# **LOVE SWIPES RIGHT**

A QUANTITATIVE STUDY ON HOW THE FACIAL EXPRESSIONS AND GAZE DIRECTION OF MEN AFFECT DATING APP INTERACTION INTENTIONS

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# Love Swipes Right: A quantitative study on how the facial expressions and gaze direction of men affect dating app interaction intentions

#### Abstract:

How individuals market themselves online has become increasingly relevant as the abundance of options makes distinctiveness even more important. The same holds for one's dating app profile. Prior research on online dating has primarily focused on browser-based online dating profiles, and research on dating apps is inconclusive. The majority of impression making on dating apps, and in mass media in general, is done through images. Therefore, this thesis will explore the effect of the facial expression and gaze direction of men in dating app profile pictures have on the perception of and dating interaction intentions towards the individual. A questionnaire-based quantitative experiment was conducted with 234 female respondents between the ages of 18 and 30. Each respondent was exposed to a man's dating app profile picture, consisting of one of four combinations of gaze direction (averted or direct) and facial expression (neutral or smiling). The study measured and found that the combination of gaze direction and facial expression in the first dating app profile picture of a man interested in dating women had no significant effect on their success of the platform, but the underlying qualities of a profile had a significant impact on this success.

### Keywords:

Dating apps, Self-presentation, Marketing, Person perception, Online behavior

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### **Definitions**

**Dating app:** An application on smartphones that allow users to create and view others' dating profiles, consisting of pictures and text.

**Experience goods:** Goods with attributes that can only be evaluated properly after being purchased and experienced.

**Face-to-face interaction:** Refers to the interaction between individuals communicating verbally and non-verbally and located physically in the same place.

**Further dating interaction (FDI):** In this thesis, the dating interactions that occur through a dating app, and consist of wanting to socialize with the person, matching with the person, sending a message to the person, chatting, going on a date, having sex, and being in a relationship.

**Interpersonal communication:** The exchange of information between two people.

**Matching:** When two people like each other by swiping right on a dating app.

**Person perception:** Element of social psychology about how people process information about others.

**Search goods:** Goods with attributes that can be evaluated prior to purchase or consumption.

**Self-presentation:** Refers to the user's process of packaging oneself in order to create an impression for the viewer.

**Success on dating apps:** In this thesis, success on a dating app refers to further dating interaction.

### 1. Introduction

You are sitting on the subway on the way home from a first date. You had chatted for a while prior to the meeting, sharing enough inconsequential information to both decide that it was worth the time and energy to meet in person. Now that the date is over, you are left unsure. The date had not necessarily gone badly, but it did not meet all your expectations, what if there is someone else who could? You open the dating app, the very same one where you had interacted with your date from earlier that evening on, and continue looking for someone else, someone better, comparing each face you scroll by to the previous and the person you met that evening.

In a world where we have access to everything, with seemingly infinite options, at the click and swipe of a finger, using dating apps to find love has increasingly become the norm. However, in a society characterized by surplus, how does any one thing stand out in the sea of options? How do we decide what is worth our time and what makes us stop our endless searching?

By having individuals evaluate a dating app profile, this thesis examines if individuals, using simple tools to market themselves on dating apps, can stand out and increase their success on the platform, as well as the underlying qualities that make it possible.

### 1.1. Background

This section aims to give a thorough understanding of the shift in consumer search methods and how this shift has impacted the private sphere of consumers' lives, mainly in their search for romantic connections and love. This section also gives an overview of dating apps and explains why the aforementioned is important for marketing. Previous research within academia and practical evidence has led to the definition of the problem area and the research question this thesis aims to answer.

### 1.1.1. Self-presentation online

The freedom of choice has led to changes in consumer behavior such as the act of comparing prices and quality on one's phone during in-store purchases (Kotler, Kartajaya & Setiawan, 2016) or scrolling through endless reviews and social media feeds when deciding on a restaurant.

The need for standing out becomes even more important as our lives and the online environment becomes increasingly characterized by abundance (Khamis, Ang & Welling, 2017). In today's digital age, where social media consumption rapidly increases, every individual becomes their own marketer when presenting themselves online (Ozansoy Çadırcı & Sagkaya Güngör, 2019). Choices about self-presentation are

made daily and are essential for success on platforms where individuals interact with others, build relationships, and search for love.

A key aspect of self-presentation online is the use of visuals. According to Joffe (2008), visuals have begun to replace textual information in mass media. The study showed that visuals are more memorable and are seen as having more of an emotional impact on the viewer, while text leaves the viewer with a more rational and logical train of thought.

