## Gone Girl: Exploring the associations between individual attachment styles, rejection sensitivity and online dater's ghosting behaviour as well as the moderation role of gender

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Master Thesis

June 2020

#### Abstract

This study aims to explore how dispositional factors relate to ghosting behaviour when people use online dating apps. Dispositional factors in the current study are specified as individual rejection sensitivity, attachment avoidance, and attachment anxiety. Ghosting behaviour is defined as a breakup strategy that people use to terminate their romantic relationships by cutting off all the contact channels with their partners and avoiding other's attempts to reach out. Besides, ghosting is considered as a one-sided breakup strategy conveying the breakup message to partners without making a clear declaration. In addition, the gender difference was also examined within the association between individual rejection sensitivity and ghosting behaviour in online dating. Gender was initially hypothesized as a moderator within such association. For this research, a quantitative method was used to collect data. More specifically, a cross-sectional online questionnaire was distributed through various social media platforms. This study focused on Chinese online dating situation, hence all the participants were adults from China. In total, 326 participants filled in the online questionnaire. After filtering out inactive online daters, 171 questionnaires including 91 males and 64 females with the average age of 26.99 were left as effective data. The outcome of this research showed that rejection sensitivity was negatively associated with ghosting behaviours in online dating, implying that people with higher rejection sensitivity would be less inclined to ghost their online dating partners, which was an opposite outcome to the hypothesis. On top of that, attachment avoidance was not found to be associated with ghosting behaviours, while the results regarding attachment anxiety were mixed. People with higher attachment anxiety would have less ghosting intentions in their mind, however, this could not predict their actual ghosting behaviour. Lastly, gender plays a significant role in moderating the association between individual rejection sensitivity and ghosting behaviour, indicating there would be a difference in online interpersonal behaviours between males and females who are rejection-sensitive. For males, those with higher rejection sensitivity would have a significantly lower ghosting intention and be less likely to implement ghosting as a breakup strategy. While for females, rejection sensitivity can predict higher ghosting intention and a higher likelihood to implement ghosting behaviours but the predictive power is modest. Theoretically, these findings can expand the understanding on how dispositional factors play a part within online interpersonal communication. Also, they can make contributions to the development of contemporary online dating apps. One example is that based on these findings, current online dating apps are able to improve their designs so that users can dissolve their online relationships in more compassionate ways. Further, this study also brings some initiatives to the research about online dating behaviours, particularly ghosting. Simultaneously, it is suggested for future researchers to take the cultural factors into consideration since this is one of the main reasons causing the inconsistency of current results with previous literature. Given that Chinese people are found to be more sensitive to others' rejection compared to American and European people (Lou, & Li, 2017), further research may explore how online dating behaviours differ within eastern and western cultural contexts.

Keywords: Online dating, Ghosting, Rejection Sensitivity, Adult Attachment Styles, Gender Difference

### **Table of Contents**

Abstract	2
1. Introduction	4
1.1 Ghosting as a modern breakup strategy	4
1.2 Ghosting in an online dating context	5
1.3 Exploring how rejection sensitivity relates to ghosting	5
1.4 Exploring how adult attachment styles relate to ghosting	7
1.5 Gender difference	8
1.6 Scientific and societal relevance of current research	9
1.7 Outline of the thesis	9
2. Theoretical framework	11
2.1 The normalization of ghosting	11
2.2 Conceptualizing rejection sensitivity	13
2.3 Rejection sensitivity in romantic relationships	14
2.4 How is rejection sensitivity related to the online daters' ghosting behaviours?	15
2.5 Adult Attachment styles	16
2.6 How are adult attachment styles (i.e. anxiety, avoidance) related to the online daters' gho behaviours?	0
2.7 The role of gender within the association between rejection sensitivity and ghosting	18
2.8 Theoretical model	20
3. Method	21
3.1 Quantitative research approach	21
3.2 Sample	21
3.3 Procedure	21
3.4 Measurement	22
3.5 Data analysis	25
4. Results	
4.1 Outcomes of multiple regression analysis	26
4.2 Gender difference: Moderating the association between rejection sensitivity and ghosting	g or not27
5. Discussion and conclusion	
5.1 General discussion and conclusion	30
5.2 Theoretical and practical implications	32
5.3 Limitation and future research	33
6. Reference	35
Appendix A. Consent form	43
Appendix B. Online survey	44

#### 1. Introduction

In the present days, more and more people expand their social networks and build relationships through digital approaches (Grabowicz, Ramasco, Moro, Pujol, & Eguiluz, 2012; Lerman, & Ghosh, 2010). Such kind of technology also makes a difference in the ways of establishing romantic bonds, which is so-called online dating - the second most common way for people to meet romantic partners (Tong, Hancock, & Slatcher, 2016). One example is that the popular online dating app Tinder is found to have 57 million users around the world in the latest research (Iqbal, 2020), which shows that online dating apps play an important and influential role in seeking romantic relationships (Eichenberg, Huss, & Küsel, 2017). With the emergence of mobile dating applications, users can make a selection based on user profiles before they really get to know each other (Guadagno, Okdie, & Kruse, 2012). Social media profiles provide plenty of contextual information about one's background and daily life, which can help people to decide whether they would like to start a private conversation (Meenagh, 2015). At the same time, the ambiguity of such mediated communication enables users to engage in flirtation as well as covertly observing people they are interested in (Meenagh, 2015).

In this study, I explored user behaviours within the Chinese online dating environment, particularly ghosting behaviour. Correspondingly, the research samples were Chinese adults who used to be active on online dating apps or currently using these apps. There are a variety of apps being widely used among Chinese online daters, such as Tantan, Momo, Blued, etc., targeting different user groups. For instance, younger users, particularly in their 20s and 30s, prefer to use Tantan and Momo, which enable users to hook up based on location and distance. While Blued works as an online dating service mainly for the gay community ("Looking for love in China," 2020). Xia, Ribeiro, Chen, Liu, and Towsley (2013) investigated the characteristics of Chinese online daters. They mentioned that Chinese males tend to seek younger females while Chinese females put more attention to the socioeconomic status of their potential partners. Also, Chinese online daters would seriously take geographic factors into consideration (Xia el al., 2013). Therefore, they would probably dissolve the relationships when they do not think their online dating partners meet their requirements.

#### 1.1 Ghosting as a modern breakup strategy

Online dating apps enable users to initiate and maintain relationships online (Meenagh, 2015), which also makes it easier for online daters to dissolve relationships through mediated communication rather than face-to-face conversation (Weisskirch, & Delevi, 2013). One of the dissolution strategies is known as the term "ghosting", referring to the behaviour that suddenly ends a relationship without informing the partners (LeFebvre, 2017). Recently, an increasing number of studies investigated ghosting behaviour and gave multiple definitions. The most popular definition of ghosting is provided by the contributor of Urban Dictionary Ghostface Illa (2013), stating that ghosting is the act of ceasing all communication with the dating partner to indicate the disengagement. The ghosting initiators (i.e. ghosters) hopes the recipients (i.e. ghostees) to get the hint so that ghosters do not have to directly tell ghostees that he/she is no longer interested (Ghostface Illa, 2013). Within an online dating context, De Wiele and Campbell (2019) described

ghosting as the act of establishing a romantic relationship or expressing romantic interest to others and then unexpectedly withdrawing from the communication without giving an explanation.

Some studies explored the motives behind people's ghosting behaviour. For example, Koessler, Kohut, and Campbell (2019) emphasized the disengager-oriented motivation, stating that ghosters avoided direct conversation with ghostees because they did not expect to put much effort into relationship breakup or make it dramatic. Another common motivation is the loss of attractiveness, which is also labeled as recipient-oriented motivation. When people lose interest in their current partners and do not want to invest in their relationships, they may be motivated to ghost their partners (Koessler et al., 2019; LeFebvre, Allen, Rasner, Garstad, Wilms, & Parrish, 2019). Sometimes people are ghosted because they cannot be aware of the breakup intention of their partners (LeFebvre et al., 2019). Moreover, the likelihood of ghosting in romantic relationships is associated with personality traits (Freedman, Powell, Le, & Williams, 2019), which will be elaborated on below.

#### 1.2 Ghosting in an online dating context

Ghosting as an indirect breakup strategy can be afforded by technological medium, such as text messaging, emailing, social media and mobile dating apps, which makes the practice of ghosting more prominent (Freedman et al., 2019; Weisskirch, & Delevi, 2012). Collins and Gillath (2012) added mediated communication as another breakup strategy based on the study of Baxter (1982). Unlike the previous research stating that a certain extent of communication is needed when the recipient is informed about the breakup intention (Sprecher, Zimmerman, & Abrahams, 2010), it seems unnecessary to include such communication for ghosting, especially in a digital environment. For instance, people can easily delete or block the accounts of those who they are not interested in or would not like to continue talking with on social media (Tong, & Walther, 2011).

As one of the social media channels, online dating apps make it more convenient for users to initiate and dissolve their relationships (LeFebvre et al., 2019). More specifically, online daters are able to keep the dating status with multiple partners simultaneously before they make a selection from them to initiate a serious relationship. Also, online communication allows a sense of anonymity for online daters so that they can behave more freely than that in reality, such as ignoring others without explanations (Tong, & Walther, 2011). Moreover, people who use online dating apps are less likely to have overlapped social networks, which can be seen as another explanation that they tend to use indirect strategies, like ghosting, to disengage relationships. Indirect strategies are typically used when partner intimacy and familiarity are low (Baxter, 1982; Cody, 1982; Collins, & Gillath, 2012).

#### 1.3 Exploring how rejection sensitivity relates to ghosting

Online daters might behave differently due to their individual personalities (Clemens, Atkin, & Krishnan, 2015). As a particular personality trait, rejection sensitivity was found to influence the way that people seek a romantic relationship (Blackhart, Fitzpatrick, & Williamson, 2014). Rejection sensitivity is defined as a cognitive-affective processing disposition in which people anxiously expect, readily perceive

and overreact to others' rejection (Downey, & Feldman, 1996; Romero-Canyas, Downey, Berenson, Ayduk, & Kang, 2010). In other words, rejection-sensitive people would have a higher level of anxiety when faced with potential rejection (Wilson, & Blackhart, 2019). The core of rejection sensitivity is the defensive expectations of rejection that can only occur in situations with the possibility of rejection from valued others, such as parents, friends and partners (Watson, & Nesdale, 2012). When responding to the perceived exclusion, rejection-sensitive individuals tend to have hostile feelings and react aggressively than those with lower rejection sensitivity in the same situation (Romero-Canyas et al., 2010). Research showed that people in higher rejection sensitivity are more likely to use online dating sites to seek a romantic relationship (Blackhart et al., 2014), since for such group of people, it is easier to avoid rejection and the rejection cues are less salient in the online environment (Blackhart et al., 2014). Besides, people in higher rejection sensitivity feel more at ease revealing aspects of their true selves in an online environment rather than in reality (Hance, Blackhart, & Dew, 2018).

