Underlying Factors of Ghosting Behavior: Sociosexuality, Age and Sex

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Master's Thesis in Psychology

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Subject: Psychology	
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Title: Underlying Factors of Ghosting Behavior: Sociosexuality, Age and Sex.	
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Abstract: *Introduction:* The arrival of online dating appears to visualize the interaction of advancing digital communication and the increasing permissiveness towards sex and casual dating. However, with new means of social connection it appears inevitable that there will also be new means of social disconnection. Ghosting has received attention within popular media as an emerging dating/relational disengagement strategy. Ghosting is commonly defined as an act in which the initiator (the person who initiates the dissolution) cuts off all the communication with the non-initiator, either in-person and/or online, without offering an explanation. The present study was the first of its kind to examine underlying factors of ghosting by exploring sociosexual orientation (SO), age and sex differences and their associations to ghosting experiences and specific behaviors.

Method: the sample consisted of 4,015 Finnish-speaking residents. Ghosting experiences and specific behaviors were measured with a survey consisting of close-ended questions, designed for the purpose of the present study.

Result: The first hypothesis predicted that individuals with less restrictive SO would be more associated with ghosting experiences and specific ghosting behaviors. This hypothesis was supported: Less restricted SO was positively associated with ghosting experiences and specific ghosting behaviors. The results support previous research on SO and dating app-related findings implying that less restrictive SO associates with dating app usage. The second hypothesis predicted that higher age would be negatively associated with ghosting experiences and specific ghosting behaviors, which was also supported, in accordance with previous research. The third hypothesis, postulating that no sex differences in ghosting experiences and behaviors would be observed was, however, contradicted. Sex differences were found in most items measuring ghosting experiences and specific behavior.

Discussion: the results are presented together with suggestions of relevant explanatory theoretical models, such as the Parental Investment Theory. The sample was big and population-based and results partially supported previous research. The biggest limitation of the study was that all data was collected from self-reported measures. Future research is needed to develop less subjective measures.

Keywords: ghosting, initiator, non-initiator, sociosexual orientation (SO), In-real-life (IRL)	
Date: 29.05.2022	**Page count**: 43
Level: Master's thesis	

ÅBO AKADEMI UNIVERSITY – FAKULTETEN FÖR HUMANIORA, PSYKOLOGI OCH TEOLOGI

Ämne: Psykologi

Författare: Laura Löfgren

Titel: Ghosting samt underliggande faktorer: sociosexualitet, ålder och kön

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Abstrakt: *Introduktion:* Uppkomsten av nätdejting och dejtingappar visualiserar samspelet mellan avancerande digital kommunikation och normaliseringen av sex och dejting. De ökade och förenklade möjligheter till kommunikation och förbindelser med individer tycks dock komma med ett pris. Ghosting har uppmärksammats som en ny strategi som används för att avsluta förhållanden eller tillfälliga förbindelser. Ghosting är en handling som definieras utifrån att en person (initiativtagaren) bryter kommunikationen med en annan person (icke-initiativtagaren) utan att erbjuda denne en förklaring. Den här studien var den första i sitt slag som utforskade ghosting samt underliggande faktorer utifrån sociosexuell orientering (SO), ålder och kön. Den här studien hypotiserade följande: icke-restriktiv SO är positivt associerat till erfarenheter och beteende kopplat till ghosting, yngre ålder är positivt associerat till erfarenheter och beteende kopplat till ghosting och det finns inga könsskillnader inom erfarenheter och beteende kopplat till ghosting.
Metod: samplet bestod av 4015 finskspråkiga personer. Ghosting mättes med ett frågeformulär med stängda svarsalternativ, skapad för den aktuella studien.
Resultat: resultaten från den här studien indikerade att de två första hypoteserna stämde: icke-restriktiv SO och yngre ålder var positivt associerade med erfarenheter och beteende kopplat till ghosting. Resultaten stämde därmed överens med tidigare forskning inom SO och ghosting. Resultaten motsade dock den tredje hypotesen. Könsskillnader hittades hos majoriteten av de enskilda frågorna som mätte erfarenheter och beteende kopplat till ghosting.
Diskussion: resultaten presenterades tillsammans med förslag på relevanta teoretiska förklaringsmodeller, som exempelvis föräldrainvesteringsteorin. Samplet var stort och populationsbaserat och stödde till viss del tidigare forskning. Studiens främsta svaghet utgjordes av att alla data togs från självrapporterade formulär. Framtida forskning krävs för att utveckla mer objektiva mätinstrument.

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Introduction

The general attitudes and conducts of courtship, sex and relationships have undergone significant changes over the last decades (Greenwood & Gunner, 2009). These changes become evident through comparison of different generations. One example is how the acceptance for having sex without being married increased steadily between the G.I generation (born 1901-1924) and Boomers (born 1946-1964), decreased among Generation X'ers (born 1965-1981) and then proceeded to increase amongst Millennials (born 1982-1999), making them the most accepting towards non-marital sex (Twenge et al., 2005). The average number of sexual partners rose progressively between the G.I.s and Gen X'ers, but declined amongst Millennials, bringing the number back to Boomer levels (Twenge et al., 2005). The decline in sexual partners amongst younger generations was further supported by Twenge et al. (2016) who found that adults born in the 1980s and 1990s were more likely to report not having had sexual partners as adults compared to the population born in the 1960s and 1970s. Despite fluctuations in numbers of sexual partners, there appears to be a general trend toward attitudinal sexual permissiveness, a trend that can be traced back to technological improvement in contraceptives and their increased availability, consequently declining the expected risk and cost of premarital sex (Greenwood & Gunner, 2009). The emergence of the digital revolution marks another transition of our society's psychological and relational functioning (Coyne et al., 2013). Above all, digital communication has made a profound impact on how people organize their lives (Van Dijk, 2006) and romantic and peer relationships are often initiated, maintained and developed through technology-mediated communication such as texting and platforms of social media (Coyne et al., 2011; Fox & Warber, 2013).

The arrival of online dating appears to exemplify the interaction of advancing digital communication and the increasing permissiveness towards sex and casual dating. As of 2021, there were over 323 million people worldwide using dating apps (Curry, 2022). Unlike previous generations, single adults of our time have the opportunity to connect with numerous partners in multiple locations. Traditional physical locations, such as work places and pubs, have been partially outrivaled by internet increasingly enabling individuals to get in touch with both new and old acquaintances (Smith & Anderson, 2016). As of 2017, online dating was the second most common way for heterosexual couples to meet, while it was the most common way homosexual couples meet (Ortega & Hergovich, 2017).

However, with new means of connecting with people, it appears inevitable that there will be new means of disconnecting. Ghosting has received attention within popular media as an emerging dating/relational disengagement strategy (Koessler et al., 2019) and is commonly defined as an act in which the initiator (the person who initiates the dissolution) cuts off all the communication with the non-initiator, either in-person and/or online, without offering an explanation. LeFebvre et al. (2019) recognized the popular use of the term ghosting and conceptualized a more definitive definition in order to encompass the popularized media phenomenon. The authors defined ghosting as "unilaterally ceasing communication (temporarily or permanently) in an effort to withdraw access to individual(s) prompting relationship dissolution (suddenly or gradually), commonly enacted via one or multiple technological medium(s)" (LeFebvre et al., 2019, p. 10). Examples of specific avoidance behaviors carried out by the initiator include not responding to text messages or phone calls, and/or removing, blocking or unmatching the non-initiator on social media channels such as Facebook, Instagram, Snapchat or dating apps such as Tinder. Ghosting differs from other dating disengagement strategies in that the initiator withholds an explanation or clear announcement of relational dissolution from the non-initiator. Consequently, the ghosted partner is often not instantly made aware of the dissolution taking place and is left on their own to deduce what the lack of communication might imply (LeFebvre, 2017). While ghosting has received attention as an emerging phenomenon (Koessler et al., 2019), it is likely that ghosting is not an entirely new strategy for relationship dissolvement. As noted by LeFebvre et al. (2019), ghosting echoes previous strategies of avoidance that have been implemented well ahead of the modern digital era. Studies of relational disengagement (e.g., Baxter, 1979; Cody, 1982) conducted prior to the launching of the world's first online dating platform in 1995 (Matthews, 2018) appears to support this view.

A large number of reports support the view that ghosting is a reoccurring phenomenon of our time. Plenty of Fish, one of the largest global online dating companies (Statista, 2022), surveyed 800 millennial daters between the ages of 18 and 33, which revealed that 78 percent of singles had been ghosted (Maclean, 2016). BankMyCell (2018) conducted a survey in which 1,521 participants were asked about their online dating experiences: 82 percent of the women and 71 percent of the men had previous experience of ghosting. A YouGov (2019) survey of 1,782 U.S. adults found that 30 percent of the respondents had ghosted a romantic partner or a friend. However, while ghosting appear to be

a recurrent phenomenon in modern society, it still tends to be frowned upon (Koessler et al., 2019). In a survey of 1,136 people, only 1.5 percent reported that they would prefer to use the strategy of ghosting when ending a relationship (CreditLoan, 2019).

The considerable incongruence found between the general disapproval of ghosting and its frequent implementation calls for further examination of what factors may be associated with the strategy. The present study sought to explore interpersonal relations and communication in romantic and/or sexual relationships by further examining ghosting as a strategy for relational dissolution. In particular, the study explored how ghosting behaviors differed in connection to sociosexual orientation, age and sex. As there are limited data on the topic of ghosting, the present study aimed to be an exploratory investigation of potential factors contributing to the practice of ghosting as a relational disengagement strategy.

The Aftermath of a Ghost

Before addressing previous research and the present study on factors behind ghosting behaviors, it is vital to address why the subject of ghosting is of importance for research by reviewing the aftermath of ghosting behaviors. Ghosting is described as a strategy that enacts undesirable forms of social rejection and ostracism to create physical and psychological distance between the initiator and the non-initiator (LeFebvre et al., 2019). Ghosting is commonly associated with indirect breakup strategies (Koessler et al., 2019), which are referred to as some of the least compassionate toward the recipient (Sprecher et al., 2010) and has been linked to greater distress (Collins & Gillath, 2012). An indirect strategy entails that the initiator will communicate their intention in an implicit and ambiguous manner that will not coherently inform the non-initiator that they are on the verge of relationship dissolution, while a direct strategy involves upfront, explicit and honest communication (Baxter, 1984). Direct strategies increase the non-initiators´ initial acceptance towards the decision, whereas indirect strategies decrease the acceptance. Moreover, indirect strategies are likely to prolong the disengagement period, potentially adding several attempts for negotiation before the non-initiator can accept that the dissolution is final (Baxter, 1984).