### 1.1.2. Dating through dating apps

The number of individuals seeking romance by finding and contacting potential romantic partners online has increased (Rosenfeld & Thomas, 2012) with the growth of online media, in turn changing dating significantly (Hefner & Kahn, 2014). By having more options within reach from the comfort of your cell phone, dating, and finding love, has become increasingly stressful and demanding (Ansari & Klinenberg, 2015). People settle less than previously as the amount of options has convinced users that there's always a better option out there (Ansari & Klinenberg, 2015), and allows people to be more selective in their search for romance (Hefner & Kahn, 2014). People advertise themselves in strategic ways in order to be successful in this search (Hefner & Kahn, 2014), which is important as the large dating pool means that profiles have to be remarkably better to be considered competitive in the market.

Dating apps allow users to familiarize themselves with, communicate with, and meet potential partners by utilizing location, convenience, and technology to promote interpersonal interaction and facilitate connections by swiping on a screen (Quiroz, 2013). Thereon, these interactions have the potential for face-to-face meetings (Sumter & Vandenbosch, 2019). In this thesis, we focus on dating apps such as Tinder, Bumble, and Happn. In Sweden, Tinder is the most downloaded dating app (Maybin, 2016), and is used by 27% of 16-25 year olds and 14% of 26-35 year olds (Davidsson, Palm & Melin Mandre, 2018). Tinder can be found in over 190 countries, has two billion views per day, has led to over 30 billion total matches, and resulted in one million dates per week (Tinder, n.d).

These dating apps are generally free, with the option to pay for a premium account which allows the user to access more features. Once the app is downloaded, the user can set up the account using Facebook or input the information themselves. This information includes first name, photos, education, employment, age, gender, and sexual orientation, and can include more depending on the app. The user can also choose a number of photos and provide a short, written description. App users register their personal preferences regarding potential partners' gender, age, and vicinity (Sumter, Vandenbosch & Ligtenberg, 2017). Once activated, seemingly endless potential partners appear and users determine their romantic interest in the profiles shown (LeFebvre, 2018). Dating apps consist of digital self-presentations focusing

mainly on one's appearance through pictures (Sumter et al., 2017), relying on first impressions, snap judgments, or initial attraction (James, 2015, as cited in LeFebvre, 2018) and fast, spontaneous decisions that occur as users swipe through profiles. The first impression users have of a profile is based on the main profile photo. If a user is interested in seeing more, they can tap the profile, which will reveal additional photos, optional text (Ward, 2017), and linked social media content. Users swipe left to reject the profile, which leads to the profile disappearing and the potential match to be lost, and right to indicate interest, or to like the profile (LeFebvre, 2018). If the right swipe is mutual, it is a match, and users can chat within the app (Ward, 2017). Direct messaging presents users the opportunity to determine if both parties are interested (LeFebvre, 2018) in further dating interaction, from here on referred to as FDI.

The swipe interface of dating apps allows users to pass or like multiple profiles, decide which of these matches to contact, and gives the user the freedom to pursue multiple relationship initiation interests simultaneously (LeFebvre, 2018). Thus, FDIs build on each other and are not mutually exclusive; just because someone has a positive reaction to a profile, it does not have to involve all of the other FDIs, just as a positive reaction to an ad does not guarantee a purchase (Nelson, 1970). Therefore, just like there are different consumer behaviors that may not necessarily end in a purchase, there are multiple different outcomes in FDIs and should therefore be treated as such.

#### 1.1.3. Consumer search behavior on dating apps

During spontaneous decision-making on dating apps, users make determinations requiring subjective knowledge about experiential attributes, such as sense of humor (Frost, Chance, Norton & Ariely, 2008). However, this information is difficult to infer as users are limited to using the objective searchable attributes that are found in a profile, like age, education, and employment (Frost et al., 2008). This distinction is similar to that between experience goods and search goods (Nelson, 1970) which will be further defined in section 2.1.1 and is central to understanding online consumer behavior.

Throughout the dating interaction process, users have to determine if the person is of quality, what price they will pay in terms of time and energy, and if it is worth it. Based on Frost et al. (2008), people can be considered experience goods. Therefore, as their study suggests, the models used to market experience goods to consumers are applicable in online dating, or in our case dating apps, where the product being consumed are FDIs. The study also suggests that regardless of what one's intention is with using the dating app, the success one has on the app is determined both by the partner's objective and subjective qualities. The objective qualities are easier to filter through on dating apps using the information presented. However, the subjective qualities are harder to account for without having a face-to-face interaction. Thus, dating apps force daters to seek the experiential attributes for their experience goods using searchable attributes

(Frost et al., 2008). We believe that the pictures used in the profile hint at the subjective qualities, helping the user create an overall impression of the person in the profile and determine if they want to have any FDI.