Within the online dating environment, rejection sensitivity plays a crucial role in adult romantic relationships (Wilson, & Blackhart, 2019; Romero-Canyas et al., 2010). Research by Hafen, Spilker, Chango, Marston and Allen (2014) indicated that people in higher rejection sensitivity are less likely to engage in romantic relationships compared to those in lower rejection sensitivity. Along with this finding, it is also demonstrated by this study that rejection-sensitive individuals would feel more anxious and avoidant when they did have relationships as well as being more likely to negatively interact with their romantic partners (Hafen et al., 2014). Therefore, it is suggested that rejection sensitivity can be considered as a predictive factor associated with how people deal with their relationships (Harper, Dickson, & Welsh, 2006). The research of Watson and Nesdale (2012) explored the effects of rejection sensitivity in romantic relationships, claiming that rejection sensitivity had a negative impact on people's interpersonal social behaviours, which made them have a higher tendency to withdraw from social contact in order to avoid potential rejection. When they recognize the likelihood to be rejected by others is high, they tend to distance themselves from others and withdraw from the communication (Bourgeois, & Leary, 2001). Therefore, rejection sensitivity could ultimately predict the initiation of a relationship breakup (Downey, Freitas, Michaelis, & Khouri, 1998).

Rejection sensitivity has an impact on the tactics that people choose to dissolve their relationships. When rejection is perceived, rejection-sensitive individuals are inclined to express hostility passively by reducing positive behaviours or withdrawing their love and support, rather than taking direct actions such as yelling (Ayduk et al., 2003). In the study of Romero-Canyas and colleagues (2010), they also mentioned rejection-sensitive people are likely to perform indirect aggression following the perceived rejections from others. Additionally, rejection sensitivity is confirmed to be associated with the social withdrawal. Such association would be intensified among people of high rejection sensitivity in overt rejection situations (Zimmer-Gembeck, & Nesdale, 2013). When rejection implications are imminent, people who are concerned about rejections would try to avoid it as much as they can (Romero-Canyas et al., 2010). Furthermore, Ayduk et al. (2013) provided evidence that rejection-sensitive individuals tend to cope with rejection by withdrawing the communication, which conveys hostility indirectly and passively. Based on the research

mentioned above, rejection sensitivity can be assumed as a predictive factor of ghosting behaviours, one of the indirect dissolution strategies to withdraw from relationships. In this study, how rejection sensitivity relates to ghosting behaviour will be explored.

#### 1.4 Exploring how adult attachment styles relate to ghosting

Grounded from attachment theory, rejection sensitivity can be attributed to a particular attachment pattern, anxiety (Downey, & Feldman, 1996). There are three adult attachment styles that can be applied in the context of romantic relationships, including security, anxiety and avoidance (Hazan, & Shaver, 1987). People with secure attachment pattern tend to bond to their partners as much as possible to seek for safety and security, not overly worrying about being abandoned (Weisskirch, & Delevi, 2012; Hazan, & Shaver, 1987). Attachment anxiety relates to the concern and preoccupation about the responsiveness of romantic partners. Individuals with such attachment pattern are more prone to feel distress and have poorer conflict resolution tactics with their partners (Weisskirch, & Delevi, 2012; Hazan, & Shaver, 1987). Also, they desire more closeness with their partners and always question the love and loyalty of their partners (Koessler, 2018). Attachment avoidance refers to the extent of the individual's willingness to be intimate with and dependent upon their partners. People who are high on avoidance tend to not trust others, downplay their emotions, and have less interest in being attentive to their partners (Collins, & Gillath, 2012; Weisskirch, & Delevi, 2012). Among three adult attachment styles, avoidance and anxiety are demonstrated as predictors of relationship satisfaction, which could then influence the ways of people initiate and dissolve their relationships (Shi, 2013).

Numerous studies linked adult attachment styles to relationship dissolution among partners, particularly anxiety and avoidance (e.g., Kirkpatrick & Hazan, 1994; Collins, & Gillath, 2012; Weisskirch, & Delevi, 2012; Weisskirch, & Delevi, 2013; Koessler, 2018). Existing research showed that avoidant individuals were most likely to experience relationship breakup since they always tend to avoid intimacy with their partners and hesitate to seek further romantic involvement. They reported more relief and less emotional distress after relationship dissolution. This increases the likelihood that avoidant individuals may be the ones who initiate a romantic termination (Feeney, & Noller, 1992). By contrast, anxious individuals have a positive association with being the recipients of relationship breakup since they might be recognized by their partners that they feel anxious in dealing with the relationship and therefore, their partners choose to deliver the breakup indication (Weisskirch, & Delevi, 2013). Also, Feeney and Noller (1992) revealed that anxious subjects were less skilled in monitoring the progress of the relationships and tend to be less prepared for the relationship dissolution. To initiate a relationship breakup, people with attachment avoidance and anxiety would choose different tactics (Collins, & Gillath, 2012). Avoidant individuals prefer to use less direct strategies to disengage romantic relationships, such as avoidance/withdrawal and de-escalation strategies. However, people with attachment anxiety tend to keep the option of getting back together with their partners after their relationship breakups, so they are found to prefer to use positive tone and deescalation strategies (Collins, & Gillath, 2012). This could also explain the tendency that anxious individuals are more likely to cycle in and out of the same relationship (Kirkpatrick & Hazan, 1994).

When it comes to ghosting, one of the breakup strategies via mediated communication, it is suggested that avoidant individuals are more inclined to perceive ghosting as an effective breakup strategy and implement it more because they always show greater indifference towards partner's need of comfort and support (Collins, & Gillath, 2012; Koessler, 2018). Another reason could be that avoidant individuals are claimed to not often use technology to communicate with their partners, which makes ghosting an ideal means for them to dissolve the relationships (Weisskirch, & Delevi, 2013). Nonetheless, anxious individuals might be less likely to implement ghosting when they dissolve a romantic relationship since they have to cut off most or all connections with their partners and that takes away the possibility to get their partners back in the future (Koessler, 2018).

As mentioned above, rejection sensitivity positively relates to attachment anxiety (Downey, & Feldman, 1996), however, it seems that rejection sensitivity and attachment anxiety have different associations with ghosting behaviours of online daters. In this study, the research focused on ghosting in an online dating context and the links between ghosting and rejection sensitivity, adult attachment styles (i.e. avoidance and anxiety) were investigated. The first research question can be formulated as follows:

*RQ1:* How are rejection sensitivity and adult attachment styles related to online daters' ghosting behaviours?

#### 1.5 Gender difference

A mass of research emphasized individual difference in rejection sensitivity, particularly between different genders (Downey, Lebolt, Rincón, & Freitas, 1998; London, Downey, Bonica, & Paltin, 2007). London and colleagues (2007) found that females had a higher level of anxious rejection expectation compared to males. Such rejection sensitivity has a stronger association with female's pessimism than males, which might cause different outcomes of romantic relationships (Downey et al., 1998). For example, females tend to display more depressive reactions when they perceive rejection from their partners (Ayduk, Downey, & Kim, 2001) or when their partners initiate a relationship breakup (Romero-Canyas, & Downey, 2005). They are also more likely to express verbal and nonverbal hostility following others' rejection (Ayduk, Downey, Testa, Yen, & Shoda, 1999). Rejection sensitivity has a negative association with relationship satisfaction for both males and females (Downey, & Feldman, 1996). However, conflicts in relationship could erode the relationship for rejection-sensitive women rather than men (Downey et al., 1998). For those who with higher rejection sensitivity, females are more likely to show hostility and diminished emotional support towards their romantic partners while males tend to perform jealous and controlling behaviours (Downey, & Feldman, 1996; Ayduk et al., 1999). Furthermore, the association between rejection sensitivity and individual behaviours within romantic relationships is more significant for females than males (Romero-Canyas et al., 2010).

Ghosting is defined to represent a low-level caring and non-compassionate breakup strategy people use to indirectly terminate the relationship (LeFebvre, 2017), the behaviour of which is also of great difference between genders. The directness in breakup strategies tends to differ in the amount of care given to the recipients (Sprecher et al., 2010). Females are demonstrated to use more direct strategies to dissolve their relationships than males, particularly more verbal directness, probably because men and women have different standards for judging self and other communicative moves toward dissolution (Wilmot, Carbaugh, Baxter, 1985). Currently, research that analyzes gender difference on both rejection sensitivity and ghosting behaviour in an online dating context is still lacking. So in this paper, the role of gender within such relationship was explored. Based on previous research and findings, it can be assumed that gender difference occurs in the relationship between individual rejection sensitivity and online daters' ghosting behaviours. Therefore, the second research question is:

*RQ2:* Is there a gender difference in the relationship between individual rejection sensitivity and online dater's ghosting behaviours?

#### 1.6 Scientific and societal relevance of current research

As mentioned above, the scientific relevance of current study lies in its potential to fill in the academic gap regarding online dating behaviours in Chinese online dating environment. Compared to conventional dating, online dating makes the initiation and termination of romantic relationships a bit more complicated. As a contemporary breakup strategy, ghosting has stemmed from technologically mediated communication that forms different connections between romantic partners (Koessler, 2018). These mediated platforms, such as online dating apps, afford ease to ghosting, which also makes the practice of ghosting more normalized (Timmermans, Hermans, & Opree, under review). The present study specifies online daters as Chinese people, providing more insights to how Chinese online daters deal with relationship breakups via online dating apps. Additionally, individual personality traits related to ghosting behaviours and their relationships still need to be further explored. According to existing research, rejection sensitivity and adult attachment styles are assumed to associate with the choice of breakup strategies and the usage of online dating (Ayduk et al., 2013; Weisskirch, & Delevi, 2013). The current study focuses on one specific breakup strategy, ghosting, in online dating context and aims to expand the understanding on how rejection sensitivity and adult attachment styles (i.e. avoidance, anxiety) relate to ghosting behaviours. Furthermore, gender differences were found in rejection sensitivity and people's breakup strategies (Wilmot et al., 1985; London et al., 2007), so an exploratory study was conducted to investigate the effect of gender difference within such relationship. Hence, the current study can complement previous research assessing sex difference in online interpersonal behaviours, particularly ghosting.