It is likely that ghosting tends to be frowned upon in society (Koessler et al., 2019) since the strategy often associates with negative outcomes, in particular for the individuals at the receiving end (Timmermans et al., 2020; Thomas & Dubar, 2021). Timmermans et al. (2020) found that the majority of their respondents reported experiencing hurt or sad feelings after they had been subjected to ghosting. Feelings of anger, disappointment and cynicism

were also commonly expressed, and some respondents reported initially worrying that something bad had happened to the initiator of ghosting due to their unexpected absence. A large proportion of the respondents described how their ghosting experience(s) had longstanding effects on their mental health, with accounts of lowered self-esteem and distrust in the world being the most frequently reported. The authors concluded that their results support the assumption that being on the receiving end of ghosting can indeed have negative impact on our health (Timmerman et al., 2020). Thomas and Dubar (2021) also found that the perceived psychological outcomes of ghosting were mostly negative for the recipient of ghosting and positive for the initiator of ghosting. Conversely, a few studies have derived conflicting findings to the results previously mentioned. Navarro et al. (2020) examined how experiences of ghosting and breadcrumbing (i.e., instances in which an initiator communicates through flirtatious yet non-committal text messages despite not having intentions of advancing their interactions) were linked to reports of satisfaction in life, helplessness and self-perceived loneliness. Participants who had experienced breadcrumbing, or both breadcrumbing and ghosting, reported less satisfaction with life and more helplessness and self-perceived loneliness. However, there were no significant relations found between any of these psychological correlates and ghosting. Koessler et al. (2019) also found that direct breakups were experienced as more painful by non-initiators than relationships ended through ghosting. Their findings implied that higher degrees of commitment and longer relationship length had a greater impact on the distress experienced after a breakup, than the choice of strategy enabling the breakup.

Despite some contrary results concerning the impact of having been subjected to ghosting, there appears to be several factors predicting the degree of hurt and harm. Timmermans et al. (2020) investigated factors that predicted participant's ratings of ghosting as a painful experience. The authors found that the more often participants had been ghosted and the less often they had ghosted others predicted their experience of ghosting as more painful. Furthermore, factors such as if the participants had met the initiator face-to-face, had longer duration of contact and did not expect ghosting, positively predicted participant's ratings of experiencing ghosting as painful. The authors where surprised to discover that factors such as intensity of contact and the level of sexual intimacy did not significantly predict the degree of painfulness experienced subsequent to ghosting. The authors suggested that a plausible explanation could be the perceived normalization of casual sex among young

adults, which might decrease individual expectations of staying in touch with a person after having been sexually intimate with another.

The Origin of the Ghost

While previous findings support that tactics of avoidance and withdrawal have existed for quite some time in the context of relational disengagement (e.g., Baxter, 1979; Cody, 1982), research on ghosting suggests that ghosting differs from previous tactics due to its paralleled development alongside technologically mediated communication. Koessler et al. (2019) argue that the distinct differences found between direct strategies and ghosting further imply that the advancement of technology has made an impact on the traditional processes of relational disengagement. Thomas and Dubar (2021) also noted that technology and social media may play a vital part in the implementation of ghosting. First of all, the amplified accessibility of technology-mediated communication has facilitated social exposure and outreach of previously unmatched levels. While this outreach creates greater opportunity for connection, it may also create a pressure to respond within a limited amount of time, and once that window of time has been missed, people may resort to ghost the counterpart. Secondly, social media provide the user with particular surveillance features, two examples being the opportunity to examine if the person of interest is online, and whether they have seen a message or not. This factor provides more evidence for avoidance/ignoring actively taking place and may incite "alternative monitoring" which, in turn, may strengthen the enticement of ghosting (Thomas & Dubar, 2021). Other researchers have argued that the technological implementation of dating apps has had a tremendous influence in the dating arena, since they have brought forward a sense of "gamification" concerning potential partners and relationships. Online dating platforms are considered by some to be more of a source of entertainment than a serious meeting ground for potential partners (Carpenter & McEwan, 2016; Timmermans & De Caluwé, 2017). There appears to be a risk that gamification of dating could increase the emotional distance experienced toward other individuals online which, in turn, could result in less motivation to invest in dating or relationships (Krüger & Spilde, 2020).

The Underlying Factors of Ghosting Behavior

As ghosting has become a commonplace phenomenon in the modern dating arena (Koessler et al., 2019) there are a number of studies that have explored potential factors and/or the underlying rational of individuals subjecting others to ghosting.

While attraction will not be a focus of this study, it appears to deserve mentioning. Attraction, which refers to the degree of physical, emotional or intellectual appeal that one individual experience toward another individual (LeFebvre et al., 2019), can have stark influence on the individual decision of whether or not to initiate and/or proceed a relationship (Finkel & Baummeister, 2010). Consequently, attraction (or the lack of thereof) appears to be one of the more prevailing factors associated with ghosting behavior (LeFebvre et al., 2019). On a relating note, results show that disinterest was the most commonly reported motive for ghosting others (Thomas & Dubar, 2021; Koessler et al., 2019), or that ghosting occurred as a result of low perceived compatibility (Koessler et al., 2019).

Self-serving bias (a tendency to attribute positive achievements and events to our own character while attributing negative outcomes to external factors; Wang et al., 2020) appears to be a factor of influence. Manning et al. (2019) found that respondents tended to rationalise ghosting more in instances where they had been the initiator, yet emphasised sentiments of hurtfulness, immaturity and inappropriateness when talking about instances where they had been subjected to ghosting by others. Self-serving bias and its involvement in ghosting behavior appears to be further supported by findings of Timmermans et al. (2020), implying that both initiators and non-initiators were more likely to allocate the blame for the ghosting behavior to the other person. However, there were also large portions within both groups who attributed the implementation of the strategy to matters related to themselves.

One study found that age appears to be associated with ghosting behavior (Timmermans et al., 2020). Age significantly predicted ghosting others on dating apps, with the odds of having ghosted others increasing with 1.08 for every year decreased in age. In terms of other demographical and situational variables, it was found that gender was not a significant predictor of ghosting behavior (Timmermans et al., 2020). The absence of a gender effect in ghosting behavior was further supported by Navarro et al. (2020), along with no significant differences for sexual orientation, age or civil status.

Another reoccurring factor is convenience, referring to initiators either preferring the practicality of ghosting over other dissolution strategies (LeFebvre et al, 2019), or resorting to ghosting as an indirect consequence of mobile dating app use. Timmerman et al. (2020) reported that 29 percent of initiators attribute their implementation of ghosting to the use and affordances of dating apps. Furthermore, 22 percent of the initiators stated that they did not owe the other person anything and that ghosting is an inevitable part of the experience of

being a mobile dating app user (Timmermans et al., 2020). These results resonate with the findings of Koessler et al. (2019), which implied that relationships ended through ghosting were more likely to have been initiated through online contact, compared to individuals who had no experience of ghosting. Timmerman et al. (2020) suggested that ghosting was perceived to be the easiest rejection strategy due to the anonymity provided by the app and the lack of shared social network between the involved individuals. This proposition resonates with the results of Tomas and Dubar (2021), revealing that some initiators choose to ghost to avoid confrontation and/or conflict or to escape vulnerable emotions. Other initiators described that they at the time did not understand themselves why they wanted to reject the other person. Consequently, they resorted to ghosting to avoid the risk of having to provide a specific explanation (Timmerman et al., 2020). Other initiators mentioned that ghosting ensued as a consequence of themselves deleting the app, thereby terminating all their active communication with others. Additionally, some initiators mentioned that the surplus of potential partners provided by the app coxed them to ghost contacts that were of less interest (Timmermans et al., 2020).

Another relevant theme is relationship state, referring to how initiators assessed the relational category (e.g., casual or exclusive dating) and the duration of contact between the parties before implementing a breakup strategy (LeFebvre et al., 2019). Rather than stating an end or a change of mind concerning the relationship status, some initiators implemented ghosting in order to avoid challenging conversation concerning how to define or re-define the current relationship. Initiators did, however, first consider the involvement and time invested before deciding upon whether to ghost the non-initiator. Ghosting was viewed as a viable option when the initiator deemed that the communication had proceeded for only a brief amount of time, which seemingly acquitted the initiator from requirements of a formal breakup (LeFebvre et al, 2019). Findings of Koessler et al. (2019) did, however, appear to contradict this unofficial rule of conduct. While the authors indeed found significant differences in relationship duration and commitment between relationships ending directly and through ghosting, relationships ended through ghosting did nonetheless average six months in length. Furthermore, the average commitment ratings amongst relationships ended through ghosting were above the midpoint of the scale (1 to 7). The authors argued that the result implies that ghosting is not exclusively utilized as a breakup strategy for short-term or casual relationships, such as one-night stands or non-exclusive dating.

The factor of negatively valenced interaction referred to initiators´ disinterest in prolonging contact after non-initiators displayed unfavorable behaviors, commonly described by the initiators as interactions causing frustration, anger or toxicity (LeFebvre et al., 2019). Negatively valenced interaction could, in turn, be related to the factor of safety that encompassed matters of self-protection, security, personal well-being or potentially dangerous situations. The factor of safety accounted for instances in which initiators deemed that abrupt termination of communication through technological venues ensured them more safety and/or wellbeing as opposed to instigating in-person interactions (LeFebvre et al., 2019). The negatively valanced interaction and safety themes may, in turn, resonate with findings indicating that Machiavellianism and narcissism were positively associated with being ghosted by others (Koessler et al., 2019). However, Jonason et al. (2021) also found that initiators of ghosting were more Machiavellian and psychopathic, compared to those who had not been initiators of ghosting. These results align with previous research reporting that individuals with higher ratings in traits linked to the Dark Triad have a higher interest in casual sex, are more reward-driven and have a more exploitative mating style. Jonason et al. (2021) suggested that ghosting may be implemented more often by people utilizing fast mating strategies, as it is a cost-efficient strategy for ending sexual relationships, either in order to avoid unwanted commitment or to enhance opportunities elsewhere.

