

I agree that there is still racial discrimination exist in singapore. Everyone knows that every race has their negative stereotype associated to it.

I agree that racial discrimination still exist in singapore it is quite obvious. There is still causal racism and the social media posting of racist comments.

Disagree

I disagree that there is racial discrimination in Singapore. In Singapore, we are multicultural and all races are being accepted.

I disagree. I think racial discrimination do not exist in Singapore. we live together, we eat the same food, we serve national service together and we belong in Singapore together as one.

3. Has the feminism movement gone too far?

Agree

I agree that I think that feminism is too extreme. I read that somewhere these feminists think that men want to dominate and oppress women.

I agree that feminism has gone too far. I do not understand why some feminist would suggest a radical reordering of society in which male supremacy is eliminated in all social and economic contexts.

Disagree

I disagree that feminism is a major problem that has to continue to exist. It can be seen that women are being oppressed, feminism reinforces women.

I disagree. Feminism has not gone too far. Talking about feminism allows both gender to have equal opportunities for both sexes.

Appendix H

4. Should there be more than two genders?

Agree

I agree that there should be more than two genders. Our sex is spectrum, it is complex as people can freely choose who they identify with which gender.

I agree that there should be more than two genders. everyone has the freedom to be what or who they want to be, who are we to judge?

Disagree

I disagree. There should only be 2 genders. Gender is just binary and biological determined.

I disagree. There are only chromones configurations: XX and XY which is in our biology.

5. Should minimum wage be introduced in Singapore?

Agree

I agree that there should be minimum wage. If minimum wage is implemented, i am sure that it will boost worker morale and productivity.

I agree that minimum wage is something that should be present in singapore. If there is minimum wage, consumer spending power would increase as well.

Disagree

I disagree minimum wage should not exist in singapore. Having a minimum wage in Singapore will increase our cost of living.

I disagree that the minimum wage should be introduced to singapore. Having minimum wage in singapore will discourages the poor from being productive.

6. Should everybody become vegans?

Agree

I agree that I think if everybody become vegans will be a good idea. The reduction of meat consumption would mean lesser greenhouse gases would be released to the ozone layer.

I agree that everyone should change their dietary preference to veganism. i feel that animals should not be contained in farms and killed for their meat.

Disagree

I disagree that everyone should be a vegan. We are born as an omnivore for a reason, eating meat is ok.

I disagree. Becoming vegan would meant that you will be deficient in many important nutrients and vitamins.

7. Getting an abortion equates to killing a child. Should abortions be banned?

Agree

I agree that abortion should it should be banned. These unborn babies are considered human beings and will feel pain