The societal relevance of this study is carried as well. It brings more initiatives to the topic discussing ghosting behaviour in Chinese online dating environment. Findings of this study will enable online dating app developers to improve their app designs and understand user behaviours better. This will also benefit online dating app users since they can have a better dating experience and deal with relationship breakups in more appropriate ways.

#### 1.7 Outline of the thesis

The thesis was structured following the sequence of theoretical framework, method, results and discussion. The theoretical framework chapter provides a literature review discussing the main theories and

previous work on relevant research topics, which relate to ghosting in online dating, rejection sensitivity and adult attachment patterns. In addition to the background information of online dating apps, this chapter gives multiple definitions of ghosting behaviours from various layers to draw a clear conceptual map for this term. It also includes previous findings about individual rejection sensitivity, adult attachment patterns and how these variables relate to romantic breakups and ghosting. Finally, this chapter discusses gender difference in individual rejection sensitivity and romantic relationships in order to deduce how gender works within such association. Based on previous research, hypothesis in this thesis can be made.

Secondly, the Method chapter discusses why choosing a quantitative approach and how to conduct the investigation. More specifically, it explains the sampling criteria, the design of online questionnaire, the selection of questions and the measurement scales as well as the reasoning behind them. In this section, the process of data collection and data analysis is described in detail to clarify the operationalization of the whole study.

The Results section discusses the results of data analysis, according to the outcomes in SPSS. It can be clear in this chapter whether each hypothesis is supported or not. In this chapter, ghosting is specified into ghosting intention and actual behaviour, which lead to different results. Hence, here indicates that people's perception of ghosting is different from their actual behaviours. Another finding is that for those never employ ghosting as a breakup tactic in online dating, they can still have a relatively higher intention on ghosting.

The final chapter Discussion and Conclusion includes an overall conclusion of current study and the answers to the research question. It also analyses the similarity and dissimilarity with previous findings when making comparisons. Then, the limitations are discussed critically to provide more insights and recommendations for further research, which may improve the design of the replicated study in the future. Finally, this chapter discusses the implications of the findings in current research.

#### 2. Theoretical framework

#### 2.1 The normalization of ghosting

As a recent widely-used breakup tactic, ghosting have been studied empirically. Apart from the definitions of ghosting, researchers also analyzed the motives and consequences of ghosting as well as how people implement ghosting to their romantic mates. According to the Cambridge Dictionary, ghosting is defined as "a way of ending a relationship with someone suddenly by stopping all communication with them" ("Ghosting," n.d.). Freedman and colleagues (2019) defined ghosting as ending a romantic relationship by cutting off all contact one-sidedly and ignoring the former partner's attempts to reach out. Koessler (2018) referred ghosting to the instances that the breakup initiator unilaterally dissolves a relationship by avoiding either online or offline contact with the recipient, the one who is broken up with. Ghosting is always a one-sided behaviour since the initiators of ghosting would not provide a clear indication of breakup with the recipients but convey a breakup signal in such an indirect way (LeFebvre et al., 2019). However, ghosting differs in the interval of implementation, which means that ghosters can decide to either suddenly cut off all the contact with their partners or gradually drift apart from the communication (LeFebvre et al., 2019). Crotty (2014) defined ghosting as ending a relationship by one party who gradually removes him or herself from their partner's life and until eventually, all communication ceases. Hence, a controversial point here is whether ghosting occurs immediately or gradually, which remains to be discovered. In current study, the definition of ghosting from most academic sources that referring to a unilateral relationship dissolution strategy by ceasing all the contact without a clear explanation was adopted.

Before the advent of technology devices, people can also conduct ghosting by ignoring ghosted partners or rejecting to communicate with them. Previous research identified a variety of dissolution strategies. The study of Baxter (1982) concluded dissolution strategies to withdrawal/avoidance, manipulation, positive tone strategies, and open confrontation strategies. Cody (1982) developed a five-factor typology of disengagement strategies, including behavioural de-escalation, de-escalation, justification, positive tone, and negative identity management, which was partially similar to Baxter (1982). In the article of LeFebvre et al. (2019), they describe ghosting as a relational withdrawal practice, which can somewhat reflect on behavioural de-escalation strategy. Koessler (2018) recognized dissolution strategies in direct and indirect approaches. A relationship termination with a clear declaration can be seen as a direct breakup while people who enact an indirect breakup would not provide a clear indication of dissolution. Therefore, ghosting should be considered as an indirect breakup strategy (Koessler, 2018). People are more likely to apply indirect breakup strategies when partner intimacy and similarity are low and the partner's fault in a breakup is high. In contrast, people tend to use direct breakup strategies when partner closeness is high and the social network of partners highly overlaps (Collins, & Gillath, 2012).

What makes ghosting different from other dissolution strategies is the lack of an explicit explanation or official declaration provided to the breakup partner (Koessler, 2018). When ghosting occurs, the ghosted partner might not be aware of being ghosted immediately. In other words, the immediate impact of ghosting is simply the ambiguous absence of communication (LeFebvre, 2017; Freedman et al., 2019). Normally, the

initiators of the relationship are more likely to be the ones who ghost their partners (LeFebvre et al., 2019). For those non-initiators, ghosting is considered as one of the worst strategies to end a relationship (Crowder, 2017). When initiators enact ghosting, they may prefer to choose the mediated channels that they initiate the relationship or communication (LeFebvre et al., 2019). Ghosting prevalence has been examined among US adults who report the rate of being ghosted by romantic partners ranging from 13% to 23%. In Spain, statistics show that 19.3% of daters have suffered ghosting at least once in their previous experience (Navarro, Larrañaga, Yubero, & Víllora, 2020).

Being combined with computer-mediated communication, the term ghosting was primarily developed by Dwyer (2007), characterizing the behaviour that people logged in their instant messengers but made themselves invisible to others online. More recently, ghosting is specified to describe when people suddenly disappear after they exchanged flirtation via mobile applications, especially in online dating apps (LeFebvre et al., 2019). Online dating apps provide the ease with users to ghost others by turning dating into a game and a form of entertainment rather than seeking a partner seriously (Timmermans, & De Caluwé, 2017). The gamification of online dating apps might result in the superficiality of the conversations between online daters, which makes it not surprising that their messages get no answers (Zhang, & Yasseri, 2016). When people encounter a potential dating partner online, they tend to pay attention to others' external information firstly, such as profiles and images. Meanwhile, the functions of online dating apps allow users to remain communication with multiple potential daters so that they can make a selection through their conversations (Guadagno et al., 2012). Besides, the anonymity of these online dating apps increases the possibility that users may suffer sexual harassment and safety threat (Timmermans et al., under review). As a consequence, all these characteristics may lead to the fact that online daters treat their relationships less seriously than that in conventional offline dating and the cultural currency of ghosting behaviour in online dating contexts (Manning, Denker, & Johnson, 2019).

Many of the previous studies explored the motives underneath ghosting and provided deeper understanding of such behaviour. One potential motivation is that people who choose ghosting to terminate their relationships would feel less hurtful to their partners compared to reject them directly (Coen, 2015). While in academic research, Freedman et al. (2019) examined how implicit relational beliefs linked to people's ghosting perceptions and found that individuals with stronger destiny beliefs were more likely to dissolve a relationship and feel more positively towards ghosting behaviour. As such, people with stronger destiny beliefs showed a higher acceptability to ghosting, indicating a higher likelihood to approve ghosting as a dissolution strategy (Freedman et al., 2019). Koessler and colleagues (2019) conducted a qualitative analysis of individual ghosting experiences. They developed five main themes to explain why people ghost their partners, including disengager-oriented motivations, recipient-oriented motivations, relationshiporiented motivations, explanation considered unnecessary, and last resort. Similarly, in the research of LeFebvre et al. (2019), they also extracted five ghosting motivations reflecting to those in Koessler et al.' study (2019), including convenience, attractiveness, negatively valenced interaction, safety, and relationship state. Based on the previous research, a recent study by Timmermans et al. (under review) assessed ghosting from both ghoster and ghostee perspectives to fully understand ghosting motivations. For ghosters, over a half of the respondents attributed the reasons of ghosting to the recipients, indicating that they ghosted because of other people's personality and undesirable actions. A small group of respondents attributed ghosting to themselves as they were not ready to commit to a relationship. They also mentioned the care for others that they did not want to hurt others by verbally rejecting them (Timmermans et al., under review).

Despite that the majority of research explored ghosting behaviour between romantic partners, in an online dating context, ghosting can occur in different stages such as in early stage without face-to-face dating (Timmermans et al., under review). Respondents in these studies mostly have offline contact already. However, it is a probable phenomenon for online daters to build committed relationships before they have offline contacts (Manning, 2014). In other words, offline contact is not a necessary prerequisite for ghosting. Due to the nature of online dating platforms, ghosting can occur in primary interaction between matched users, in early-dating stage before offline meeting, after several offline dates, and after having committed romantic relationships. Research showed that almost half of online daters would not transfer their online dating to offline encounters, thus, ghosting were predicted to be limited to online platforms only (Timmermans, & Courtois, 2018). Classifying ghosting by different stages also makes it to be a more complex interpersonal behaviour than before.

In this study, I investigated ghosting experience among Chinese online daters who have used ghosting to disengage their committed romantic relationships. Young (2019) argued that people are ghosted by Chinese girls probably because of the different online dating attitudes. More specifically, Chinese people have a relative higher eagerness to get married compared to western people, especially Chinese girls (Lange, Houran, & Li, 2015). When they think the possibility of such consequence is low in online dating, they might walk out of the dating and ghost their online dating partners (Young, 2019). Moreover, as the most popular Chinese online dating app, Momo is considered to be used to flirt and seek short-term sexual relationships (Li, 2016). Given that the relationships dissolved via ghosting are more short-term and less committed (Koessler et al, 2019; Navarro et al., 2020), the normalisation of ghosting among Chinese online daters can be clarified.

#### 2.2 Conceptualizing rejection sensitivity

As one predictor of ghosting behaviour in present study, rejection sensitivity has been conceptualized by numerous research. Although most people have experienced rejection during their interpersonal social lives, the degree of intensity and negativity that they respond to rejection remains different (Ayduk, & Gyurak, 2008). In early study, Downey and Feldman (1996) proposed that rejection sensitivity originated in childhood rejection and might result in interpersonal difficulties. People might generate a basic anxiety to potential rejection or rebuff no matter how slight, underlying a painful sensitivity (Horney, 1937). Ayduk and Gyurak (2008) investigated rejection sensitivity within cognitive-affective processing systems and then defined it as a cognitive-affective processing disposition. They revealed an if...then pattern (i.e. if situation A, then the behaviour will be like B) of rejection sensitivity, illustrating that rejection-sensitive individuals preferred to prevent rejection and this might lead to accommodating behaviours. Conversely, the failure of preventing rejection would lead to aggressive and overreactive behaviours (Ayduk, & Gyurak, 2008).