### 1.1.4. First impressions on dating apps

Relationship initiation, regardless if it occurs face-to-face or on dating apps, is dependent on the success of the first impression (Wotipka & High, 2016). On dating apps, the dating profile is the key facilitator of this and for attracting potential partners (Gibbs, Ellison & Heino, 2006). 90% of one's success with online dating depends on the pictures featured in one's profile (Ansari & Klinenberg, 2015) as they provide the first impression and influence how users perceive other qualities (McGloin & Denes, 2018). These pictures can include anything from the individual posing, working out, doing outdoor activities, posing with animals, to standing behind a bar. The majority of the photos, however, show the face of the individual.

As previously mentioned, by presenting curated information and pictures in the profiles, dating app users increase the likelihood of forming a positive impression, the success of which can be measured by the viewer's desire for FDI with the profile owner (Wotipka & High, 2016). This coincides with consumer behavior: brand cognition and brand awareness increase the likelihood of the consumer purchasing the product.

### 1.2. Problem area and research gap

Online dating has grown to be one of the most popular ways of finding romantic connections (Emerging Technology from the arXiv, 2017). While there has been research done on online dating, the research on the shift from browser-based dating platforms to dating apps is inconclusive. The previous research on online dating has focused on the dating profile as a whole (Fiore, Taylor, Zhong, Mendelsohn & Cheshire, 2010), including both pictures and text, which is appropriate for the browser-based online dating where these elements are equally represented. As previously mentioned, pictures are the main element of one's dating app profile, and thus has the largest impact on impression making. Further, on the majority of dating apps, the viewer is presented with one photo from which they have the opportunity to view the rest of the profile, including more pictures. Thus, as the majority of self-presentation is image-based, the first picture in a dating profile is the main focus of our study.

In regard to marketing theory, people on online dating platforms have been compared to experience goods (Frost et al., 2008). However, this has not been applied to dating apps. Therefore, our study adapts the same theory as Frost et al (2008) and aims to test if this holds in dating apps as well, where pictures are the main form of presentation in a dating profile. Moreover, previous studies on online dating focus on person perception and the psychology behind mating choice. From the aforementioned previous research

within marketing and psychology of dating and dating apps we have found a research gap, specifically, how these fields can be combined to make dating app users successful in the growing dating app market.

### 1.3. Purpose and research question

The growth of the online dating medium has created opportunities for individuals to apply marketing strategies on themselves and their self-presentation. As previously mentioned, pictures are the first thing users engage with in a dating app profile. Since the majority of these photos feature the face of the user, we believe that focusing on the facial expression and gaze direction in the photo will contribute to the profile's impression making.

The aim of this thesis is to empirically investigate how men, who are interested in dating women, should visually present themselves in pictures on dating apps to increase their success on the platform. The picture composition for the sake of this thesis is limited to the combination of gaze direction and emotional facial expression. Success is measured through FDIs. As previously mentioned, FDIs consists of multiple behaviors; in this study we define FDIs as seven possible behaviors: wanting to socialize with the person, matching with the person, sending a message to the person, chatting, going on a date, having sex, and being in a relationship. Further, we aim to explore what characteristics are necessary for any of these FDIs to occur. Based on this, the research question is as follows:

How does the gaze direction and facial expression in pictures of men, who are interested in dating women, in dating app profiles affect the underlying qualities of the profile along with the success of the profile, in terms of further dating interaction?

### 1.4. Delimitations

Our study is limited on the basis of gender identity and sexual preference. The study investigates how men interested in dating women should market themselves in the most successful way, therefore, the participants are excluded to only women interested in dating men. Furthermore, prior research (Sumter et al., 2017) has pointed to differences in gender and dating intentions, and as this study focuses only on women's interest in dating men, this study is limited to gender identity. Furthermore, the age of the respondents is limited to 18-30, which aligns with the age of the average dating app user. Geographically, the study is limited to Sweden.

### 1.5. Expected contribution

As this study focuses on the impact of person perception on the marketing of men on dating apps, our hope is to contribute with academic knowledge in this inconclusive research field and, thus, fill the aforementioned research gap. Moreover, the aim of the thesis is to find how men should market themselves successfully through pictures on dating apps in regard to facial expression and gaze direction in their first photo, in order to increase the likelihood of FDIs.