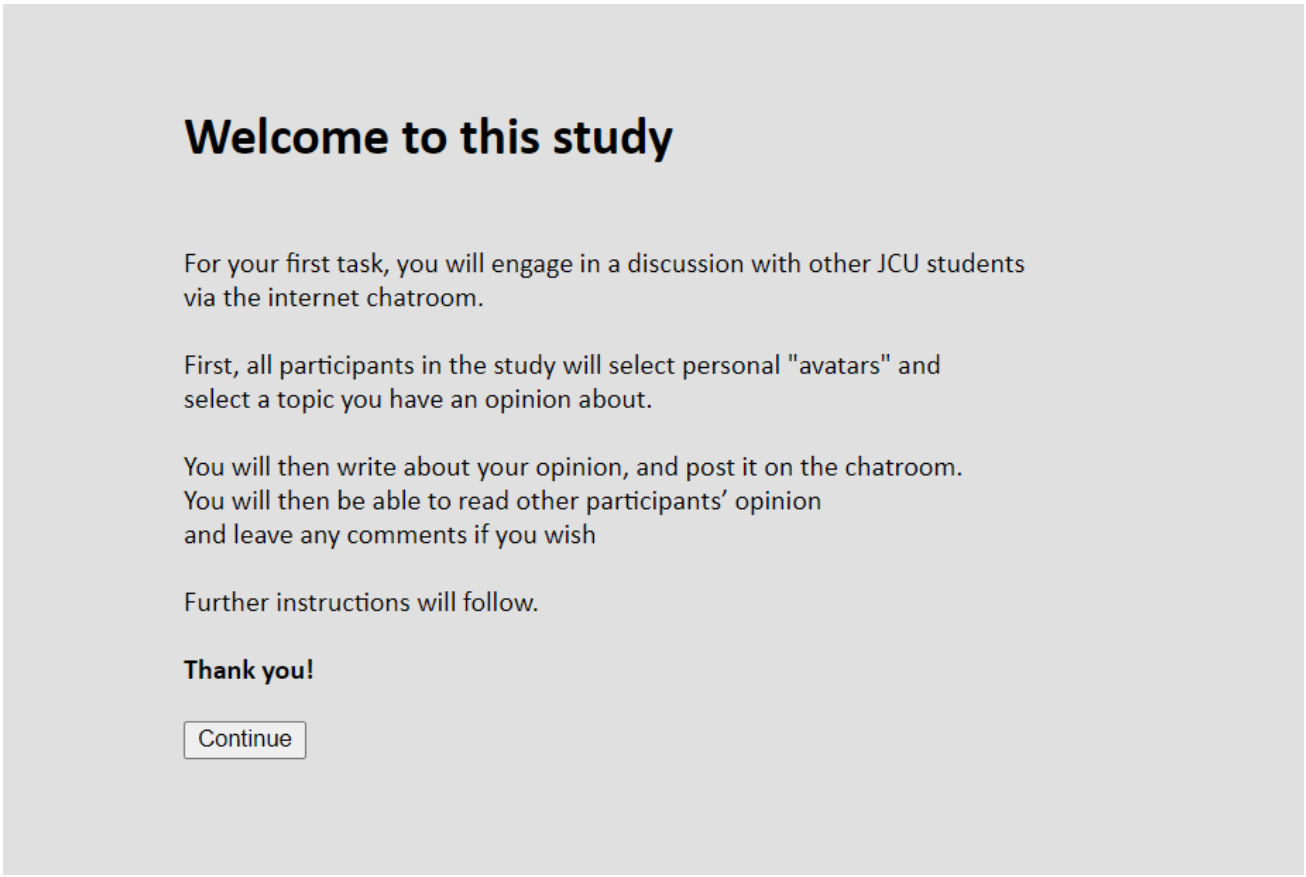
I agree that abortion should be banned. If women become pregnant, they should accept the responsibility that comes with producing a child.