Rejection sensitivity model has its theoretical foundation in attachment and attribution theories (Bowlby, 1969; Horney, 1937) that emphasize how early interpersonal relationships form the acceptance-rejection schemas and function the later relationships. Rejection sensitivity is claimed to stem from the early experiences of rejection, neglect and abuse (Ayduk, & Gyurak, 2008). In 1994, Feldman and Downey found that rejection sensitivity was positively associated with the physical or verbal abuse between parents and children as well as between parents themselves. Subsequently, the research by Downey, Khouri, and Feldman (1997) showed that harsh parenting would result in an increase on children's rejection sensitivity, which would influence the cognition and behaviours in later relationships. Moreover, the rejection sensitivity model includes an activation network, linking fears and expectations of rejection, attributions of rejection, affective behavioural overreactions to perceived rejection (Ayduk, & Gyurak, 2008). Based on this, rejection sensitivity can be conceptualized as a disposition that individuals tend to anxiously expect, readily perceive and overreact (emotionally and behaviourally) to the rejections from significant others (Downey, Feldman, & Ayduk, 2000; Downey, & Feldman, 1996; Downey et al., 1997).

#### 2.3 Rejection sensitivity in romantic relationships

Downey and Feldman (1996) studied the implications of rejection sensitivity in intimate relationships and found that rejection sensitivity undermined romantic relationships. More specifically, results showed that people who were high in rejection sensitivity would feel rejected to ambiguous rejection while people in low rejection sensitivity would not. When rejection-sensitive individuals enter into romantic relationships, they will be more prone to interpret the negative behaviours of their partners as motivated by hurtful intent (Downey, & Feldman, 1996). Such intent is always invisible, so it is open to misinterpretation for rejection-sensitive individuals by overestimating the likelihood of rejection and the hurt from their partners. Accordingly, their partners may have difficulties to recognize their ambiguous negative behaviours as potentially conveying rejection (Pietrzak, Downey, & Ayduk, 2005). A study with 92 adolescent romantic couples as participants demonstrated that rejection sensitivity was related to higher level of aggression and lower relationship satisfaction (Galliher, & Bentley, 2010). This is consistent with the rejection sensitivity model, describing that more negative interpretations by rejection-sensitive individuals would lead them to behave in the ways that compromise the quality of their relationships (Galliher, & Bentley, 2010). In the same year, Romero-Canyas and colleagues (2010) conducted a series of experimental and diary studies to explore the link between anxious expectations of rejection and hostility after rejection in romantic relationships. They discovered that perceived rejection prompts hostility and aggressive behaviours for rejection-sensitive individuals, which hence perpetuates a cycle by eliciting rejection from valued others.

A study among college students proposed that rejection sensitivity was positively related to slower entry into romantic relationships (Downey, Halim, & Bolger, 2003). Research by Hafen et al. (2014) also showed that in early adolescent relationships, individuals with high rejection sensitivity were less likely to have a romantic partner and were observed to be more negative in the interaction with their partners. In the article of Levy, Ayduk, and Downey (2001), they linked rejection sensitivity to impaired interpersonal social behaviours and relational distress. In romantic relationships, vigilance or excessive attentional focus on rejection cues may contribute to the relationships in short term (Pietrzak et al., 2005). While in long term, the hypervigilant expectation of rejection may cultivate inaccurate interpretations and maladaptive responses to the behaviours of partners, which then serves to strengthen the rejection-sensitive stance and further lead to the relationship dissolution (Levy et al., 2001; Galliher, & Bentley, 2010). Research by Romero-Canyas and colleagues (2010) also provides evidence to this argument, stating that rejection-sensitive individuals tend to exhibit hostility and aggressive behaviours when they discern rejections or rejection cues from their partners, which might result in the consequence of relationship breakup (Ayduk, May, Downey, & Higgins, 2003). Furthermore, rejection sensitivity is demonstrated to be positively related to social avoidance and distress (Watson, & Nesdale, 2012). Leary (2011) indicated that rejection sensitivity predicted less engagement in close relationships as well as a higher possibility of avoidance in social situations. In other words, people who are sensitive to others' rejection-sensitive counterparts (Downey et al., 1998).

#### 2.4 How is rejection sensitivity related to the online daters' ghosting behaviours?

Many studies provided evidence that rejection sensitivity is a risky factor influencing the stability of romantic relationships in either online or offline communication. In the study of Romero-Canyas et al. (2010), online daters with high rejection sensitivity was confirmed to be able to detect more negative interpretations compared to low rejection sensitivity individuals when facing the same emotion. They also found that people with high rejection sensitivity were more likely to perform indirect forms of reactive aggression when they perceived potential rejection from their online dating partners. In romantic relationships, such kind of people may engage in certain strategic responses in order to maintain a relationship they perceive as vulnerable, such as displaying compliant behaviours (Harper et al., 2006). But these relationship-maintenance behaviours are proved to be ineffective and probably might sabotage an unstable relationship (Downey et al., 1998).

When conflicts occur in romantic relationships, high rejection-sensitive individuals tend to choose avoidant patterns to prevent them from confronting problems when they communicate hostility. Instead of active or direct approaches, they would use passive or indirect tactics to deal with relationship issues and express their hurt and anger, including acting cold and distant, relational withdrawal, and giving partners silent treatments (Ayduk et al., 2003). Given the fact that rejection sensitivity can predict lower partner satisfaction and relationship dissolution (Downey et al., 1998), rejection-sensitive individuals can be deduced as the initiators of relationship termination because of the fear of rejection from their partners. Likewise, Park, Sanchez, and Brynildsen (2011) also pointed out that higher rejection sensitivity associated with more contributing to the problems that led to relationship breakup. As ghosting is considered as one of popular indirect breakup strategies, people who are sensitive to prospective rejection are assumed to be more likely to ghost their partners when they hope to terminate their relationships in online dating. In view of all that has been mentioned so far, the hypothesis can be formulated as:

*Hypothesis 1: People high in rejection sensitivity are more inclined to ghost their partners in online dating compared to those in low rejection sensitivity.* 

#### 2.5 Adult Attachment styles

Apart from rejection sensitivity, another dispositional factor, adult attachment styles, plays a significant role in adult romantic relationships as well. Attachment theory was originally described as the internal working model that an infant naturally forms to attach and interact with their significant others, usually their parents. It was considered as a mental representation of the relationship between infants and their parents (Bowlby, 1969). Adapted from Bowlby's theory (1969), Hazan and Shaver (1987) developed three adult attachment styles that could be applied in adult romantic relationships and influence interpersonal behaviours. Specifically, adult attachment styles refer to attachment security, avoidance and anxiety (Hazan, & Shaver, 1987). A secure person always believes that he/she is worthy to be loved, so he/she can trust others and feel comfortable in close relationships (Mikulincer, & Shaver, 2007). While those with absent or unresponsive caregivers are likely to develop insecure attachment, which may lead to anxiety about depending on others or avoidance of intimacy in their adulthood (Finkel, Eastwick, Karney, Reis, & Sprecher, 2012). Anxious people always have a negative perception on themselves and care too much about signs of rejection, which hence makes them to develop a high level of social anxiety and demand more closeness in romantic relationships. On the other side, avoidant people tend to utilize defense mechanisms more and surpass their need for intimacy and belonging (Seyed Mousavi, & Poorganji, 2019).

A number of research shows that adult attachment orientations are associated with the usage of technology-mediated communication, such as social media and online dating apps. Empirical evidence supported the predictive role of attachment in online social media use, verifying that adult attachment styles contribute to the conceptual integration of online social networks with personality characteristics (Yaakobi, & Goldenberg, 2014). Lin (2015) argued that anxious individuals used online social networks more frequently and concerned more about how other people perceived them online. Yet, avoidant individuals are less interested in engaging in online social networking (Oldmeadow, Quinn, & Kowert, 2013). Research by Morey, Gentzler, Creasy, Oberhauser, and Westerman (2013) also illustrated the negative association between attachment avoidance and engagement in online communication such as social media platforms and texting. When it comes to online dating apps, people with attachment anxiety report higher level of engagement in online dating since they always hope to seek emotional intimacy and form relationships (Timmermans, & Alexopoulos, 2020). Another reason might be that online dating apps offer them greater opportunities to manage their images and communication so that they may feel more comfortable engaging in self-disclosure in an online environment compared to traditional dating environment. This allows them to have a greater illusion of intimacy with other online daters (Blackhart et al., 2014). Meanwhile, these apps increase the likelihood of finding partners whilst protecting them from potential rejection (Chin, Edelstein, & Vernon, 2019). Thus, it is proposed that anxiously attached people are more likely to meet up with dating partners they know through dating apps (Chin et al., 2019). While research by Timmermans and Alexopoulos (2020) showed opposite result, stating that anxious individuals exhibited a decreased likelihood of meeting up with others. For avoidant individuals, findings regarding the usage of online dating apps are more conflicted. Chin et al. (2019) argued that people with avoidant attachment are less likely to use dating apps because they always expect the failure in dating interactions and find it difficult to trust others online (Demircioğlu, & Köse, 2018). As a result, they try to avoid committed relationships and keep emotional distance. However, compared to traditional dating, avoidant people may be more inclined to use online dating apps to meet potential partners since they view online environments as safer space to express themselves (Rochat, Bianchi-Demicheli, Aboujaoude, & Khazaal, 2019). Moreover, dating apps can afford a physical distance for online daters, which makes dating settings more comfortable for those avoidant people (Blackhart et al., 2014). In the study of Timmermans and Alexopoulos (2020), they reported that avoidant individuals would use dating apps more often when travelling because it was harder to create long-lasting connections on the journey. One comparable point with anxious individuals is that those with higher scores on avoidant attachment would also be less likely to meet up with other online daters in reality (Timmermans, & Alexopoulos, 2020).