Previous research has also found concern for the other to be a factor of influence. One study found that 16% of initiators reported resorting to ghosting because of their concern for the other (Timmermans et al., 2020). Concern for the other encompassed initiators´ wish to reduce the potential harm caused by verbal rejection. Initiators perceived the scenario of themselves explaining their reasons for rejection (e.g., not enough interesting/attractive) to the non-initiator as more harmful than ghosting them. Some initiators also reported that they resorted to ghosting because they wanted to avoid deception or giving out false hope (Timmermans et al., 2020).

Attachment style, thought to be acquired in individuals during early childhood in relation to primary caregivers (Ainsworth et al., 1978), is another factor that has been associated with assessment of relationship state and adult use of various breakup tactics (Collins & Gillath, 2012; Krahl & Wheeless, 1997). Avoidantly attached individuals (e.g., more prone to be hesitant toward intimacy and have problems with trusting and/or depending on their partners; Hazan & Shaver, 1987) are reportedly more likely to use avoidance/withdrawal and de-escalation tactics (Collins & Gilliath, 2012). Koessler et al.

(2019) found that anxious attachment (e.g., more prone to want more closeness than their partner and to be excessively concerned about abandonment and/or lack of affection; Hazan & Shaver, 1987) was associated with being ghosted more frequently. The authors suggested that the result either suggests that anxiously attached individuals are ghosted more often or that they have an inclination to overestimate frequency in ghosting experiences (Koessler et al., 2019).

Implicit theories on relationships have also been reported to be influencing factors in ghosting behaviors. Freedman et al. (2019) explored how destiny and growth beliefs were associated with ghosting in romantic and peer relations. Individuals with stronger destiny beliefs (e.g., people are either compatible or not and relationships are static; Knee, 1998) were more likely to having been both an initiator and a non-initiator of ghosting, were more accepting towards using ghosting as breakup strategy and were more likely to use the strategy in the future. Conversely, individuals with stronger growth beliefs (e.g., relationships have potential to improve and develop over time; Knee, 1998) showed less association with ghosting behaviors, perceptions and intentions (Freedman et al., 2019). Previous research also implies that individuals with stronger growth beliefs date for longer periods of time and are less prone to engage in one-night stands, compared to individuals with weaker growth beliefs (Knee, 1998). Freedman et al. (2019) found that stronger destiny beliefs were linked to acceptance of ghosting regardless of how long a romantic relationship had commenced or physical intimacy had been established. In contrast, stronger growth beliefs were only negatively linked to ghosting acceptability in a romantic relationship after physical intimacy had occurred. Freedman et al. suggested that the result indicates that implicit beliefs have different impacts on when and how individuals deem that a romantic relationship becomes serious. It was further suggested that individuals with stronger destiny beliefs view relationships as serious earlier on, while individuals with stronger growth beliefs may be more prone to view relationships as serious after a more defining relational event, such as being physically intimate with a partner (Freedman et al., 2019).

Sociosexual Orientation

Sociosexual orientation (SO), also called sociosexuality, refers to individual differences in willingness to engage in sexual activities in uncommitted relations (Gangestad & Simpson, 1990). Simpson and Gangestad (1991) described SO as a personality dimension that can be viewed as a continuum stretching between two opposing strategies: restrictive and non-restrictive. Individuals who are more sociosexually restricted prefer having shared more

intimacy and emotional bonding with a partner prior to engaging in sexual intercourse. Sociosexually restricted individuals are more likely to have a smaller number of longer relationships and are more prone to prefer partners that are more responsible, considerate and ready to invest in long-term relationships. Conversely, sociosexually unrestrictive individuals are more comfortable with engaging in sexual activities without closeness and commitment and are more likely to engage in one-night stands, engage in sex in the earlier onsets of romantic relationships, and are also more prone to be sexually active with more partners than one simultaneously. The relationships of sociosexually unrestrictive individuals tend to be characterized by weaker affectional bonds and lower investment (Simson & Gangestad, 1991). The conceptualization of sociosexual orientation developed parallell to the psychological theorization of evolutionary human mating (Gangestad & Simpson, 2000). Restricted sociosexual orientation has been associated with a slower reproductive strategy that favors quality over quantity in offspring, while unrestricted orientation aligns with a faster reproductive strategy choosing quantity over quality in offspring (Penke & Asendorpf, 2008; Simpson & Gangestad, 1991). While SO has been found to associate with mobile dating app use (Botnen et al. 2018; Hallam et al. 2018; Sevi 2019), so that individuals with less restrictive SO use dating apps more frequently, the associations between SO and ghosting have not yet been explored.

According to Penke and Asendorpf (2008), global sociosexual orientation consists of three interacting facets: behavior, desire and attitude. The authors theorized that sociosexual behavior results from both an individual degree of desire for uncommitted sexual relationships, and from the attitude toward sociosexuality that an individual acquires to a certain extent during socialization and, thereby, communicates in social settings. These factors have reciprocal influences on each other during the lifetime of an individual. Ergo, SO fluctuates and depends on the physical location of the individual and customs of the socioenvironmental context surrounding the mating market. Penke and Asendorpf (2008) found differences in global sociosexuality between men and women. Additionally, they found that these sex differences were most pronounced in sociosexual desire, to a lesser degree in attitude, while it was absent in the behavior component. However, previous research (Gangestad & Simpson, 2000) implies that intrasexual differences in sociosexual desires are much larger than intersexual differences.

The Present Study: SO, Age and Sex

The present study explored how ghosting behaviors differed in connection to SO, age and sex. As there are limited data on the topic of ghosting, the present study aimed to explore potential factors contributing to the practice of ghosting as a relational disengagement strategy. Age was included as a means of examining previous results indicating that higher age is negatively associated with ghosting experiences (Timmermans et al., 2020) and to control for cohort effects, that previously have been found in earlier research in sexual permissiveness (Greenwood & Gunner, 2009; Twenge et al., 2005). Furthermore, the present study sought to further explore occurrences of ghosting experiences and behaviors: partially by examining their frequencies in the population and partially by comparing frequencies between men and women. As previous scientific studies indicates that there are no significant differences between sexes in connection to ghosting experiences (Timmermans et al., 2020; Navarro et al., 2020), it was hypothesized that there would not be sex differences. To my knowledge, this study is the first one of its kind to explore the associations between ghosting and SO, age and gender with a large Finnish population-based sample.

Hypotheses

Considering the findings of previous studies, the following hypotheses were formulated:

(1) Less restrictive SO will be positively associated with ghosting experiences and ghosting behaviors.

(2) Higher age will be negatively associated with ghosting experiences and ghosting behaviors.

(3) There will be no sex differences in ghosting experiences and ghosting behaviors.

Method

Participants and Procedure

The participants in the present study were a subset of a large population-based sample of twins and siblings and parents of twins from Finland. Twin families and their postal addresses were obtained from the Digital and Population Data Services Agency of Finland, which maintains the national population registry. In total, addresses to 50771 individuals were obtained from the registry. Over the period from October 2021-February 2022, these individuals were sent an invitation to participate in an anonymous survey by postal mail. Individuals who did not respond in any way were sent a reminder letter 2-3 weeks after the arrival of the first invitation letter. In order to incentivize participation, invitees were offered

the possibility to participate in a raffle for 100 gift cards worth €25 apiece to S-Ryhmä, a business conglomerate operating shops, grocery stores, hotels, restaurants and petrol stations across Finland (an individual could only win one gift card). Due to time constraints involved with the present Master's thesis, data analyses for the present study began while the data collection was still ongoing. Therefore, responses from a total of 4015 Finnish-speaking Finnish residents were utilized for the present study. The ages of the participants ranged between 21 - 88, the mean age was 41,27 (SD = 19.42). The sex of the participants was determined on the basis of what gender they had been assigned by the Central Population Registry (2951 female and 1064 male) and whether if the participants currently agreed with the assigned gender. There were 35 participants that did not agree with the sex that they had been assigned: 30 participants that had been assigned female sex and 7 participants had been assigned male sex.

Ethical Review

Before commencing the data collection, an ethical review of the research plan and data collection was carried out by the Ethics Review Board of Åbo Akademi University, who gave a positive evaluation. The voluntary and anonymous nature of participation was explained to all participants in an invitation letter, and all participants provided written informed consent in accordance with the Declaration of Helsinki before accessing the survey. Participants were informed that they were free to terminate their participation at any stage without providing a reason for doing so. Anonymity was ensured by assigning a randomly generated 8-character personal code for each participant, which the participant then used to log onto the survey. Individuals belonging to the same family were identified by means of this personal code.

Measures

SO was measured with the Revised Sociosexual Orientation Inventory (SOI-R) (Penke & Asendorpf, 2008) consisting of 9 items (α = 0.62) with a 9-point response scale. SOI-R is a revised version of the Sociosexual Orientation Inventory (Simpson & Gangestad, 1991). The SOI-R measures SO based on three components: behavior, desire and attitude. While the inventory lists these components separate from one another, they are thought to interact and overlap in a socioenvironmental context of a local mating market, together accumulating a global SO score that is likely to fluctuate depending on the life circumstances and development of the individual. The global score of SOI-R was the only measurement

used from the SOI-R for the purpose of this study, with higher SOI-R scores indicating less restrictive SO.

To examine past ghosting experiences and behaviors, I developed a survey with closed-ended questions (found in appendix). First, respondents were presented with the definition of ghosting (in this survey referred to as passive rejection), how it is most enacted and where. Secondly, respondents were asked to choose the alternative that best described their experience of ghosting (e.g., being an initiator and/or a non-initiator). Finally, the survey was extended with nine (non-exclusive of one another) additional items for those who reported having been an initiator and/or having been a non-initiator. The respondents were presented with four options describing ghosting behavior implemented through different technological and physical venues (e.g., through a dating app or by physically avoiding certain locations) and were asked to choose the alternative(s) matching their experience. Participants were then presented with five options describing whether if interactions had proceeded online and/or IRL and if sexual encounter(s) had been established prior to the implementation of ghosting. These options were intended to construct a provisional sliding scale where the first option (never having met the person IRL") could be viewed as the least intimate, while the last option (having met the person one-on-one IRL and having had sex with them more than once) could be viewed as the most intimate.

Statistical analyses

For the purpose of the present study, IBM SPSS Statistics 26.0 was used for Windows to conduct the statistical analyses. A Generalized Estimating Equations (GEE) multilevel regression model was conducted to examine differences in SOI-R between participants (N = 4015) who had been initiators and/or non-initiators of ghosting. GEE analysis was selected as it allows for controlling for between-subjects dependence, since the data contained responses from twins and other closely related individuals. Age was included as a covariate in the SOI-R analysis to examine and control for possible cohort-effects. All variables measuring specific ghosting implementation were tested for association with sociosexual orientation by inserting them one at a time into the GEE multilevel regression model, to compare those who had executed a specific implementing of ghosting to those who had not executed a specific implementation of ghosting, with age as a covariate and SOI-R global as the dependent variable.