Disagree

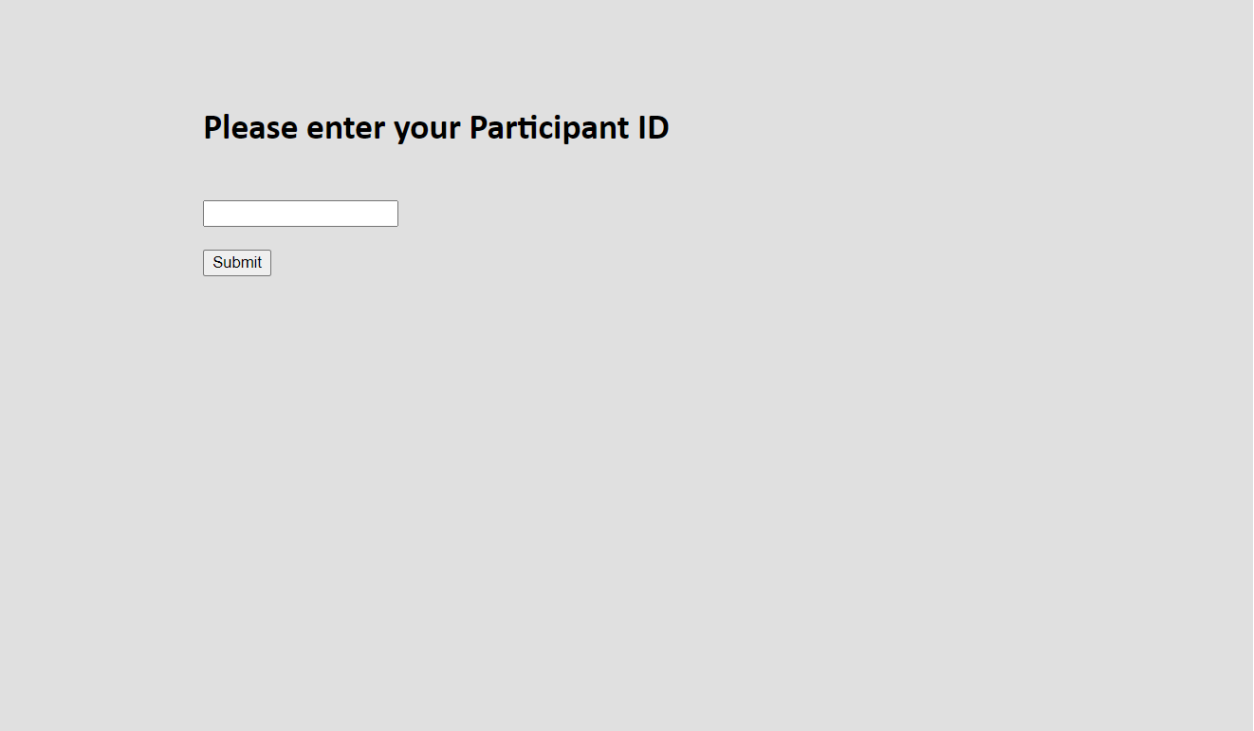
I disagree. Abortion should NOT be banned. during the early stage of pregnancy the unborn child do not feel any pain.

I disagree. Abortion Shouldn’t be banned. what if the child was due to rape or incest.

Appendix I


Welcome to this study
For your first task, you will engage in a discussion with other JCU students via the internet chatroom.
First, all participants in the study will select personal "avatars" and select a topic you have an opinion about.
You will then write about your opinion, and post it on the chatroom. You will then be able to read other participants' opinion and leave any comments if you wish
Further instructions will follow.
Thank you!
Continue