# 2.6 How are adult attachment styles (i.e. anxiety, avoidance) related to the online daters' ghosting behaviours?

As mentioned in introduction section, adult attachment styles are perceived as predictors of romantic relationship dissolutions. Mende, Scott, Garvey, and Bolton (2019) argued that people with avoidant attachment were less likely to engage in romantic consumption. In the research by Liu, Wang, and Jackson (2018), they investigated the association between attachment styles and relationship satisfaction among 365 Chinese couples, which is consistent with the cultural background of current study. Their findings indicated that attachment avoidance could predict a decreased relationship satisfaction (Liu et al., 2018), which may predict a higher likelihood of relationship dissolution. According to Weisskirch and Delevi (2013), adult attachment styles can somewhat relate to the usage of mediated technology when terminating a relationship. People with higher level of attachment avoidance prefer to use technology to initiate a relationship dissolution since they can avert the emotional intensity by placing themselves distally. Sprecher et al. (2010) termed this dissolution strategy as distant communication. Another notable point is that avoidant individuals tend to withdraw from the relationship when facing conflicts or sensing threats in their relationships (Albert, Allen, Biggane, & Ma, 2015). In the study of Collins and Gillath (2012), researchers posited that attachment avoidance would be associated with the tendency to use more indirect and less compassionate dissolution strategies. While the results of Markovska and Kennedy's study (2002) supported to this proposition only for females rather than males. When applying in an online dating context, it can be assumed that avoidant individuals are more likely to use ghosting as their breakup strategy due to the nature of ghosting (indirectness and technology-mediated distant communication). Combined with preliminary research, I expected a positive relationship between attachment avoidance and the use of ghosting in online dating.

Hypothesis 2: People with higher scores on attachment avoidance are more likely to employ ghosting as breakup strategy in online dating compared to those with lower scores on attachment avoidance.

For those with attachment anxiety, they perform different attitudes on dealing with intimate relationships compared with avoidant individuals. Individuals characterized by anxious attachment orientation describe their relationships as lack self-confidence and fear to be apart (Mandal, & Latusek, 2014). Kirkpatrick and Hazan (1994) thought that such people might enter the same relationships several times, deciding to disengage the relationships and then returning to them. Researchers Mikulincer, Shaver, Bar-On, and Ein-Dor (2010) conducted six studies to investigate the ambivalent tendencies of anxious individuals within romantic relationships, proving that attachment-anxious individuals manifested strong attitudinal ambivalence toward their romantic partners. As such, anxious individuals may keep approaching and avoiding their partners tentatively (Mikulincer et al., 2010). All these findings predict ghosting as a less effective dissolution strategy for anxious people since they have to cease all the connections with their partners, which may cut off the possibility of returning to previous relationships (Koessler, 2018). In addition, anxious individuals are always afraid of loneliness and try to maintain a relationship regardless of the costs (Mandal, & Latusek, 2014), which may decrease the likelihood that they initiate a relationship breakup. From these viewpoints, I expect a negative association between attachment anxiety and the use of ghosting in online dating.

*Hypothesis 3: People with higher scores on attachment anxiety are less likely to employ ghosting as breakup strategy in online dating compared to those with lower scores on attachment anxiety.* 

#### 2.7 The role of gender within the association between rejection sensitivity and ghosting

In present study, gender difference was predicted as a moderating role in the association between rejection sensitivity and online daters' ghosting behaviour. As stated by the relevant literature, gender difference was found to occur in individual-reported rejection sensitivity but the findings were mixed. A study with 500 college students revealed that females reported higher rejection sensitivity than males in general (Erozkan, 2009), which is in line with the result of London et al. (2007). While Downey and colleagues (1998) examined rejection sensitivity of both two genders within romantic relationships and their result showed that there was no difference between males and females on rejection sensitivity. However, they found that rejection sensitivity predicted relationship breakups only in the case of women but not men. In the study of Galliher and Bentley (2010), they provided evidence to this view, concluding that girls appeared to be more sensitive to the interaction with their boyfriends than vice verse. As such, males and females may behave differently when they are in high sensitivity to their partners' rejective or avoidant indications (Hafen et al., 2014). One explanation to such difference may be that maintaining harmonious romantic relationships was seen as a more integral part of self-construction for women than men, so events threatening the relationship, such as conflicts or disagreements, would activate rejection concerns in women to a greater extent than in men (Cross, & Madson, 1997). To maintain their relationships, females with increasing rejection sensitivity were more likely to adopt a submissive pattern to their romantic partners (Hafen et al., 2014). When sensing rejection from others, men and women would react differently as well. A longitudinal study by London and colleagues (2007) illustrated that peer rejection predicted an increased

anxious expectation to rejection only for men, and such anxious expectations of rejection could further predict social anxiety and withdraw from interpersonal communication.

Gender difference also occurs in the way that people communicate their dislike (London et al., 2007), which might result in the differences in the disengagement of their relationships. Research revealed that in romantic relationships, both men and women would have negative emotions and feel distress after experiencing breakup (Perilloux, & Buss, 2008), while the later study of Wrape, Jenkins, Callahan and Nowlin (2016) proposed that females reported more distress than males. Women are more likely to be considered as the initiators of relationship breakup (Sprecher, 1994), which is consistent with the previous finding by Hill, Rubin and Peplau (1976), arguing a higher proportion of female-initiated breakup than the male-initiated breakup. One reason might be that females tend to identify more relational problems than males do, underlying the breakups in romantic relationships, women always had a lower relationship satisfaction than men because of gender inequality.

In terms of the usage of online dating apps, gender difference has been confirmed either. Men are more prone to engage in online dating and meeting potential online partners face-to-face (Valkenburg, & Peter, 2007; Blackhart et al., 2014). On the contrary, females are less likely to use online dating sites to seek a sexual partner but use them to be social (Clemens et al., 2015). In the meantime, their engagement in online dating was significantly related to dispositional factors. One example is that introverted women prefer to engage in online dating than extraverted women (Blackhart et al., 2014).,

As mentioned in existing research, rejection sensitivity is negatively related to either self-perceived or partner-perceived satisfaction in romantic relationships (Downey et al., 1998; Galliher, & Bentley, 2010; Demircioğlu, & Köse, 2018), which can be considered as a predictive factor of ghosting behaviour. Research by Downey, Irwin, Ramsay, and Ayduk (2004) noted that in romantic relationships, rejection sensitivity was positively associated with hostility and aggressive behaviours for both men and women, which is partially compatible with the previous outcomes of Ayduk and colleagues in 1999 since they substantiated such proposition only within female community. What is more, men and women are thought to adopt different approaches to communicate their hostility and express disengagement. In heterosexual relationships, women tend to deal with the conflicted-related issues indirectly and unilaterally whereas men are prone to solve these issues directly and involve both sides (Romero-Canyas et al., 2010), which may predict a higher likelihood for female to choose ghosting as a dissolution tactic due to its indirectness and unilaterality. Nevertheless, an early research by Wilmot and colleagues (1985) reported that females would use more direct strategies than males to dissolve the relationships, while a recent study by Timmermans and colleagues (under review) did not offer a predictive role of gender, which means that the possibility of females to ghost others is not higher or lower than the possibility of males. Thus, gender differences on the selection of breakup tactics remain unclear until now. In view of the fact that rejection sensitivity predicting relationship breakup was only found in female cases, I expect that gender works as a moderator within the association between rejection sensitivity and ghosting and such association would be stronger for females.

*Hypothesis 4: Gender moderates the association between rejection sensitivity and ghosting behaviour in online dating as that the association will be stronger for females compared to males.* 

#### 2.8 Theoretical model

The model in figure 1 was developed to map out the associations between different variables in current study. Adult attachment styles, particularly anxious attachment and avoidant attachment, have associations with ghosting behaviours. Meanwhile, anxious attachment and rejection sensitivity relate to each other as that anxious individuals always have higher rejection sensitivity in their interpersonal communication. Additionally, rejection sensitivity is a third predictor to online dater's ghosting behaviour and within such relationship; gender is hypothesized as a moderator.

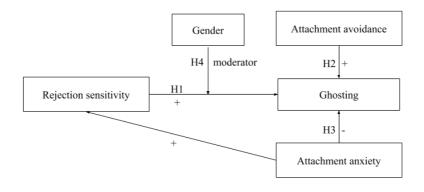


Figure 1. Theoretical model and illustration of all the hypotheses of the study

#### 3. Method

#### 3.1 Quantitative research approach

To explore the relationship between rejection sensitivity, adult attachment styles and ghosting behaviours of online dating app users as well as the moderation effect of gender, a quantitative method was selected. Quantitative methods are always used to investigate correlates and causal relationships between two or more variables, which are more structural and replicable than qualitative methods like interviews or focus groups (Davis, & Michelle, 2011). This research aims to explore the correlation between rejection sensitivity and adult attachment styles as independent variables and online daters' ghosting behaviours as dependent variable with the moderating variable gender, thus, the quantitative method is considered as the appropriate approach. Specifically, statistical data was collected by distributing online surveys. Online surveys engage online users in a large variety of media platforms either online and offline (Davis, & Michelle, 2011). Wright (2005) argued that online survey enables people access in distant locations and has the ability to reach participants who are difficult to contact. Also, the usage of online survey software automates the process of data collection, which can reduce the time and effort of the researcher (Wright, 2005). Moreover, since participants for this research should be active online daters, using online services can skip the step of manually judging people whether they are online daters or not. Participants were randomly chosen from online dating population to make the results representative and generalized.

#### 3.2 Sample

For this study, the sampling criteria were limited to Chinese adults and active users of online dating apps, which could ensure the effectiveness of data. This means the age range should be above 18 years and the nationality of participants should be Chinese. Online questionnaires were created by Qualtrics and distributed via different online platforms and mobile social media (e.g. email, WhatsApp, Facebook, Instagram, WeChat and online dating apps) in order to collect data from the population, so a random sampling method was adopted. The duration of distributing the online surveys was two weeks.

The number of respondents was 326 in total. After filtering out those who did not use online dating apps and never built relationships through online dating apps, the effective sample size was 171, including 91 males and 64 females (14 people chose "do not want to tell"). The age range was from 18 to above 50 with the average age of 26.99 (SD = 6.51). Most of the participants (73.1%) were heterosexual online daters. For their current relationship status, single (42.7%) and casually dating (25.7%) people constituted a large part of samples. Respondents were located in different provinces of China evenly rather than concentrating in northern or southern provinces. The top 3 most-used online dating apps for participants were Tantan (39.2%), Momo (21.6%) and Tinder (16.4%). When asking the frequency they used online dating apps, 30.4% of respondents reported using them once every few days and 22.8% reported less often than every few weeks, showing less addictive usage. Besides, 139 (81.3%) of them have ever experienced offline dating with people they met on online dating apps.