Another GEE multilevel regression model was conducted to examine differences in age between participants ($N = 4015$) who had been initiators and/or non-initiators of ghosting. All variables measuring specific ghosting implementation were tested for association with sociosexual orientation by inserting them one at a time into the GEE multilevel regression model, to compare those who had executed a specific implementing of ghosting, to those who had not executed a specific implementation of ghosting, with age as the dependent variable. In order to control for multiple tests, Bonferroni correction was applied. In both of the GEE analyses, the Bonferroni correction option was selected.

To examine frequencies of ghosting experiences and specific ghosting behaviors and gender differences, a crosstabulation (i.e., a χ^2 test) was conducted. The crosstabulation test examining sex differences was conducted with sex on the Y axis, and dichotomous ghosting items on the X axis. The crosstabulation test was selected to control for family effects by only utilizing one individual at random from each family of the sample, thereby removing 806 respondents from the analysis. Consequently, 3209 respondents were utilized for the frequency analysis of ghosting experiences and specific ghosting behaviors. In order to compare frequencies of ghosting experiences and specific ghosting behaviors between men and women, 27 individuals were removed from the sample as they had stated that they did not agree with the gender assigned to them in the Central Population Registry. As a result, the analysis measuring and comparing frequencies of ghosting experiences and specific ghosting behaviors between sexes consisted of 2349 women and 833 men ($n = 3182$), currently agreeing with the gender they had been assigned by the Central Population Registry. All variables measuring specific ghosting behaviors were tested for association with sexes by inserting them one at a time into the crosstabulation test to compare those who had executed a specific ghosting behavior, to those who had not executed a specific ghosting behavior. In order to control for multiple tests, Bonferroni correction was applied. For the χ^2 analyses, the Bonferroni corrected alpha p level threshold for statistical significance for 13 tests was $0.05/13 = 0.004 = $ note).

Results

Ghosting and SOI-R

The association between ghosting experiences and sociosexuality was highly significant (Wald χ^2 [3] $= 516.654$, $p < .001$), so that individuals that had no experience of ghosting had the most restrictive SO. Furthermore, individuals with experience of both

ghosting others and having been ghosted themselves had the least restrictive SO. The results from specific ghosting behaviors revealed that previous implementation of all the specific behaviors were associated with less restrictive SO, compared to those who had not implemented the specific behaviors. Furthermore, the result implied that initiators who had met a person one-on-one IRL, had sex with them once and then ghosted them had the least restrictive SO compared to those who had not implemented that specific behavior. The results of these analyses were all corrected for effects of age, which in itself had a significant association with sociosexual orientation (Wald χ^2 [1] = 191.176, $p < .001$). The results can be viewed in Table 1.

Table 1

Associations between Ghosting Experiences and Sociosexual Orientation

Response option	SOI mean	SE of SOI mean	95% Wald C.I		B	SE (B)	Wald χ^2	df	p
			Lower	Upper					
I have ghosted (a)	37.620[cd]	0.523	36.595	38.645	7.178	0.596	145.000	1	<.001
I have been ghosted (b)	36.317[cd]	0.630	35.083	37.551	5.875	0.693	71.923	1	<.001
I have both ghosted/been ghosted (c)	41.538[abd]	0.412	40.731	42.344	11.096	0.507	478.371	1	<.001
I have no experience of ghosting (d)	30.442[abc]	0.286	29.880	31.003					
Specific Ghosting Behaviors									
I have ghosted on a dating app	41.906	0.475	40.975	42.838	8.735	0.532	269.142	1	<.001
I have ghosted on social media	40.809	0.466	39.896	41.722	7.546	0.528	203.967	1	<.001
I have ghosted by phone texts/calls	40.637	0.477	39.701	41.573	6.988	0.531	173.014	1	<.001
I have ghosted in another way	41.249	0.655	39.965	42.533	6.943	0.690	101.337	1	<.001
I have ghosted someone I have met online and not IRL	41.029	0.460	40.123	41.930	7.810	0.521	224.303	1	<.001
I have ghosted someone I have met IRL in contexts with other people (e.g., at school/work or a party)	40.530	0.577	39.395	41.658	6.432	0.623	106.616	1	<.001
I have ghosted someone I have met IRL and ben one-on-one with	40.999	0.451	40.116	41.882	7.603	0.506	225.578	1	<.001

	Mean	SE	Lower C.I.	Upper C.I.				df	p
I have ghosted someone I have met IRL, been one-on-one with and had sex with once	45.686	0.486	44.732	46.639	12.613	0.536	554.478	1	<.001
I have ghosted someone I have met IRL, been one-on-one with and had sex with more than once	44.156	0.552	43.074	45.238	10.567	0.594	316.900	1	<.001

Note. SOI = Sociosexual Orientation Inventory-Revised (Penke & Asendorpf, 2008)); C.I. = confidence interval; SE = standard error; df = degrees of freedom. Higher SOI values indicate less restrictive sociosexual orientation (scale range = 1 – 9). Significant mean differences are indicated with superscript small letters (e.g., individuals with no experience of ghosting (d) have significantly lower SOI mean values compared to a, b and c (all ps < .001). Age was included as a covariate in all analyses. All variables measuring specific ghosting behaviors were tested for association with sociosexual orientation by inserting them one at a time into the GEE multilevel regression model to compare those who had executed a specific ghosting behavior to those who had not executed a specific ghosting behavior, with age as a covariate and SOI global as the dependent variable.

Ghosting and Age

The association between ghosting experiences and age was also highly significant (Wald χ^2 [3] = 595.574, p < .001), so that the younger the individuals were, the more likely they were to have had experiences with ghosting. Furthermore, individuals with experience of both ghosting others and having been ghosted themselves were the youngest of age. All specific ghosting behaviors except one indicated that higher age was negatively associated with previous experience of conducting specific ghosting behaviours. The exception being "I have ghosted in another way, (e.g., by physically avoiding places where I might encounter the person)", which indicated that higher age was positively associated with this specific ghosting behavior. The results can be viewed in Table 2.

Table 2

Associations between Ghosting Experiences and Age

Response option	Age mean	SE of Age mean	95% Wald C.I Lower	Upper	B	SE (B)	Wald χ2	df	p
I have ghosted (a)	36.361[bcd]	0.704	34.981	37.741	-12.079	0.847	203.591	1	<.001
I have been ghosted (b)	33.533[ad]	0.738	32.087	34.979	-14.907	0.882	285.658	1	<.001
I have both ghosted/been ghosted (c)	33.391[ad]	0.439	32.530	34.251	-15.049	0.660	519.315	1	<.001
I have no experience of ghosting (d)	48.440[abc]	0.523	47.415	49.465					
Specific Ghosting Behaviors									
I have ghosted on a dating app	28.225	0.214	27.806	28.644	-16.452	0.466	1250.536	1	<.001
I have ghosted on social media	28.520	0.245	28.040	29.000	-16.504	0.481	1177.012	1	<.001
I have ghosted by phone texts/calls	34.250	0.503	33.263	35.235	-8.673	0.628	190.779	1	<.001
I have ghosted in another way	43.344	1.014	41.357	45.330	2.295	1.051	4.767	1	0.029
I have ghosted someone I have met online and not IRL	28.613	0.238	28.148	29.079	-16.342	0.478	1167.759	1	<.001
I have ghosted someone I have met IRL in contexts with other people (e.g., at school/work or a party)	30.659	0.467	29.743	31.574	-12.305	0.595	427.629	1	<.001
I have ghosted someone I have met IRL and ben one-on-one with	31.976	0.450	31.094	32.858	-11.740	0.588	398.366	1	<.001

I have ghosted someone I have met IRL, been one-on-one with and had sex with once	30.724	0.429	29.883	31.564	-12.427	0.571	472.732	1	<.001
I have ghosted someone I have met IRL, been one-on-one with and had sex with more than once	36.747	0.749	35.278	38.216	-5.210	0.814	40.935	1	<.001

Note. Age = Age in years; C.I. = confidence interval; SE = standard error; df = degrees of freedom. Significant mean differences are indicated with superscript small letters (e.g., individuals with no experience of ghosting (d) have significantly lower age mean compared to a, b and c (all ps < .001). All variables measuring specific ghosting behavior were tested for association with age by inserting them one at a time into the GEE multilevel regression model to compare those who had executed a specific ghosting behavior to those who had not executed the specific ghosting behavior, with age as the dependent variable. Bonferroni-corrected was applied for all analyses.

Ghosting Frequencies and Sex differences

All variables measuring ghosting experiences were, expectedly, correlated with one another (point biserial rs = .109 - .793, all rs p < .01). Out of 3209 participants, 12.6% (n = 404) reported having been an initiator, while 7.8 % (n = 251) reported having been a non-initiator. Participants who accounted for both having been an initiator and a non-initiator amounted to 25.6% (n = 822) of the sample, while 54.0% (n = 1732) of the participants reported having no experience of ghosting. The items listing specific ghosting behavior describing where/at what forum(s) initiators enacted ghosting behavior, implied that ghosting was most commonly enacted through social media (21.0%), followed by dating apps (19.7%) and text/phone calls (21.2 %). Ghosting was least enacted in ways that did not involve social media, dating apps or contact through phone (9.0%), such as physically avoiding certain locations. Moving on to specific behavior-items measuring weather if interactions had proceeded online and/or IRL and whether if sexual encounter(s) had been established prior to ghosting. The results indicated that ghosting was most commonly implemented by initiators when they had only interacted with the non-initiator online and not IRL (21.3%). Followed by instances in which the initiator had met the non-initiator IRL and been one-on-one with them (19.0%). Ghosting was least enacted in instances where the initiator had met the non-initiator IRL one-on-one and had had more than one sexual encounter with the non-initiator (12.1%).