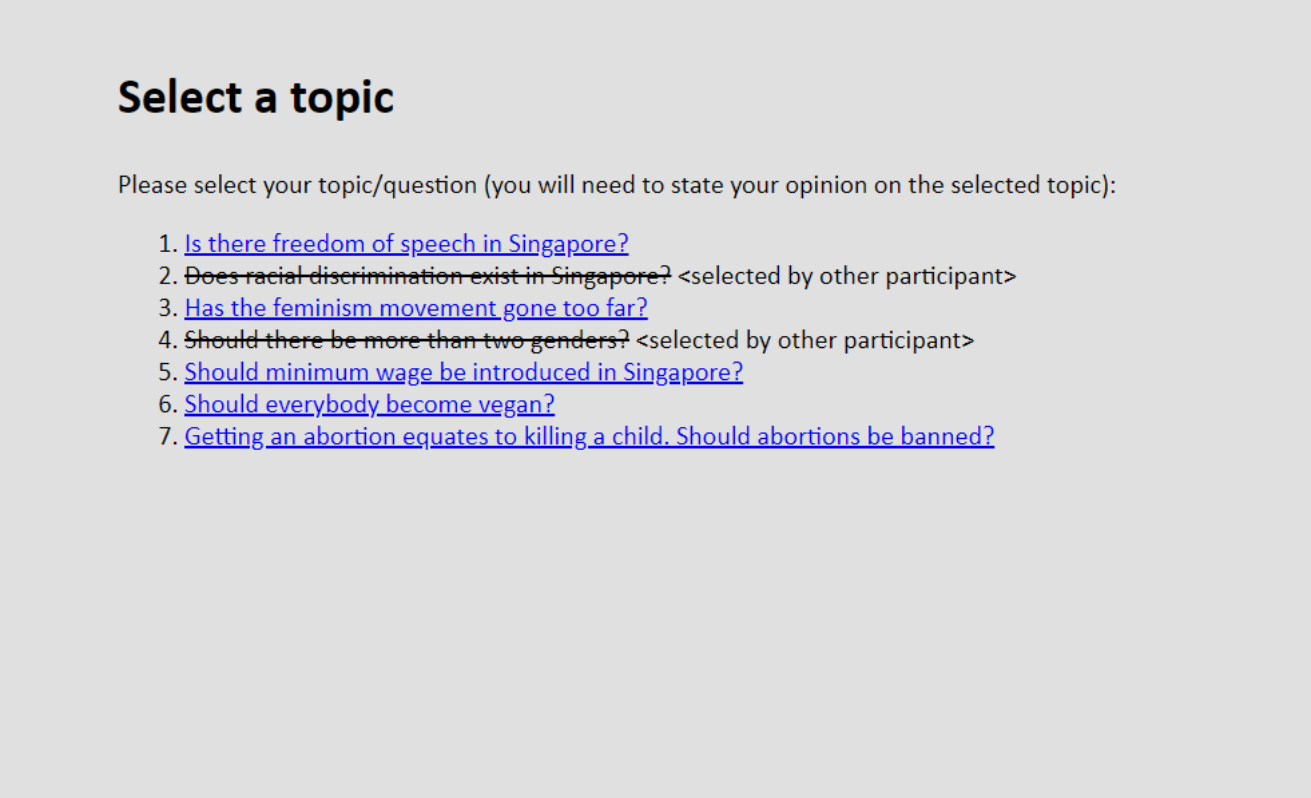
Appendix J



Appendix K


Please select an avatar
This avatar will represent you during the group task, but will not be linked to any of your responses.
Your choice of avatar will not be recorded or analyzed.