#### 3.3 Procedure

Before the actual survey, participants saw a consent form, including information about privacy, confidentiality and anonymity of their personal data. The consent form also contained a brief self-introduction and my contact information as well as stating the background and aim of the current study. Their participation was anonymous and voluntary without getting paid. At the end of consent form, they could see two choices "I agree" and "I do not agree", which means they have the right to participate or quit this survey. After they clicked the box with "I agree", they could enter the next page and started to answer questions. It took approximately 10 minutes for participants to answer all the questions. The survey had English and Chinese versions so that participants could choose the language they understood better. The online survey was divided into four sections.

Firstly, there were two filter questions "Do you use online dating apps?" and "Have you built relationships through online dating apps?". Only if respondents answered "Yes" to both of the two questions, they could access other questions. Otherwise, they would be filtered out and led to the end of the survey. For those who could move further, they were firstly asked to fill in their demographic information and questions regarding their usage of online dating apps. The second section consisted of 6 questions, measuring the extent of individual rejection sensitivity. Next, they answered questions measuring the extent of their attachment anxiety and avoidance in romantic relationships. Lastly, participants answered questions regarding ghosting intention and behaviours in online dating. In the end, they were sincerely thanked for participation.

#### 3.4 Measurement

**Demographic information.** The first section of the survey included questions asking participants' personal information and the usage of online dating apps. Participants should fill in their age, gender, birthplace, current relationship status and sexual orientation. The measurements of current relationship status and sexual orientation were extracted and adjusted based on the study of Koessler (2018). In particular, I changed the choice "Gay/Lesbian" to "Homosexual" to make it consistent with another two choices. Then participants were asked to indicate the frequency they used online dating apps. The frequency scale was replicated from the article of Iqbal (2020), who did an expansive research about Tinder usage. Lastly, they should indicate whether they experienced offline dating with people they met through online dating apps.

**Rejection Sensitivity.** An RSQ was performed to measure people's rejection sensitivity, which was widely used in a number of previous studies (Watson & Nesdale, 2012; Downey et al., 2000; Stritzke, Nguyen, & Durkin, 2004). There were 18 items in the scale of Downey and Feldman (1996) assessing people's anxiety or the anxious expectations of rejection by not just significant others but more broadly in any interpersonal situations. Inspired by the survey in Stritzke et al.'s study (2004), the RSQ in this study had 6 items and was adapted to measure people's rejection sensitivity in romantic relationship within an online dating context. For example, the original item "*You ask your boyfriend/girlfriend if he/she can move in with you*". The six items in current survey can be seen in Table 1. Following each item, respondents was firstly asked to indicate their degree of concern or anxiety about the outcome on a 6-point

scale ranging from 1 (*very unconcerned*) to 6 (*very concerned*) (M = 3.30, SD = 1.18). The question was like "*How concerned or anxious would you be if you ask your boyfriend/girlfriend who met through online dating to move in with you?*" The next scale indicated their perceived likelihood that other people respond in an accepting manner on a similar 6-point scale ranging from 1 (*very unlikely*) to 6 (*very likely*) (M = 3.18, SD = 0.95). The statement was like "*I expect he/she would be willing to move in with me.*" After respondents answered all the questions, scoring on the second scale was reversed since it assesses the degree of respondents' expectations in which others agree on such requests. Then the grand mean value of all the items was calculated to get the average degree of individual's rejection sensitivity. A higher score represents higher individual online rejection sensitivity. Since I adjusted the current RSQ, a factor analysis was performed. The complete RSQ and factor analysis results were shown in Table 1.

Items	Loadings	Cronbach's alpha
You ask your boyfriend/girlfriend who met through inline dating if he/she can move in with you.	.496	.77
Your boyfriend/girlfriend who met through online dating has plans to go out with friends tonight, but you really want to spend the evening with him/her, and you tell him/her.	.317	
After a bitter argument, you tell your boyfriend/girlfriend who met through online dating you want to see him/her.	.474	
You ask someone who met through online dating to go out on a date.	.498	
You ask your boyfriend/girlfriend who met through online dating if he/she really loves you.	.480	
You ask your boyfriend/girlfriend who met through online dating to come home to meet your parents.	.568	

#### Table 1. Factor analysis table for adjusted RSQ

Attachment Styles. The next part of the survey was to measure individual attachment patterns. An attachment style questionnaire (Simpson et al., 1992) was used to measure participants' differences in attachment in terms of avoidance and anxiety. The measurement included 8 items, 4 for each pattern. Participants answered to what extent they agreed with these statements by a 7-point scale ranging from 1 (*totally disagree*) to 7 (*totally agree*) (avoidance: M = 3.80, SD = 1.21; anxiety: M = 3.61, SD = 1.14). The grand mean of each sub-scale was assessed to get individual attachment patterns. A higher score represents a higher tendency on this attachment pattern. This scale also showed a good reliability ( $\alpha = .75$ ).

**Ghosting.** Considering that some of the respondents never actually ghosted others but remained such ghosting intention, here, the measurement was divided into two parts, namely ghosting intention and actual behaviour. Before measuring the ghosting intention and behaviour of online daters, the definition of ghosting was stated clearly as: *In an online dating context, ghosting is defined as (suddenly) avoiding online or offline contact and disengaging from a relationship without informing the partner explicitly.* Then a ghosting intention. The original scale was in Dutch, so I translated it into English. I deleted a few items that were not suitable for current study. Participants were asked to indicate to what extent they agree with these statements ranging from 1 (*totally disagree*) to 7 (*totally agree*) (M = 4.18, SD = 0.97). The last item "*It is NOT OK to ghost a partner when you are dating that person*" was reversely recoded before calculating the grand mean value of all the items was calculated to get the general likelihood of individual's ghosting behaviour. A higher score represents a higher ghosting intention of online daters. As this is a new scale, a factor analysis was carried out. The results of factor analysis were shown in Table 2.

Items	Loadings	Cronbach's alpha
It's OK to ghost a partner when you don't feel like talking to this person anymore.	.565	.71
If you use a dating app, it is normal to suddenly break contact without explaining why.	.544	
Ghosting is a socially acceptable way to end a serious relationship with a partner.	.413	

Table 2. Factor analysis table for ghosting attitude measurement scale

Dating apps make it easy to ghost a dating partner.	.610
It is only OK to ghost a partner if you have not yet had physical intimate contact with that person.	.758
It's OK to ghost a partner if you've only been on 1 or 2 offline dates.	.507
It is easier to ghost a partner than to say rejective word to that person.	.599
Sometimes, on a dating app, you just have to suddenly disconnect with a partner without explaining why.	.652
It is NOT OK to ghost a partner when you are dating that person.	.730

Finally, the actual ghosting behaviour was measured by a simple question "*Have you ever ghosted your online dating partners?*" Participants should choose "Yes" or "No" to disclose whether they actually ghosted someone in online dating. The complete survey can be seen in the appendix.

#### 3.5 Data analysis

To analyze the data, the statistical software SPSS 25 was used. A multiple regression analysis was conducted to test the relationship between independent variables (i.e. rejection sensitivity, two individual attachment patterns) and dependent variables (ghosting intention and behaviour). As for the predicted moderator gender, a Hayes Process was installed and performed to test moderation effect within the association between rejection sensitivity and ghosting. Before analyzing the data, the dataset was cleared by excluding incomplete and ineligible responses. In previous study, the reliability of RSQ scale was checked as  $\alpha = .83$ . However, RSQ scale in current study was adjusted, so the Cronbach's alpha value was re-calculated. All the scale reliabilities were above 0.7, proving that the reliability of measurement scale was all good.

#### 4. Results

#### 4.1 Outcomes of multiple regression analysis

Multiple linear regression analyses with a moderation analysis were carried out to test all the hypothesis. In the regression models, the control variables were age, relationship status, sexual orientation. The outcomes of multiple linear regression analysis were shown in Table 3.

To examine how rejection sensitivity and adult attachment styles related to online daters' ghosting intention, a linear regression analysis was performed using the corresponding measurement scales. Firstly, a significant regression model was found (F(1, 169) = 27.17, p < .001), with an  $R^2$  of .14. The rejection sensitivity was found to be a significant predictor of ghosting intention in online dating. However, the analysis outcome showed that rejection sensitivity was negatively related to ghosting intention, implying the opposite result of hypothesis. As for the association between rejection sensitivity and ghosting behaviour, a linear regression analysis was used as well. The model was found to be significant, F(1, 169) = 4.30, p = .040 < .05,  $R^2 = .03$ , which meant that rejection sensitivity was a significant predictor of actual ghosting behaviour in online dating. Similar to the outcome above, this analysis showed that rejection sensitivity was negatively associated with ghosting behaviour, confirming that H1 was not supported. Overall, it can be concluded that people high in rejection sensitivity would have lower ghosting intention and would be less likely to implement ghosting in online dating. Therefore, H1 stating that people high in rejection sensitivity was not supported.

Next, a multiple linear regression analysis was conducted to test the association between adult attachment styles (i.e. avoidance and anxiety) and ghosting intention. The overall model was found to be significant, F(2, 168) = 5.59, p = .004 < .05,  $R^2 = .25$ . Only attachment anxiety was found to be significant predictor (p = .035) while attachment avoidance was not a significant predictor (p = .201) for online daters' ghosting intention. To test the association between attachment avoidance, anxiety and ghosting behaviour, a second multiple regression analysis was performed. Interestingly, the statistical model displayed different results. The overall model was not found to be significant, F(2, 168) = 1.35, p = .261, implying that there was no association between either attachment avoidance (p = .828) or anxiety (p = .183) and ghosting behaviour. This was partially inconsistent with the result in previous analysis, which demonstrated that attachment anxiety was positively associated with ghosting intention of online daters but not related to their actual ghosting behaviour. As for attachment avoidance, results proved that it was not a predictive factor of ghosting. Therefore, H2 which stated that people with higher level of attachment avoidance are more likely to employ ghosting as breakup strategy was not supported. Due to the inconsistent results in the analysis that adopting ghosting intention and ghosting behaviour as dependent variables, H3 were rejected as well.

Table 3. Multiple linear regression models of the main effects.