No significant sex differences were found when comparing experiences of being an initiator or a non-initiator of ghosting (with Bonferroni corrected alpha p level threshold p < 0.004). The analysis did however find other significant sex differences. Firstly, women (27.4%) were significantly (Wald χ^2 [1] = 16.424, p < .001) more likely to have had experience with having been both initiators and non-initiators of ghosting compared to men (20.3%). Secondly, men (60.4%) were significantly more likely than women (52.0%) to not have had any previous experience with ghosting (Wald χ^2 [1] = 17.497, p < .001). Turning to the nine items measuring specific ghosting behaviors: women were significantly more likely than men to have implemented a specific ghosting behavior in all items but three. Sex differences were not significant for the three items: I have ghosted by phone texts/calls, I have ghosted in another way and I have ghosted someone I have met IRL, been one-on-one with and had sex with more than once. The results can be viewed in Table 3.

Table 3

Frequencies of Ghosting Experiences amongst Participants and Sex Differences

Response option	Total N = 3209	Percent = 100 %	Men N = 833		Women N = 2349		Sex difference χ²
			N	Percent	N	Percent	
I have ghosted	404	12.6 %	86	10.3 %	314	13.4 %	5.182, df 1, $p = 0.023$
I have been ghosted	251	7.8 %	75	9.0%	170	7.2 %	2.700, df 1, $p = 0.100$
I have both ghosted/been ghosted	822	25.6 %	169	20.3 %	644	27.4 %	16.424, df 1, $p < 0.001$
I have no experience of ghosting	1732	54.0 %	503	60.4 %	1221	52.0%	17.497, df 1, $p < 0.001$
		Specific Ghosting Behaviors					
I have ghosted on a dating app	633	19.7 %	104	12.5 %	522	22.2 %	36.895, df 1, $p < 0.001$
I have ghosted on social media	679	21.2 %	107	12.8 %	562	23.9 %	45.466, df 1, $p < 0.001$
I have ghosted by phone texts/calls	574	17.9 %	119	14.3 %	448	19.1 %	9.620, df 1, $p = 0.002$
I have ghosted in another way	294	9.2 %	76	9.1 %	216	9.2 %	0.004. df 1, $p = 0.951$
I have ghosted someone I have not met IRL	685	21.3 %	100	12.0 %	576	24.5 %	57.577, df 1, $p < 0.001$
I have ghosted someone I have met IRL in contexts with other people (e.g., at school/work or a party)	424	13.2 %	67	8.0 %	352	15.0 %	25.917, df 1, $p < 0.001$
I have ghosted someone I have met IRL and ben one-on-one with	620	19.3 %	99	11.9 %	516	22.0 %	40.089, df 1, $p < 0.001$

I have ghosted someone I have met IRL, been one-on-one with and had sex with once	456	14.2 %	88	10.6 %	365	15.5 %	12.462, df 1, p < 0.001
I have ghosted someone I have met IRL, been one-on-one with and had sex with more than once	387	12.1 %	103	12.4 %	281	12 %	0.094, df 1, p = 0.759

Pearson Chi-Square: value 27.458, df 3, asymptotic significance (2 –sided) < 0.001. A crosstabulation test was conducted to control for family effects, resulting in 3209 participants being used for the frequency analysis in ghosting experiences and specific ghosting implementations. χ² [3] = 27.458, p < .00, χ² (3 df). Note. df = degrees of freedom. In order to compare sex differences 27 participants were removed, leaving 3182 participants for the analysis.

Discussion

The present study was the first of its kind to examine differences in SO, age and sex in connection to ghosting experiences and specific ghosting behaviors, using a large Finnish population-based sample. The SO of the participants was studied using SOI-R. Ghosting experiences and specific behaviors were measured with a survey consisting of close-ended questions, designed for the purpose of the present study.

The first hypothesis postulated that individuals with less restrictive SO would be more likely to report ghosting experiences and specific ghosting behaviors. This hypothesis was supported: SO was positively associated with ghosting experiences and specific ghosting behaviors. The result support previous research in SO (Penke & Asendorpf, 2008) and dating app-related findings with SOI-R, implying that less restrictive SO associates with dating app use (Botnen et al. 2018; Hallam et al., 2018; Sevi, 2019). The second hypothesis, predicting that higher age would be negatively associated with ghosting experiences and specific ghosting behaviors, was also supported. The result was in line with previously reported associations between age and ghosting (Timmermans et al., 2020), that is, that younger individuals are more likely to engage in ghosting than older individuals. The third hypothesis postulated that there would be no sex differences in ghosting experiences and specific behaviors. This hypothesis was not supported by the results: sex differences were found for most of the items measuring ghosting experiences and specific behaviors. Women were more likely to both have been an initiator and recipient of ghosting, while men were more likely to have no ghosting experience at all. Women were also more likely to have implemented most of the listed specific ghosting behaviors.

Main Findings and Interpretations

SO was positively associated with ghosting experiences, so that individuals who had no experience of ghosting had the most restrictive SO, while individuals who had experienced being both an initiator and a non-initiator of ghosting had the least restrictive SO. Additionally, results from specific ghosting behaviors revealed that previous implementation of specific ghosting behaviors were associated with less restrictive SO, compared to those who had not implemented the specific behaviors. Furthermore, the result implied that initiators who "had met a person one-on-one IRL, had sex with them once and then ghosted them" had the least restrictive SO compared to those who had not implemented the specific behavior. The result matched previous research showing that less restrictive SO is

positively associated with dating app usage (Botnen et al. 2018; Hallam et al. 2018; Sevi 2019).

Age was associated with ghosting so that younger individuals were more likely to have had experiences with ghosting. Furthermore, individuals with experience of both ghosting others and having been ghosted themselves were the youngest of age. Overall, the present study aligned with previous results of Timmermans et al. (2020) and appeared to resonate with previous research in generational shifts of sexual permissiveness (Greenwood & Gunner, 2009; Twenge et al., 2005). All specific ghosting experiences except the least reported one indicated that higher age was negatively associated with specific ghosting behaviors, the exception being "I have ghosted in another way (for example by physically avoiding certain locations)". Instead, the results implied that participants reporting having ghosted in another way were older than those who did not have that experience. This finding appears to support the view that ghosting is not an entirely new strategy. While ghosting is mainly conducted through technological venues today, behaviors associated to ghosting can be and has been implemented in other ways, especially in earlier decades (see Baxter, 1978; Cody, 1982).

A great occurrence of ghosting became evident through the reports of the participants; almost half of the sample reported having had previous experience of ghosting. The result supports previous studies measuring frequencies of ghosting experiences (Maclean, 2016; BankMyCell; 2018; YouGov, 2019). Furthermore, the result implies that ghosting was most enacted through social media and least enacted in ways that did not involve social media, dating apps or contact through phone, such as physically avoiding certain locations. The five last items of specific ghosting behaviors were formulated as an attempt to construct a generalized sliding scale of advancing intimacy. It was, thereby, somewhat curious that it was more common to ghost a person one had met IRL one-on-one than a person one had met in contexts with other people, presuming that interactions one-on-one would be experienced as more personal/intimate. However, the result resonated with previous research implying that online dating has displaced other ways of meeting potential dates, such as through common friends or work (Rosenfeld et al., 2019). The result also supported the suggestion made by Timmermans et al. (2020), that ghosting is perceived to be the easiest rejection strategy due to the anonymity provided by the app and the lack of shared social network between the involved individuals. It is perhaps easier to ignore the existence of an individual seeking contact if they are safely unconnected to one's own social orbit, despite having shared one or

many dialogues eye-to-eye in a real-life setting. The scale of advancing intimacy did otherwise appear to predict the acceptability of participants using ghosting behavior. The result indicated that ghosting was most implemented by initiators when they had never met the non-initiator IRL, while ghosting was least likely to have been implemented in instances where the initiator had met the non-initiator IRL one-on-one and had had more than one sexual encounter.

Women were reportedly more likely to have been both initiators and non-initiators of ghosting compared to men, while men were more likely not to have any experience of ghosting. Also, while differences were not significant between men and women when comparing frequencies of exclusively being an initiator or a non-initiator, women were still significantly more likely than men to have implemented the majority of the listed specific ghosting behaviors. Sex differences were, however, not significant when initiators had ghosted by phone/text or in other ways than through phone, social media or dating apps. Sex differences were also not significant in instances where the initiator had been one-on-one with the non-initiator and had sex with them more than once. Curiously, the compared frequencies of ghosting experiences between men and women appeared to contradict each other. As previous research indicates that about 89.7 percent of the population defines as heterosexual (Folkhälsomyndigheten, 2020), it does appear unlikely that women are more likely to have been both initiators and non-initiators of ghosting, at the same time as men are more likely to have no experience of ghosting. This result is likely indicative of a selection effect and/or of effects relating to the ghosting survey relying on self-reports, which are prone to self-serving bias (Wang, 2020) and recall bias (Brenner & DeLamater, 2016). While the present ghosting study did not quantify or compare the total number of lived instances of ghosting, the items measuring specific ghosting behaviors suggest that women tend to ghost more often than men. Considering these results, the present study infers two plausible explanations. First, the parental investment theory could be viewed as a probable explanation. The parental investment theory states that the sex most physiologically obligated to invest in offspring will evolve to become more selective when choosing a mate. This means that the higher-investing sex strives to avoid mating with low-quality mates, as a hazardous choice is more costly to that sex than the other. Meanwhile, the lesser-investing sex has a reproductive interest in being intersexually competitive to stand a chance of accessing mates of the more valuable sex (Jonason et al., 2012). In accordance with the parental investment theory, it is logical on an evolutionary basis that women would ghost more often than men, since women

are physiologically required to invest more in their offspring and thereby have to be pickier about their partner selection. In addition to the larger physiological investment, women also have a narrower window of reproductive ability compared to men (Díaz, 2021). Consequently, women have more biological incitement than men to promptly dissolve relationships with partners that are not fulfilling their needs. The second explanation concerns negatively valenced interactions and matters of personal safety. One crucial example being that women that are dating online are at higher risk than men of getting subjected to harassment, violence, sexual offences and murder (Price, 2022). One survey found that women under the age of 35 reported far more issues with harassment and explicit messages than their male counterparts on online dating platforms (Anderson et al., 2020). Six out of ten women reported previous experience of having someone continuing to contact them, despite them previously telling them that they were not interested, compared to 27 percent of men. Women were also twice as likely as men to account for instances in which someone had called them an offensive name or threatened to physically abuse them (Anderson et al., 2020). Naturally, caution serves a great purpose in some instances, even if that implies resorting to ghosting, hurting feelings of others or mistaking kind strangers for something else.