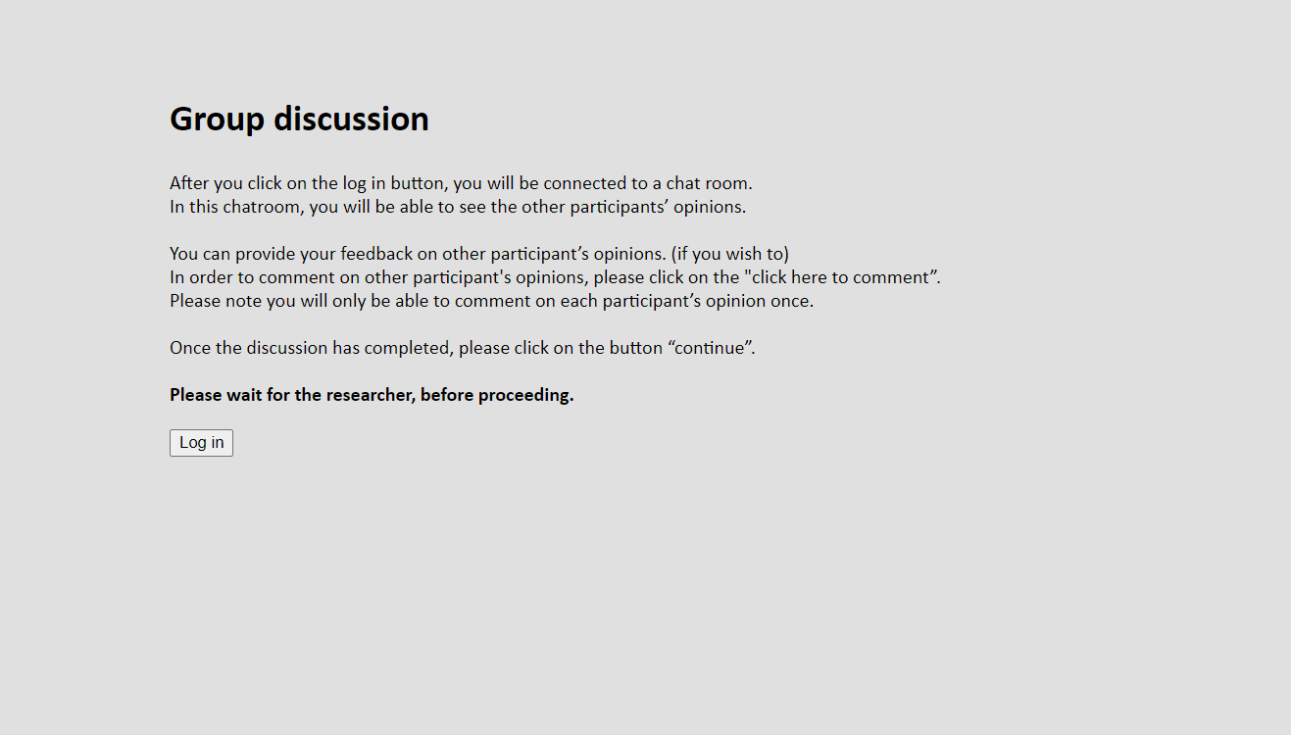
Appendix L


Select a topic
Please select your topic/question (you will need to state your opinion on the selected topic):
1. Is there freedom of speech in Singapore?
2. Does racial discrimination exist in Singapore? <selected by other participant>
3. Has the feminism movement gone too far?
4. Should there be more than two genders? <selected by other participant>
5. Should minimum wage be introduced in Singapore?
6. Should everybody become vegan?
7. Getting an abortion equates to killing a child. Should abortions be banned?