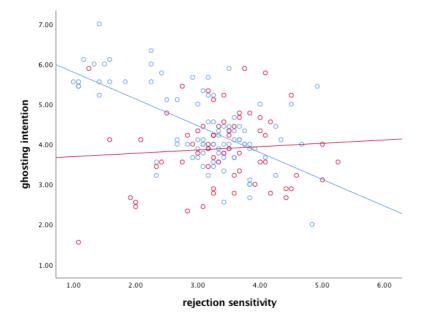
Variables	Ghosting intention		Ghosting behaviour	
Block 1	SE	b*	SE	b*
Age	.016	106	.008	017
Relationship status	.070	.173	.036	006
Sexual orientation	.091	.101	.047	.162*
Block 2				
Rejection sensitivity	.106	303**	.057	061*
Attachment avoidance	.074	.026	.040	.024
Attachment anxiety	.074	076*	.040	080
Adjusted R2		.09	.01	
<i>F</i> for change in <i>R</i>		1.54	1.32	

*Note*. Gender (male = 1; female = 2), relationship status (single, casually dating, separated, divorced, widowed =1; engaged, married =2), sexual orientation (heterosexual = 1; non-heterosexual = 2 (homosexual, bisexual)). Significance levels: \* p < .05; \*\* p < .01; \*\*\*p < .001

#### 4.2 Gender difference: Moderating the association between rejection sensitivity and ghosting or not

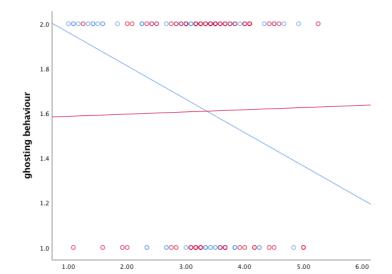
Although H1 was not supported, rejection sensitivity was found to be negatively associated with ghosting behaviour, which still demonstrated a significant association between these two variables. So it is worthwhile to test the moderation effect of gender. To check if the association between rejection sensitivity and ghosting behaviour is moderated by gender, the Hayes' Process Macro v3.5 was used to perform a moderator analysis. The interaction between gender and rejection sensitivity was found to be statistically significant. The analysis output showed that the predictive relationship between rejection sensitivity and ghosting intention was significantly moderated by gender,  $R^2 = .27$ , F(3, 165) = 20.17, p < .001. Examination of the interaction plot (Figure 2) showed an enhancing effect that as male's rejection sensitivity increased,

the ghosting intention would be lower. While for females, result showed an opposite association that as female's rejection sensitivity increased, their ghosting intention would slightly go higher.



*Figure* 2. Moderation effect of gender within the association between individual rejection sensitivity and ghosting intention (blue line represents male, red line represents female)

Another moderation analysis was conducted to test the interaction between gender and rejection sensitivity on ghosting behaviour. The analysis output showed a significant moderation effect of gender within the association between individual rejection sensitivity and actual ghosting behaviour (p = .013 < .05). As shown in figure 3, the gender difference appeared to be statistically significant on this association. Likewise, males who are more sensitive to other's rejection would be less likely to implement ghosting behaviour in online dating, while for females, rejection sensitivity has a slightly positive association between rejection sensitivity and ghosting behaviour in online dating can be demonstrated and supported partly. However, the predictive power of rejection sensitivity on ghosting behaviour is stronger for males rather than females, which is against H4. In the view of this, H4 was not supported. In Table 4, the results of the four hypotheses are summarized.



*Figure* 3. Moderation effect of gender within the association between individual rejection sensitivity and ghosting behaviour (blue line represents male, red line represents female)

Table 3. Overview of hypothesis outcomes

H1	People high in rejection sensitivity are more inclined to ghost their partners in online dating compared to those in low rejection sensitivity.	Rejected
H2	People with higher scores on attachment avoidance are more likely to employ ghosting as breakup strategy in online dating compared to those with lower scores on attachment avoidance.	Rejected
Н3	People with higher scores on attachment anxiety are less likely to employ ghosting as breakup strategy in online dating compared to those with lower scores on attachment anxiety.	Rejected
H4	Gender moderates the association between rejection sensitivity and ghosting behaviour in online dating as that the association will be stronger for females compared to males.	Rejected

#### 5. Discussion and conclusion

#### 5.1 General discussion and conclusion

This study investigated how dispositional factors (i.e. individual rejection sensitivity, attachment avoidance and attachment anxiety) associate with ghosting behaviour when Chinese people use online dating apps as well as the moderation role of gender within the association between rejection sensitivity and ghosting. In total, 326 Chinese adults participated in this study by filling in the online questionnaire and 171 of them were filtered out as effective data. To answer the main research question and sub-question, statistical analyses were performed. The first hypothesis assumed that when rejection-sensitive people perceived rejection signals, they were predicted to distance themselves from their online dating partners proactively rather than maintaining the relationship until being ghosted. However, the results suggest that individuals with higher scores on rejection sensitivity would be less inclined to ghost their online dating partners compared to those with lower scores on rejection sensitivity, which is a reverse finding to the initial assumption. This is inconsistent with the findings of Watson and Nesdale (2012) who found that rejectionsensitive individuals had a higher tendency to withdraw from social communication to evade possible rejection from others. Also, current findings are not in line with the study by Leary (2011), who stated that rejection sensitivity predicted a lower engagement in romantic relationships and a higher likelihood of avoidance in interpersonal situations and the statement of Downey et al. (1998), who argued that rejection sensitive individuals were more likely to be the initiators of romantic relationship breakups.

There are some reasons that may explain such inconsistency. Previous research found that rejection sensitive people are more likely to use online dating apps to search for romantic relationships (Chin et al., 2019). However, studies exploring the association between rejection sensitivity and online dating behaviours, particularly ghosting, is not as many as expected, which may result in a shortage of academic references on this topic. Here, the ghosting behaviour in an online dating context has to be specified into three aspects: the withdrawal from social communication, avoidance in romantic relationships and indirect breakup strategies. Yet, these terms might not accurately describe ghosting, especially in an online dating context, which might lead to the inaccurate hypothesis. Secondly, I adjusted the measurement scale in the original RSO, which may also explain the inconsistency of results. In the RSO of Downey and Feldman (1996), they measured individual rejection sensitivity in communication with families, peers and romantic partners. While in current survey, only items about the communication with romantic partners were extracted. What is more, the items in the current measurement scale were adjusted as well. Romantic partners in the statements were specified as partners who met through online dating apps, which may lead to the deviation on participants' self-reported rejection sensitivity and influence the study outcomes then. Thirdly, some previous research provided evidence to the assumption that rejection-sensitive individuals were more likely to be the recipients of relationship dissolutions. For instance, research by Romero-Canvas and colleagues (2010) suggested that people who anxiously expect rejection from others have a higher tendency to behave confrontationally and aggressively when facing conflicts in relationships, which was highly likely to evoke the reflective rejection from their partners. Meanwhile, the excessive concerns in

romantic relationships have a negative impact on relationship satisfaction and may lead to misinterpretation within the communication between partners (Pietrzak et al., 2005). Based on these findings, it is reasonable to consider rejection-sensitive people as the recipients of relationship dissolutions, predicting a lower likelihood for them to ghost others in online dating.

Contrary to expectations, hypotheses regarding attachment avoidance and anxiety were rejected by data analysis. Results with ghosting intention and ghosting behaviour as dependent variables showed different associations with the two attachment patterns. In particular, attachment avoidance does not have association with the likelihood people would ghost their online dating partners. While people with lower attachment anxiety are proved to have more positive attitudes towards ghosting, but this can not predict their ghosting behaviour in online dating, implying a variance between people's intention and their actions. Based on previous findings, I assumed a positive association between attachment avoidance and the employment of ghosting as a breakup strategy in online dating. As suggested in the research by Collins and Gillath (2012), people with attachment avoidance prefer to use less direct breakup strategies. It has been argued by Koessler (2018) either that those avoidant individuals tend to consider ghosting as an effective breakup tactic and are more prone to conduct it. But these do not appear in the current case. Current findings are also not in line with the research by Weisskirch and Delevi (2013), who stated that people with higher attachment avoidance prefer to use technological-mediated communication to dissolve their close relationships in order to prevent intense emotions from the recipients.

The results of attachment anxiety were a bit more complicated. Attachment anxiety was found negatively associated with ghosting intention in online dating, implying that people with higher attachment anxiety will have a lower ghosting intention to their online dating partners. This corroborates the findings of Koessler (2018), confirming that anxious individuals might be less likely to implement ghosting as a relationship breakup strategy since they hope to keep the possibility of getting back together with their previous partners again. This also somewhat accords with previous findings in the research of Weisskirch and Delevi (2012) that anxious individuals are predicted to be the recipients of relationship breakups via technology rather than the initiators. An explanation to this might be that anxious individuals are always afraid of being lonely and desire to maintain the relationships as much as they can, which results in a lower likelihood for them to initiate a relationship breakup (Mandal, & Latusek, 2014). Another possible explanation is that people with higher attachment anxiety are more likely to return to the previous relationships several times (Kirkpatrick, & Hazan, 1994), so they may not consider ghosting as an effective dissolution strategy since they have to cut all the connections with their partners if they choose to ghost them. What is surprising in current case is that statistical analysis illustrated an unanticipated result on the association between attachment anxiety and ghosting behaviour. The outcome showed that attachment anxiety was not significantly related to ghosting behaviour in online dating. This finding is unexpected and against the upper outcome that supported the negative association between attachment anxiety and ghosting intention. The reason for this is not clear but it may have something to do with the cultural background of samples. In the current study, all the participants were from China and had Chinese ethnicity, which may explain the difference in previous findings focusing on people from western countries, like America or

European countries. Previous research suggested the cultural differences between Asians and Europeans in how they decide to break up or remain together (Yuan, & Weiser, 2019). When Chinese people are engaged in romantic relationships, they will be concerned not only his or her personal feelings but also how their behaviours in the relationships will influence their romantic partners or even their relational networks (Gao, & Gudykunst, 1995). Compared to Europeans and Americans, Asian people tend to concern more about the results of their behaviours on their partners (Yuan, & Weiser, 2019). This makes them to be less likely to actually implement ghosting to terminate their relationships even though they have such intention in their minds, because ghosting is a low-caring and less compassionate breakup strategy.