The present study sought to explore underlying factors of ghosting because the great incongruence between the general disapproval of ghosting and its frequent implementation called for further examination. While the present study has demonstrated that SO, age and sex differences associate with ghosting behavior, it is important to not exclude other relevant factors from the explanatory model of ghosting behavior, such as the technological advances of the past decades. As the technological advances appears to have made an impact on the traditional processes of relational disengagement, it appears plausible to assume that technology has brought forward social change. This idea could be compared to that of how sexual permissiveness has increased in modern society, and that this social change could be traced to technological progress. Greenwood and Guner (2009) argued that the sexual revolution was brought forward by technological improvement in contraceptives and their increased availability, suggesting that social change is a reaction to technological progress in the economy. Technological progress influences consumption and prospects of production on a societal level, which consequently influences the individual's motivation to conduct themselves after social customs and morals. In sum: "As people gradually change their behavior to take advantage of emerging opportunities, custom (an aggregation of individual

behavior) slowly evolves too" (Greenwood & Guner, 2009, p. 41). Could ghosting be part of a social change in interpersonal communication and relationships, brought forward by the technological development? If technology has contributed to a social change concerning relational dissolution, the question remains what other positive or negative implications the digital communication may have on general perspectives and behaviors surrounding interpersonal communication and relationships. In Liquid Love, Bauman (2003) argued that "computer-dating" is a symptom of unregulated individualism that has unleashed a consumer-driven and adiaphoric general sense regarding courtship, sex and relationships. Bauman proposed that the twin forces of social change and individualisation has "liquified" the security and solidity of traditionally structured monogamous relationships. According to Bauman, the structures of long-lasting relationships are being deconstructed due to the current extensive possibilities of fleeting virtual relations and networks, which he referred to as connections. These connections are both easy to enter and exit, mainly filling a function as a source of entertainment and may strike us as more user-friendly and efficient while real relationships may look dull, messy and complicated (Bauman, 2003). Other researchers have argued similarly to Bauman, that dating apps has brought forward a sense of gamification concerning dating and relationships, and that these forums are considered by some to be more of a source of entertainment than a serious meeting ground for potential partners (Carpenter & McEwan, 2016; Timmermans & De Caluwé, 2017). This gamification might increase the emotional distance experienced toward other individuals online and result in less motivation to invest in dating or relationships (Krüger & Spilde, 2020). Hobbs et al. (2016) sought to explore Bauman's idea by examining whether if dating app networks may be eroding traditional ideals of commitment, romantic love and monogamy. The authors criticized Bauman's theory for being too pessimistic and downplaying the benefits of networked intimacy. The authors concluded, in contrast to Bauman, that internet dating and dating apps are not eroding ideals such as monogamy, commitment to long-lasting relationships or romantic love in a general sense. Their findings suggested that most individuals use virtual platforms as tools for seeking out partnerships and that they, despite the ease of making virtual connections, continue to value and look for meaningful and long-lasting relationships. The participants of their study generally felt that they had more possibilities to pursue romance and relationships than previous generations, and that their technological devices facilitated them in this matter. However, through this study it also became clear that the experiences of technology-mediated communication differ a lot from one person to the next. Some participants had similar ideas to Bauman (2003), fearing that dating apps reduces

people to commodities easily replaceable by other romantic options and that interactions will turn sour due to the overly strategic nature of these exchanges. Some participants also reported missing out on many possible connections or intimate experiences due to themselves not being attractive enough. Others accounted for experiencing technology-enabled interactions as more superficial in that they were centred on the appearances of profile pictures and could not give a broader understanding of a person's personality (Hobbs et al., 2016). To summarize, it seems safe to assume that the landscape of courtship, sex and relationships has changed due to the technical advancement, with ghosting being one of them. Nevertheless, as noted by Hobbs et al. (2016), it might still be too early to draw strong conclusions on whether digital communication has had a fundamental impact on the perceptions on intimacy, interpersonal communication and relationships.

Strengths and limitations

The size and population-based sample were strengths of the present study. One potential limitation of the present study was that all measures were based on retrospective self-reports, which are prone to self-serving bias (Wang, 2020) and recall bias (Brenner & DeLamater, 2016). Future studies are needed to develop more objective measures to gain more reliable results. Additionally, the internal consistency of SOI-R was low (Cronbach's α = 0.87), which implies that the questionnaire may not have fully performed its intended function. The present study compared sex differences by utilizing individuals that, at the time of them taking the survey, agreed on the gender that was assigned to them by the Central Birth Registry. As an earlier Swedish study implies that 0,4 percent of the population identify as trans (Folkhälsomyndigheten, 2016), future studies should attempt to involve trans- and/or non-binary individuals to their samples and explore gender differences to get a more representative view. Ghosting experiences and behaviors of gender and sexual minorities could potentially differ from the experiences of most of the population, as research indicate that gender and sexual minorities still face discrimination and harassment despite developed HBTQ-rights and legislations (FRA, 2020).

Finally, in accordance with arguments raised by LeFevbre et. al. (2019), the present study conceptualized ghosting as a strategy for dissolving relations, thereby deriving an existence of a relationship prior to ghosting taking place. Previous research on relationship dissolution has mainly focused on strategies that are taking place in the context of a relationship. It is, however, the case that initiators and non-initiators may differ in their perceptions to whether a relationship existed at the time when ghosting ensued, especially in

the early stages of interactions. To my knowledge, there is no known empirical description of standardized components required to grant the existence of a relationship. While interpersonal communication is present prior to ghosting, the experience of a prior relationship being dissolved through ghosting varies depending on the person you ask.

Summary in Swedish – Svensk sammanfattning
Ghosting samt underliggande faktorer: sociosexualitet, ålder och kön

Introduktion

Uppkomsten av nätdejting och dejtingappar visualiserar samspelet mellan avancerande digital kommunikation och normaliseringen av sex och dejting. De ökade och förenklade möjligheterna till kommunikation och förbindelser med potentiella partner tycks dock höra ihop med ett pris. Ghosting har uppmärksammats som en ny strategi som används för att avsluta förhållanden eller tillfälliga förbindelser. Ghosting definieras som en handling där en individ bryter kommunikationen med en annan individ utan att informera motparten eller erbjuda en förklaring (Koessler et al., 2019). Att kommunikationen upphör eller avvecklas kan antingen vara permanent eller tillfälligt och åstadkommer en upplösning av relationen (LeFebvre et al., 2019). Ghosting utförs vanligen via ett eller fler tekniska medier (t.ex. sms, Facebook, Instagram, Tinder) och kommunikationen kan antingen brytas tvärt eller gradvis avvecklas tills inget socialt utbyte kvarstår (LeFebvre et al., 2019). Tidigare forskning tyder på att ghosting är ihopkopplat med negativa upplevelser för den som blir utsatt för strategin (Timmermans et al., 2020; Thomas & Dubar, 2021) och att samhället fördömer till största delen användning av ghosting för att upplösa relationer (Koessler et al., 2019; Creditloan, 2019). Trots detta är ghosting ett vanligt förekommande fenomen. Plenty of Fish rapporterade att nästan 80 procent av studiens singlar blivit utsatta för ghosting (Maclean, 2016), medan YouGov (2019) fann att 30 procent av deltagarna i studien hade utsatt en vän eller partner för ghosting. Ghosting samt vilka faktorer som ligger bakom behöver studeras närmre då det råder en påtaglig paradox i samhällets fördömanden av ghosting och strategins återkommande användning.

Tidigare forskning har visat att ålder är en faktor som kan kopplas till ghostingbeteende. För varje extra levnadsår minskade oddsen med 1,08 för att en person ska ha utsatt någon för ghosting (Timmermans et al., 2020). Tidigare forskning har däremot inte visat stöd för könsskillnader inom ghosting (Navarro et al., 2020; Timmermans et al., 2020). Sociosexuell orientering (SO), även kallad sociosexualitet, beskriver att det finns individuella

skillnader i villigheten att ägna sig åt sexuella aktiviteter utan fast relation (Gangestad & Simpson, 1990). SO kan utläsas som en skala som pendlar mellan två motsatta strategier: restriktiv och icke-restriktiv. Restriktiv SO har associerats med färre och längre relationer, medan icke-restriktiv SO har kopplats till fler tillfälliga sexuella förbindelser samt högre sannolikhet att dejta flera personer simultant (Gangestad & Simpson, 1990). Tidigare forskning tyder på att icke-restriktiv SO har ett positivt samband med användning av dejtingappar, men det finns ingen tidigare forskning på hur SO och ghosting är kopplade till varandra.

Den här studien var den första i sitt slag som studerade erfarenheter och beteende kopplat till ghosting utifrån SO, ålder och könsskillnader. Utifrån tidigare forskning hypotiserades följande i studien:

(1) Icke-restriktiv SO är positivt associerat till erfarenheter och beteende av ghosting.

(2) yngre ålder är positivt associerat till erfarenheter och beteende av ghosting.

(3) det finns inga könsskillnader inom erfarenheter och beteende av ghosting.

Metod

Samplet bestod av 4015 finskspråkiga personer. SO mättes med SOI-R (Penke & Asendorpf, 2008). Ghosting mättes med ett frågeformulär med stängda svarsalternativ som var skapat för den aktuella studien.

Resultat

Resultaten indikerade att de två första hypoteserna stämde: icke-restriktiv SO och yngre ålder var positivt associerade med erfarenheter och beteende kopplat till ghosting. Resultaten stämde därmed överens med tidigare forskning inom SO (Penke & Asendorpf, 2008) och studier som tytt på att användning av dejtingappar har ett positivt samband med icke-restriktiv SO (Botnen et al. 2018; Hallam et al., 2018; Sevi, 2019). Resultaten motsade dock den tredje hypotesen då könsskillnader hittades för majoriteten av de enskilda frågor som mätte erfarenheter och beteenden kopplat till ghosting.