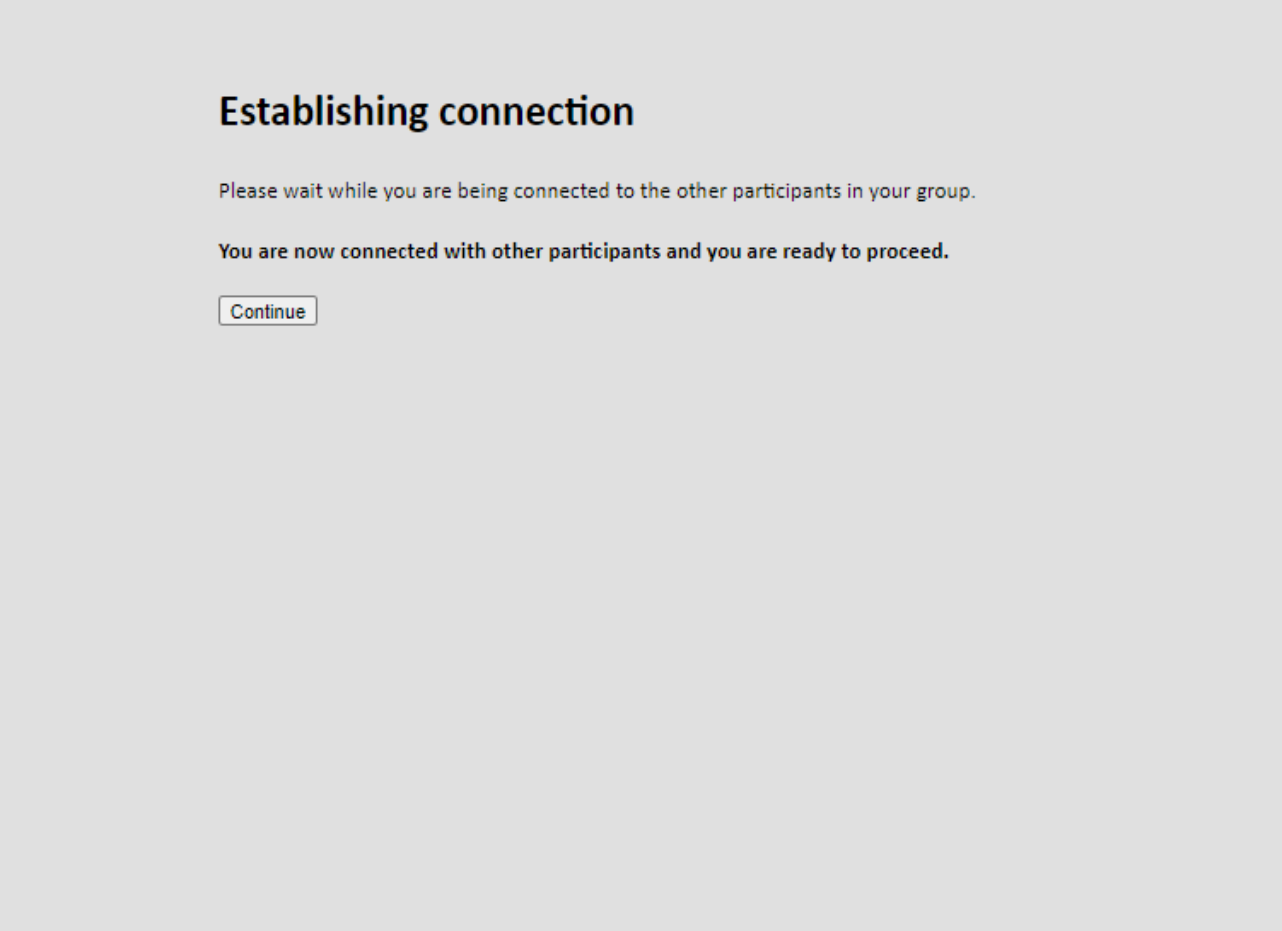
Appendix M


Do you agree with the following statement?
Is there freedom of speech in Singapore?
Agree
Disagree
Please state at least 1 reason why you agree or disagree with the statement.
(15 more words)
Submit