Finally, according to the data analysis, gender was found to significantly moderate the association between individual rejection sensitivity and both ghosting intention and ghosting behaviour in online dating, providing support to the fourth hypothesis. These results matched the previous observations in the study of London et al. (2007), who suggested gender differences in the way people express their dislike and breakup intention. In current study, female respondents (M = 3.36, SD = 0.11) reported higher individual rejection sensitivity in online dating than male respondents (M = 3.09, SD = 0.09), which is in agreement with multiple previous studies confirming that females were more sensitive to rejection from others compared to males (Erozkan, 2009; London et al., 2007; Galliher, & Bentley, 2010). Furthermore, results indicated significant gender differences within the association between rejection sensitivity and ghosting. More specifically, rejection sensitive females were found to have more positive attitudes towards ghosting and be more likely to ghost their online dating partners even though the predictive power of rejection sensitivity is slight. This is partially in accord with the research by Hill et al. (1976) and Sprecher (1994), indicating that females tend to be or be perceived as the initiator of relationship breakups. However, for males, when they have higher rejection sensitivity, their ghosting intention and the likelihood of ghosting others would decrease. Previous studies showed that females high in rejection sensitivity are more likely to preform hostility and aggression than males (Downey, & Feldman, 1996; Ayduk et al., 1999), which may explain the lower ghosting intention of males. Additionally, the predictive power of rejection sensitivity on ghosting behaviour was found to be stronger for males compared to females, which was against the statement of Romero-Canyas et al. (2010) that those rejection-sensitive females were more inclined to take actions in romantic relationships than males. Hence, H4 was partially supported as gender moderated the association between rejection sensitivity and ghosting but such association was stronger for males than females. One possible reason may be that the sample size in present study (91 males, 64 females) was insufficient to do moderation analysis.

#### 5.2 Theoretical and practical implications

This study provides more theoretical insights to interpersonal behaviours via technology-mediated communication and how adult attachment patterns relate to the choice of breakup strategies. In present times, studies exploring how dispositional factors relate to online dating behaviours, particularly ghosting, is relative few. The current research narrowed down the dispositional factors to rejection sensitivity, attachment avoidance and attachment anxiety, and gave more insights on how people with these dispositions

may initiate or dissolve their intimate relationships stemming from online dating. In addition, gender difference was also investigated within the association between one of these dispositional factors, rejection sensitivity, and online daters' ghosting behaviour. This raises intriguing questions regarding the occurrence of gender differences within other online dating behaviours. One example is breadcrumbing, referring to the act of sending out flirtatious, but non-committal messages to lure a sexual partner rather than expending much effort into establishing a serious relationship (Navarro et al., 2020). Another implication to this is the possibility that other researchers can measure ghosting more systematically by the ghosting attitude scale developed in this study. The ghosting measurement scale used in current study can be replicated and improved in future research so that the validity and reliability of this measurement scale are able to be checked. Moreover, the inconsistency in current findings with previous research may encourage further research to consider cultural background of participants as a control variable.

Additionally, findings from this study can make some contributions to the development of online dating apps, especially those targeting Chinese users. Given the fact that people who are sensitive to rejections from others are less likely to use ghosting to disengage their relationships with online dating partners, it is advised that online dating apps may introduce more functions or improve their systems to simplify the process of relationship breakup, enabling these rejection-sensitive online daters to disengage their relationships in a polite and compassionate approach. Especially for Chinese people, they were demonstrated to have a general higher rejection sensitivity than American and European people (Lou, & Li, 2017), which predict a cultural difference on the tactics they use to terminate relationships. Furthermore, findings in this study implied a phenomenon that individual intention cannot always predict actual behaviours. Therefore, online dating application developers should take this into account when they improve the designs of apps.

#### 5.3 Limitation and future research

Reflecting on the whole process of current study, there are still some limitations that are observed. Firstly, the sample size is insufficient for moderation analysis. Although it is clear that gender moderates the association between individual rejection sensitivity and ghosting in online dating, the outcome of data analysis is contradicted some previous findings. Secondly, the measurement scale of the ghosting attitude used in the survey was developed individually rather than being extracted from existing survey. Although the factor analysis is good, this scale still needs to be tested further. At the same time, the rejection sensitivity scale is adjusted as well to fit in an online dating context. In the original version of Downey and Feldman (1996), they measured individual rejection sensitivity from the interpersonal communication with parents, friends and parents, while in the adapted version, only items about romantic partners were picked and the subjects in statements were changed into "*boyfriend/girlfriend who met through online dating apps*". This may lower the accuracy of the RSQ because many of the respondents did not experience the situations as the statements described. Lastly, the distribution of male and female participants is not equal, which may influence the results when making comparisons between different gender groups.

For future research, there are several suggestions. First and foremost, it is highly recommended equalizing the amount of male and female participants so that the research findings can be more representative and generalized. Then, should any researchers are about to replicate the measurement scale of ghosting attitude, further work is required to ensure the validity and reliability of this scale. If possible, it is advised to develop another scale to measure ghosting behaviour more precisely due to the unpredictability of ghosting intention and behaviour which is found in this study. Next, in addition to gender, the cultural background is proposed to be taken into consideration when future researchers explore similar topics. They are encouraged to make a comparison between eastern and western people to understand the cultural difference on online dating more deeply. For example, instead of the popular online dating app Tinder in most of the western countries, the No.1 popular online dating apps for Chinese users is Momo, which is used for seeking sexual partners and short-term relationships more often than pursuing a serious intimate relationship. This may influence the dating attitudes of users and their online dating behaviours like ghosting. Finally, other factors that may predict ghosting behaviours are encouraged to be investigated. Apart from personality traits, other factors such as social phobia may also significantly predict ghosting behaviour. Meanwhile, attachment anxiety as one of the personality traits needs to be assessed further. Since people with attachment anxiety is proposed to be the recipients of ghosting, it is worthwhile to explore the association between attachment anxiety and ghosting more deeply.

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## Appendix A. Consent form

# **CONSENT REQUEST FOR PARTICIPATING IN RESEARCH**

## DESCRIPTION

You are invited to participate in a research about ghosting behaviours in online dating. The purpose of the study is to explore the phenomenon of ghosting in online dating, especially within the romantic relationships built through online dating. The target group of this study is Chinese adults who use online dating platforms.

Your acceptance to participate in this study means that you accept to participate in a survey. In general terms, the questions of the survey will be mainly related to online dating and ghosting.

You are always free not to answer any particular question, or stop participating at any point.

## **RISKS AND BENEFITS**

As far as I can tell, there are no risks associated with participating in this research. I will make sure that you cannot be identified, your participation will be anonymous and general identification will only mention information such as age and gender.

## TIME INVOLVEMENT

Your participation in this study will take approximately 10 minutes. You may interrupt your participation at any time.

# PAYMENTS

There will be no monetary compensation for your participation.

# PARTICIPANTS' RIGHTS

If you have decided to accept to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. You have the right to refuse to answer particular questions. If you prefer, your identity will be made known in all written data resulting from the study. Otherwise, your individual privacy will be maintained in all published and written data resulting from the study.

## **CONTACTS AND QUESTIONS**

If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact the researcher above.

#### FOR QUESTIONS ABOUT THE STUDY, CONTACT:

Zhixuan Chen, 525624zc@eur.nl

#### SIGNING THE CONSENT FORM

If you click the button with I agree, this means you sign the consent form and participate in this study voluntarily.

If you click the button with I disagree, you cannot participate in this survey.

I agree. I disagree.

# Appendix B. Online survey

**Part 1**. In this section, you need to answer questions regarding your demographic information and the use of online dating apps.

1. Have you ever used online dating apps? (e.g. Tantan, Momo, Tinder)

Yes No

2. If yes, please indicate what online dating apps you ever used.

3. Did you find a romantic partner through using online dating apps?

Yes

No

4. What is your age?

5. What is your gender?

Male

Female

Do not want to tell

6. Which province in China are you originally from?

7. What is your current relationship status?

Single

Casually dating

Engaged

Married

Separated

Divorced

Widowed

8. What is your current sex orientation?

Heterosexual

Homosexual

Bisexual

9. How frequently do you use online dating apps?

Several times a day

Once a day

Once every few days

Once a week

Once every few weeks

Less often than every few weeks

10. Have you experienced offline date with people who you met on online dating apps?

Yes

No

**Part 2**. Please imagine that you are in the situations mentioned below and answer the following questions. If you are currently single, please answer the questions based on your previous relationships.

1. How concerned or anxious would you be if you do such activity?

Very Mildly unconcerned unconcer			lildly Very cerned concerned
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You ask your boyfriend/girlfri end who met through online dating to move in with you.

You ask someone who met through online dating to go out on a date.

Your boyfriend/girlfri end who met through online dating has plans to go out with friends tonight, but you really want to spend the evening with him/her, and you tell him/her.

After a bitter argument, you tell your boyfriend/girlfri end who met through online dating you want to see him/her.

You ask your boyfriend/girlfri end who met through online dating if he/she really loves you. You ask your boyfriend/girlfri end who met through online dating to come home to meet your parents.

2. I expect that he/she would be willing to agree with me or respond to me positively.

Very	Mildly	Somewhat	Somewhat	Mildly	Very likely
unlikel	y unlikely	unlikely	likely	likely	

You ask your boyfriend/girlfriend who met through online dating to move in with you.

You ask someone who met through online dating to go out on a date.

Your

boyfriend/girlfriend who met through online dating has plans to go out with friends tonight, but you really want to spend the evening with him/her, and you tell him/her.

After a bitter argument, you tell your boyfriend/girlfriend who met through online dating you want to see him/her.

You ask your boyfriend/girlfriend who met through online dating if he/she really loves you.

You ask your boyfriend/girlfriend who met through online dating to come home to meet your parents.

# Part 3. Please indicate to what extent you agree with these statements.

|--|

I am somewhat uncomfortable being too close to others. I find it difficult to trust others completely. I am nervous whenever anyone gets close to me. Others often want me to be more intimate than I feel comfortable being. Others often are reluctant to get as close as I would like. I often worry that my partners don't really love me. I often worry about my partners leaving me. I often want to merge completely with others, and this sometimes scares them away.

Part 4. You now get questions related to ghosting. In an online dating context, ghosting is defined as (suddenly) avoiding online or offline contact and disengaging from a relationship without informing the partner explicitly.

1. Please indicate to what extent you agree with these statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
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	1		
It's OK to ghost a partner when you don't feel like talking to this person anymore.			
If you use a dating app, it is normal to suddenly break contact without explaining why.			
Ghosting is a socially acceptable way to end a serious relationship with a partner.			
Dating apps make it easy to ghost a dating partner.			
It is only OK to ghost a partner if you have not yet had physical intimate contact with that person.			

It's OK to ghost a partner if you've only been on 1 or 2 offline dates.	
It is easier to ghost a partner than to say rejective word to that person.	
Sometimes, on a dating app, you just have to suddenly disconnect with a partner without explaining why.	
It is NOT OK to ghost a partner when you are dating that person.	

2. Have you ever ghosted your online dating partners? Yes No