Diskussion

Icke-restriktiv SO var associerat med erfarenheter och beteende kopplat till ghosting. Resultaten visade även att ålder var associerat med ghosting genom att yngre individer med större sannolikhet hade erfarenhet av ghosting och att yngre individer hade mer erfarenhet av

vissa typer av ghosting-beteende. Dessa resultat tyder på kohorteffekter och förefaller gå i linje med tidigare forskning som tyder på generationsskillnader då det gäller sexuellt tillåtande attityder (Greenwood & Gunner, 2009; Twenge et al., 2005). Resultatet visade att kvinnor med större sannolikhet än män att hade erfarenhet av att både ha utsatt andra för ghosting och själva ha blivit utsatta för ghosting, medan män med större sannolikhet än kvinnor inte ha någon erfarenhet av ghosting. Då det gäller majoriteten av vissa typer av ghostingbeteende hade kvinnor med större sannolikhet tillämpat beteendet mer. I studien hävdas att resultatet kan förklaras med hjälp av selektionseffekter och att studien enbart byggde på självrapporterade formulär. Att kvinnor rapporterade att de oftare utfört vissa typer av ghostingbeteende än män kan förklaras genom föräldrainvesteringsteorin (Jonason et al., 2012) och att risken för att utsättas för hot och våld i samband med dejting och relationer är större för kvinnor än för män (Price, 2022; Anderson et al., 2020). I diskussionen framhålls teknikens utveckling som en av de mest relevanta underliggande faktorerna för uppkomsten av ghosting. Studien föreslår att tillgången till vidsträckt kommunikation och social kontakt har gjort att människor gradvis har ändrat sitt beteende för att kunna nyttja dessa medel. De nya vanorna har lett till en social förändring som påverkar människans interrelationella kommunikation och relationer. Samplet var stort och befolkningsbaserat och resultaten stödde till viss del tidigare forskning inom relaterade områden. Den största bristen med studien var att alla data togs från självrapporterade frågeformulär. Framtida forskning behövs för att utveckla mindre subjektiva mätinstrument.

References

Ainsworth, M.D.S., Blehar, M.C., Waters, E., & Wall, S. (1978). *Patterns of Attachment: A Psychological Study of the Strange Situation* (1st ed.). Psychology Press. https://doi.org/10.4324/9781315802428

Anderson, M., Vogels, E. A., & Turner, E. (2020, October 8). *The Virtues and Downsides of Online Dating.* Pew Research Center. https://www.pewresearch.org/internet/2020/02/06/the-virtues-and-downsides-of-online-dating/

BankMyCell. (2018). *Millennial Dating Statistics: What is Ghosting Someone?* https://www.bankmycell.com/blog/what-is-ghosting-someone

Baxter, L. A. (1979). Self-disclosure as a relationship disengagement strategy: An exploratory investigation. *Human Communication Research, 5(*3), 215–222. doi:10.1111/j.1468-2958.1979.tb00635.x

Baxter, L. A. (1984). Trajectories of Relationship Disengagement. *Journal of Social and Personal Relationships*, 1(1), 29–48. https://doi.org/10.1177/0265407584011003

Botnen, E. O., Bendixen, M., Grøntvedt, T. V., & Kennair, L. E. O. (2018). Individual differences in sociosexuality predict picture-based mobile dating app use. *Personality and Individual Differences*, *131*, 67–73. https://doi-org.ezproxy.vasa.abo.fi/10.1016/j.paid.2018.04.021

Brenner, P. S. & DeLamater J. (2016). Lies, Damned Lies, and Survey Self-Reports? Identity as a Cause of Measurement Bias. *Social Psychology Quarterly, 79* (4):333-354. doi:10.1177/0190272516628298

Carpenter, C. & McEwan, B. (2016). The players of micro-dating: Individual and gender differences in goal orientations toward micro-dating apps. *First Monday, 21*. https://doi.org/10.5210/fm.v21i5.6187

CreditLoan. (2019, May 31). *CreditLoan.* https://www.creditloan.com/blog/breaking-down-the-breakup/

Cody, M. J. (1982). A typology of disengagement strategies and an examination of the role intimacy, reactions to inequity and relational problems play in strategy selection. Communication Monographs, 49(3), 148–170. doi:10.1080/03637758209376079

Collins, T. J. & Gillath, O. (2012). Attachment, breakup strategies, and associated outcomes: The effects of security enhancement on the selection of breakup strategies. *Journal of Research in Personality, 46*, 210–222. https://doi.org/10.1016/j.jrp.2012.01.008

Cooper, J. C., Kreps, T. A., Wiebe, T., Pirkl, T. & Knutson, B. (2010). When giving is good: Ventromedial prefrontal cortex activation for others' intentions. *Neuron, 67*, 511–521. https://doi.org/10.1016/j.neuron.2010.0

Coyne, S. M., Padilla-Walker, L. M., & Howard, E. (2013). Emerging in a Digital World: A Decade Review of Media Use, Effects, and Gratifications in Emerging Adulthood. *Emerging Adulthood, 1*(2), 125–137. https://doi.org/10.1177/2167696813479782

Curry, D. (2022, May 4). Dating App Revenue and Usage Statistics (2022). BusinessofApps. https://www.businessofapps.com/data/dating-app-market/

Díaz, M. Y. (2021). The Biological Clock: Age, Risk, and the Biopolitics of Reproductive Time. *Sex Roles, 84*, 765–778. https://doi.org/10.1007/s11199-020-01198-y

Finkel, E. J., & Baumeister, R. F. (2010). Attraction and rejection. In R. F. Baumeister & E. J. Finkel (Eds.). *Advanced social psychology: The state of the science,* (pp. 419–459). Oxford University Press.

Finkel, E. J., Eastwick, P. W., Karney, B. R., Reis, H. T., & Sprecher, S. (2012). Online Dating: A Critical Analysis From the Perspective of Psychological Science. *Psychological Science in the Public Interest, 13*(1), 3–66. https://doi.org/10.1177/1529100612436522

Folkhälsomyndigheten. (2016). *Rätten till hälsa. Hur normer och strukturer inverkar på transpersoners upplevelser av sexuell hälsa* (19093). https://www.folkhalsomyndigheten.se/contentassets/3b29bf7ea68948c6af3e6b92b2ac524a/ratten-halsa-16045-webb.pdf

Fox, J. & Warber, K. M. (2013). Romantic relationship development in the age of Facebook: An exploratory study of emerging adults' perceptions, motives, and behaviors.

Cyberpsychology, Behavior, and Social Networking, 16, 3–7.
doi:10.1089/cyber.2012.0288

FRA. (2020). *Does hope or fear prevail among Europe´s LGBTI people?
(*132.18)https://fra.europa.eu/en/news/2020/does-hope-or-fear-prevail-among-europes-lgbti-people

Freedman, G., Powell, D. N., Le, B., & Williams, K. D. (2019). Ghosting and destiny:
Implicit theories of relationships predict beliefs about ghosting. *Journal of Social and Personal Relationships, 36*(3), 905–924. https://doi.org/10.1177/0265407517748791

Gangestad, S. W., & Simpson, J. A. (1990). Toward an evolutionary history of female
sociosexual variation. *Journal of Personality, 58*, 69-96.
https://doi.org/10.1111/j.1467-6494.1990.tb00908.x

Gangestad, S. W., & Simpson, J. A. (2000). The evolution of human mating: trade-offs and
strategic pluralism. *The Behavioral and brain sciences, 23*(4), 573–644.
https://doi.org/10.1017/s0140525x0000337x

Hallam, L., De Backer, C. J. S., Fisher, M. L., & Walrave, M. (2018). Are sex differences in
mating strategies overrated? Sociosexual orientation as a dominant predictor in online dating strategies. *Evolutionary Psychology Science, 4*(4), 456–465. https://doi-org.ezproxy.vasa.abo.fi/10.1007/s40806-018-0150-z

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process.
Journal of Personality and Social Psychology, 52(3), 511-524. doi:10.1037/0022 3514.52.3.511

Hergovich, P. & Ortega, J. (2018). *The Strength of Absent Ties: Social Integration via Online
Dating.* https://ssrn.com/abstract=3044766

Hobbs, M., Owen, S., & Gerber, L. (2017). Liquid love? Dating apps, sex, relationships and
the digital transformation of intimacy. *Journal of Sociology, 53*(2), 271–284.
https://doi.org/10.1177/1440783316662718

Jonason, P. K., Kaźmierczak, I., Campos, A. C., & Davis, M. D. (2021). Leaving without a
word: Ghosting and the Dark Triad traits. *Acta psychologica, 220*, 103425.
https://doi.org/10.1016/j.actpsy.2021.103425

Jonason, P. K., Valentine, K. A., Li, N. P. & Harbeson, C. L. (2012). Mate-selection and the Dark Triad: Facilitating a short-term mating strategy and creating a volatile environment. *Personality and Individual Differences (51)*6, 759-763. Pergamon.

Krahl, J. R., & Wheeless, L. R. (1997). Retrospective analysis of previous relationship disengagement and current and current attachment style. *Communication Quarterly, 45*(3), 167-187. doi:10.1080/01463379709370059

Knee, C. R. (1998). Implicit theories of relationships: Assessment and prediction of romantic relationship initiation, coping, and longevity. *Journal of Personality and Social Psychology, 74*(2), 360–370. https://doi.org/10.1037/0022-3514.74.2.360

Koessler, R. B., Kohut, T. & Campbell, L. (2019). When Your Boo Becomes a Ghost: The Association Between Breakup Strategy and Breakup Role in Experiences of Relationship Dissolution. *Collabra: Psychology*, *5*(1): 29. doi: https://doi.org/10.1525/collabra.230

Krüger, S. & Spilde, A. C. (2020) Judging books by their covers – Tinder interface, usage and sociocultural implications. *Information, Communication & Society, 23*:10, 1395-1410. doi: 10.1080/1369118X.2019.1572771

LeFebvre, L. (2017). Phantom Lovers: Ghosting as a Relationship Dissolution Strategy in the Technological Age. Punyanunt-Carter, N., & Wrench, J. (Eds.). *The Impact of Social Media in Modern Romantic Relationships* (219-236). Lanham, MD; Lexington Books.