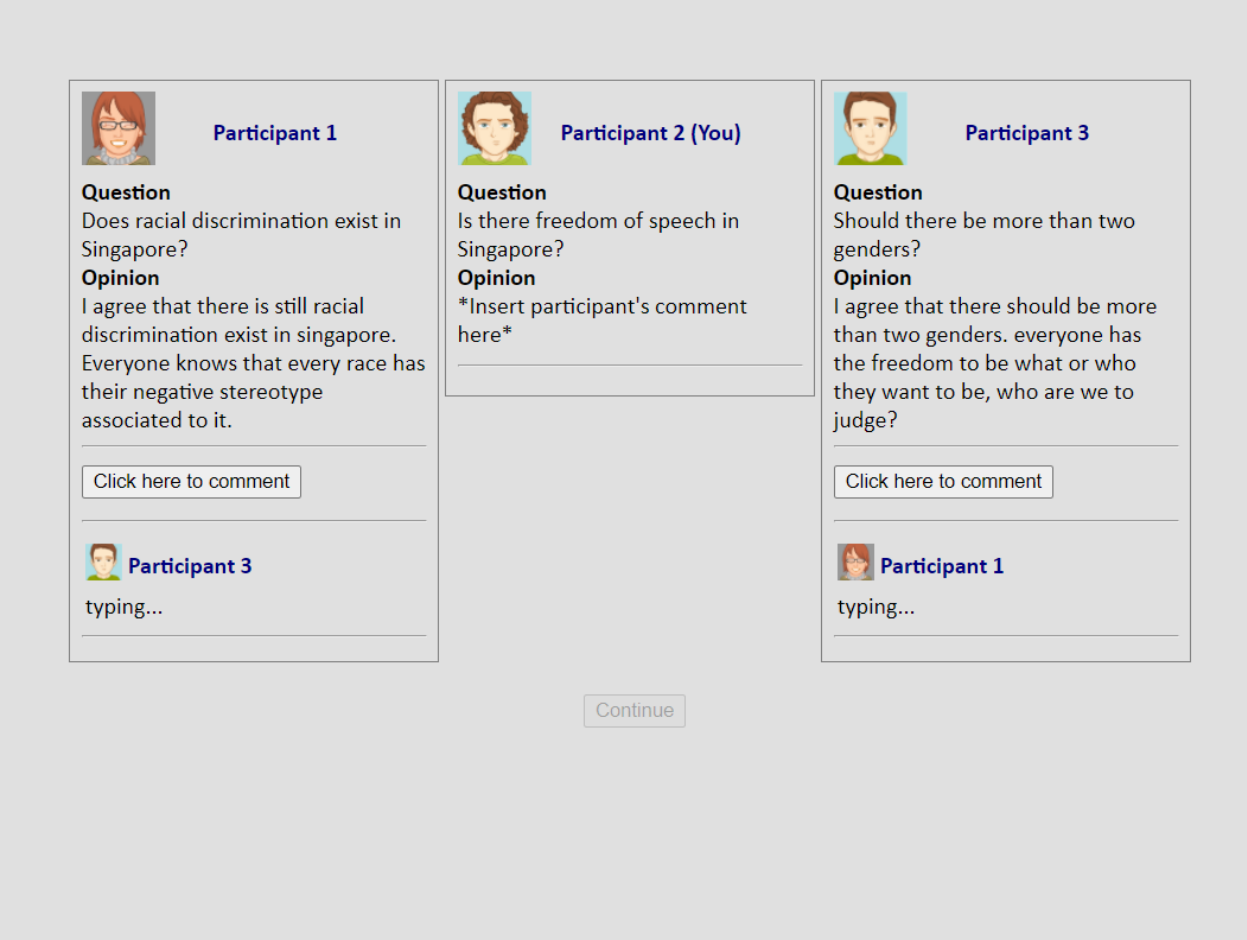
Appendix N


Group discussion
After you click on the log in button, you will be connected to a chat room.
In this chatroom, you will be able to see the other participants' opinions.
You can provide your feedback on other participant's opinions. (if you wish to)
In order to comment on other participant's opinions, please click on the "click here to comment".
Please note you will only be able to comment on each participant's opinion once.
Once the discussion has completed, please click on the button "continue".
Please wait for the researcher, before proceeding.
Log in

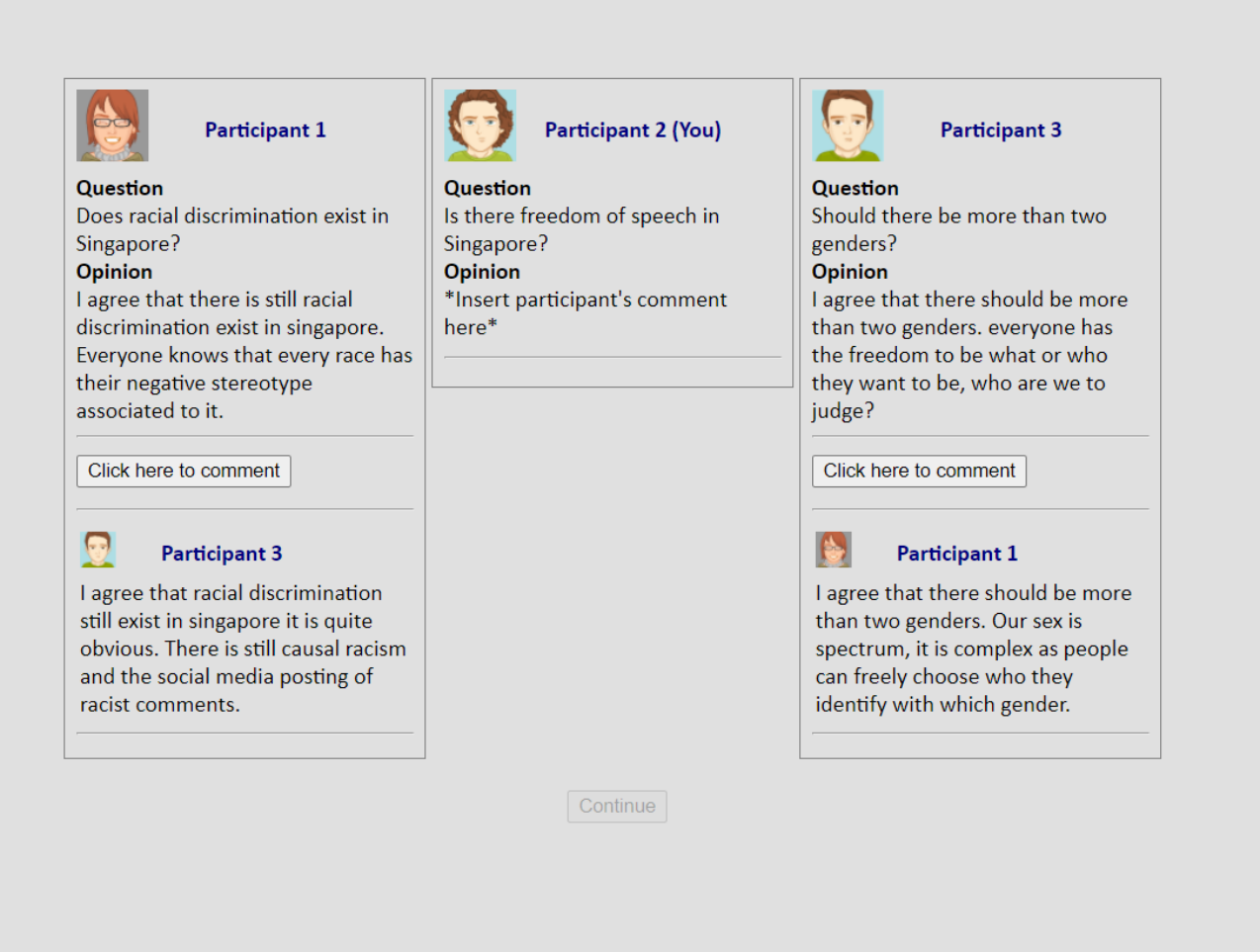
Appendix O


Establishing connection
Please wait while you are being connected to the other participants in your group.
You are now connected with other participants and you are ready to proceed.
Continue

Appendix P


Participant 1
Question
Does racial discrimination exist in Singapore?
Opinion
I agree that there is still racial discrimination exist in singapore. Everyone knows that every race has their negative stereotype associated to it.
Click here to comment
Participant 3
typing...
Participant 2 (You)
Question
Is there freedom of speech in Singapore?
Opinion
Insert participant's comment here
Participant 3
Question
Should there be more than two genders?
Opinion
I agree that there should be more than two genders. everyone has the freedom to be what or who they want to be, who are we to judge?
Click here to comment
Participant 1
typing...
Continue

Appendix Q


Participant 1
Question
Does racial discrimination exist in Singapore?
Opinion
I agree that there is still racial discrimination exist in singapore. Everyone knows that every race has their negative stereotype associated to it.
Click here to comment
Participant 3
I agree that racial discrimination still exist in singapore it is quite obvious. There is still causal racism and the social media posting of racist comments.
Participant 2 (You)
Question
Is there freedom of speech in Singapore?
Opinion
Insert participant's comment here
Participant 3
Question
Should there be more than two genders?
Opinion
I agree that there should be more than two genders. everyone has the freedom to be what or who they want to be, who are we to judge?
Click here to comment
Participant 1
I agree that there should be more than two genders. Our sex is spectrum, it is complex as people can freely choose who they identify with which gender.
Continue