LeFebvre, L. E., Allen, M., Rasner, R. D., Garstad, S., Wilms, A., & Parrish, C. (2019). Ghosting in Emerging Adults' Romantic Relationships: The Digital Dissolution Disappearance Strategy. *Imagination, Cognition and Personality, 39*(2), 125–150. https://doi.org/10.1177/0276236618820519

LeFebvre, L. E., Rasner, R. D.& Allen, D. (2020) "I Guess I'll Never Know…": Non-Initiators Account-Making After Being Ghosted. *Journal of Loss and Trauma, 25*(5), 395-4115. https://doi.org/10.1080/15325024.2019.1694299

Maclean, K. (2016, March 29). POF Survey Reveals 80% of Millennials Have Been Ghosted! *The Latest Catch, by Plenty of Fish*. https://blog.pof.com/2016/03/pof-survey-reveals-80-millennials-ghosted/

Matthews, H. (2018, June 15). The History of Match.com (From 1993 to Today). DatingNews.com. https://www.datingnews.com/apps-and-sites/history-of-match/

Navarro, R., Larrañaga, E., Yubero, S., & Víllora, B. (2020). Psychological Correlates of Ghosting and Breadcrumbing Experiences: A Preliminary Study among Adults. *International journal of environmental research and public health, 17*(3), 1116. https://doi.org/10.3390/ijerph17031116

Ortega, J. & Hergovich, P. (2017). *The Strength of Absent Ties: Social Integration via Online Dating.* doi:10.2139/ssrn.3044766. https://www.researchgate.net/publication/320163287_The_Strength_of_Absent_Ties_Social_Integration_via_Online_Dating

Penke, L., & Asendorpf, J. B. (2008). Beyond global sociosexual orientations: A more differentiated look at sociosexuality and its effects on courtship and romantic relationships. *Journal of Personality and Social Psychology, 95*(5), 1113–1135. https://doi.org/10.1037/0022-3514.95.5.1113

Price, H. (2022, February 24). Dating apps accused of ignoring sexual assault. *BBC.* https://www.bbc.co.uk/bbcthree/article/aeadcc6c-3d3a-4c75-9316-079c1d70b2d3

Rosenfeld, M. J., Thomas, R. J., & Hausen, S. (2019). Disintermediating your friends: How online dating in the United States displaces other ways of meeting. *Proceedings of the National Academy of Sciences of the United States of America, 116*(36), 17753–17758. https://doi.org/10.1073/pnas.1908630116

Sevi, B. (2019). The dark side of Tinder: the dark triad of personality as correlates of Tinder use. *Journal of Individual Differences, 40*(4), 242-246. https://doi-org.ezproxy.vasa.abo.fi/10.1027/1614-0001/a000297

Simpson, J. A. & Gangestad, S. W. (1991). Individual differences in sociosexuality: Evidence for convergent and discriminant validity. *Journal of Personality and Social Psychology, 60*(6), 870–883. doi:10.1037/0022-3514.60.6.870

Smith, A., and Anderson, M. (2016). *5 Facts About Online Dating.* Pew Research Center. Washington, DC. https://internet.psych.wisc.edu/wp-content/uploads/532-Master/532-UnitPages/Unit-06/Smith_Pew_OnlineDating_2016a.pdf

Smith, T.W. (1994). *Attitudes Towards Sexual Permissiveness: Trends, Correlates, and Behavioral Connections.* https://www.researchgate.net/publication/237440754_Attitudes_Towards_Sexual_Permissiveness_Trends_Correlates_and_Behavioral_Connections

Sprecher, S., Zimmerman, C. & Abrahams, E. M. (2010). Choosing compassionate strategies to end a relationship. *Social Psychology, 41*, 66–75. https://doi.org/10.1027/1864-9335/a000010

Starks, K. M. (2007). Bye bye love: Computer-mediated communication and relational dissolution. *Texas Speech Communication Journal, 32,* 11–21.

Statista. (2022). Most popular online dating apps in the United States as of September 2019, by audience size. *Statista.* https://www.statista.com/statistics/826778/most-popular-dating-apps-by-audience-size-usa/

The Manifest. (2019). The Manifest 2019 Consumer Social Media Survey. https://themanifest.com/social-media/how-different-generations-use-social-media

Thomas, J. O., & Dubar, R. T. (2021). Disappearing in the age of hypervisibility: Definition, context, and perceived psychological consequences of social media ghosting. Psychology of Popular Media, 10(3), 291–302. https://doi-org.ezproxy.vasa.abo.fi/10.1037/ppm0000343.supp

Timmermans, E. & De Caluwé, E. (2017). Development and validation of the Tinder Motives Scale (TMS). *Computers in Human Behavior, 70*, 341–350. https://doi.org/10.1016/j.chb.2017.01.028

Timmermans, E., Hermans, A.-M., & Opree, S. J. (2021). Gone with the wind: Exploring mobile daters' ghosting experiences. *Journal of Social and Personal Relationships, 38*(2), 783–801. https://doi.org/10.1177/0265407520970287

Twenge, J. M., Sherman, R. A. & Wells, B. E. (2005). Changes in Young People's Sexual Behavior and Attitudes, 1943–1999: A Cross-Temporal Meta-Analysis. *Review of General Psychology* 9(3):249-261. doi:10.1037/1089-2680.9.3.249. https://www.researchgate.net/publication/232591313_Changes_in_Young_People's_Sexual_Behavior_and_Attitudes_1943-1999_A_Cross-Temporal_Meta-Analysis

Twenge, J. M., Sherman, R. A., & Wells, B. E. (2017). Sexual Inactivity During Young Adulthood Is More Common Among U.S. Millennials and iGen: Age, Period, and Cohort Effects on Having No Sexual Partners After Age 18. *Archives of sexual behavior, 46*(2), 433–440. https://doi.org/10.1007/s10508-016-0798-z

van der Molen, M., Dekkers, L., Westenberg, P. M., van der Veen, F. M., & van der Molen, M. W. (2017). Why don't you like me? Midfrontal theta power in response to unexpected peer rejection feedback. *NeuroImage, 146*, 474–483. https://doi.org/10.1016/j.neuroimage.2016.08.045

Van Dijk, J. A. G. M. (2006). Digital Divide Research, Achievements and Shortcomings. *Poetics, 34*(s 4–5). doi:10.1016/j.poetic.2006.05.004

Wang, Y., Zheng, L., Wang, C., & Guo, X. (2020). Attenuated self-serving bias in people with internet gaming disorder is related to altered neural activity in subcortical-cortical midline structures. *BMC Psychiatry, 20*. https://doi.org/10.1186/s12888-020-02914-4

Wells, B. E. & Twenge, J. M. (2005). Changes in Young People's Sexual Behavior and Attitudes, 1943–1999: A Cross-Temporal Meta-Analysis. *Review of General Psychology 9*(3):249-261. doi:10.1037/1089-2680.9.3.249

YouGov. (2019, January 23). *Have you ever "ghosted" someone (abruptly cut off all contact with a romantic partner or friend without explaining why you were doing so)?* YouGov. https://today.yougov.com/topics/politics/survey-results/daily/2019/01/23/8102f/3

Appendix – Ghosting Survey in Swedish

Enkät för ghosting: översatt från finska till svenska

Den här delen är byggd för att forska inom erfarenheter av passiv avvisning i sexuellt och/eller romantiskt betonade kontakter.

Passiv avvisning definieras i detta frågeformulär som en händelse, där en person (aktör) beslutar sig för att avsluta kontakten (för evigt eller tillfälligt) med en annan person utan att ge någon förklaring. Aktörens beteende syftar till att avsluta en romantisk och/eller sexuell kontakt/förhållande. Avslutandet av kontakten kan ske plötsligt; då aktören slutar att ta kontakt med personen samt svara på hens kontaktförsök helt. Avslutandet av kontakten kan också ske gradvis; då aktören svarar betydligt mer sällan och mindre detaljerat, tills kontakten med den andra personen upphör helt och hållet.

Passiv avvisning kallas ofta för "Ghosting" och den utförs oftast via en eller flera tekniska kommunikationsmedel/sociala medier (t.ex. Facebook, Instagram, Twitter, Tiktok, WhatsApp, Snapchat, Skype, Tinder, Grindr, sms och telefonsamtal etc.)

Ghostsort

Välj det svarsalternativ som bäst beskriver din erfarenhet av passiv avvisning i romantisk och/eller sexuell betonade kontakter

1.   Jag har använd passiv avvisning för att avsluta en eller flera romantiska och/eller sexuellt betonade kontakter.

2.   En eller flera personer har använt passiv avvisning för att avsluta en romantisk och/eller sexuellt betonad kontakt med mig.

3.   Jag har erfarenhet av båda alternativ 1 och 2.

4.   Jag har ingen erfarenhet av passiv avvisning.

GhostSelf

Välj ett eller flera svarsalternativ som bäst beskriver dina erfarenheter av att använda passiv avvisning för att avsluta en eller flera romantiskt och/eller sexuellt betonade kontakter.

Jag har använt passiv avvisning för att avsluta en eller flera romantiska och/eller sexuellt betonade kontakter…

1. På en dejtingapp (Tinder, Grindr eller motsvarande).

2. På sociala medier (Facebook, Instagram, Twitter, Skype, WhatsApp, Snapchat eller motsvarande).

3. Via telefon (samtal, sms eller motsvarande).

4. På ett annat sätt (t.ex. genom att sluta röra mig vid platser där jag skulle kunna träffa personen).

Jag har använt passiv avvisning för att avsluta en eller flera romantiskt och/eller sexuellt betonade kontakter med en eller flera personer…

1. Som jag inte har träffat IRL (som jag har lärt känna genom sociala medier/dejtingapp eller kontaktannons).

2. Som jag har träffat endast IRL i sammanhang med andra människor (t.ex. i skolan, på arbetsplatsen eller en fest).

3. Som jag har varit i kontakt med ensam IRL.

4. Som jag har varit i kontakt med ensam IRL och har haft sexuell interaktion med en gång.

5. Som jag har varit i kontakt med ensam IRL och har haft sexuell interaktion med oftare än en gång.

GhostOther

Väj ett eller flera svarsalternativ som beskriver dina erfarenheter av när en eller flera personer har använt passiv avvisning för att avsluta en romantisk och/eller sexuellt betonad kontakt/förhållande med dig.

En eller flera personer har använt passiv avvisning för att avsluta en romantisk och/eller sexuell betonad kontakt med mig…

1. På en dejtingapp (Tinder, Grindr eller motsvarande).

2. På sociala medier (Facebook, Instagram, Twitter, Skype, WhatsApp, Snapchat eller motsvarande).

3. Via telefon (samtal, sms eller motsvarande).

4. På ett annat sätt (t.ex. genom att sluta röra sig vid platser där de skulle kunna träffa mig).

En eller flera personer som har använt passiv avvisning för att avsluta en romantisk och/eller sexuell betonad kontakt med mig, har varit en person…

1. Som jag inte har träffat IRL (som jag har fått kontakt med genom sociala medier/dejtingapp eller kontaktannons).

2. Som jag har träffat endast IRL i sammanhang med andra människor (t.ex. i skolan, på arbetsplatsen eller en fest).

3. Som jag har varit i kontakt med ensam IRL.

4. Som jag har varit i kontakt med ensam IRL och haft sexuell interaktion med en gång.

5. Som jag har varit i kontakt med ensam IRL och haft sexuell interaktion med oftare än en gång.