Further, the use of visuals in advertising has been found to have a persuasive effect on the minds and intentions of consumers (Joffe, 2008). As such, we believe that the findings will be applicable for other marketing content, such as advertisements, since it is generally image-based and featuring peoples' faces (Berg, 2015).

The majority of studies on consumer behavior treat purchase as the only possible outcome in the consumer decision making process. We believe that this is untrue and that there are multiple paths and outcomes that a consumer might take. With this study we plan on highlighting this by focusing on the many different possible outcomes within FDIs.

The consumer search model has changed with the growth of online media and has impacted consumers' information search methods. It has impacted the daily lives of consumers by making marketing of one-self an expected part of one's online presence (Ozansoy Çadırcı & Sagkaya Güngör, 2019). Further, it has forced individuals to market themselves as, and make decisions about, experience goods using search good characteristics. Due to this, the choice of pictures and text in one's dating app profile is crucial in bridging this gap and for being successful on the platform. With this study we hope to further the research on how men should market themselves in the personal, non-commercial sphere, while drawing attention to this change in consumer behavior.

### 2. Theoretical framework

This section aims to present theory and research from the fields of self-presentation and consumer behavior in marketing and modern dating behavior and person perception in psychology. The four hypotheses that are tested in this study are derived from the framework that follows.

### 2.1. Theoretical Background

#### 2.1.1. Consumer information search

As described in section 1.1.3, humans are seen as experience goods, rather than search goods. Search goods are defined as goods that have objective, tangible attributes and are judged by the function they perform (Frost et al., 2008). Experience goods consist of attributes that require direct experience (Basu, 2018), are judged by the emotions they evoke (Frost et al., 2008), and have to be evaluated in person (Holbrook & Hirschman, 1982; Li, Daugherty & Biocca, 2001). In the case of this thesis, the experience good is the person in the profile and the consumer is the dating app user.

In this study we adopt and adapt Nelson's (1970) definition of search. Search is defined as any way of evaluation that is subject to two restrictions: 1) The user must inspect the option, and 2) that inspection must occur prior to any sort of FDI. For a consumer, the alternative to this is experience, which is preferable when it comes to experience goods (Nelson, 1970). This can partially be done in the case of dating apps. By matching with the person, one can engage in some sort of FDI with as many people as possible, and then determine which are worth interacting with face-to-face. The difference here, in comparison to traditional consumer goods, is that consent is necessary from both parties for any sort of interaction to occur. Just as when shopping for an experience good; the quality of the match can only be determined after, which decreases the incentive for the dating app user to do an extensive search prior to engaging in the first steps of FDI (Basu, 2018).

The consumer decision making process also involves competitive comparison (Teng & Laroche, 2007). Applied to dating apps, the sequential order of profiles shown impact how the profiles are evaluated, and each profile can be seen as competing with each other.

#### 2.1.2. Dating App Motivations

When using dating apps, the user makes choices about their self-presentation (Hancock & Toma, 2009) in order to be successful on the platform. Self-presentation refers to the user's process of packaging oneself in order to create an impression for the viewer (Goffman, 1959, as cited in Hancock & Toma, 2009). Success on dating apps depend on

the individual user and their motivation for using the app in regard to the FDI intentions. According to Sumter and Vandenbosch (2019), there are six motivations for young adults using dating apps, divided into relational, interpersonal, and entertainment goals. They specify that the relational goals consist of finding love or engaging in casual sex, the interpersonal goals consists of the ease of communication online compared to in-person and self-worth validation, and the entertainment goals include the thrill of excitement in using a dating app and because it is seen as trendy to use one. In a study conducted by Ward (2017), these goals, have the potential to shift over time, but the dating outcomes are highly related to the user's intention with using the app (Sumter & Vandenbosch, 2019).

If the user has relational goals in mind, this relationship building usually involves five consecutive steps, according to The Relationship Development Model: initiating, experimenting, intensifying, integrating, and bonding (LeFebvre, 2018). LeFebvre (2018) states that initiating builds on stereotypical considerations, environmental and situational expectations, judgements of attractiveness, and decisions to initiate communication. The initiating step will be the focus of this study since all of the interactions on dating apps occur within this step. However, some of the interaction included in our definition of FDI occurs in the second step, as experimenting begins once communication is initiated (LeFebvre, 2018).

Based on the motivations for using dating apps and the Relationship Development Model, the FDIs used in this study consist of socializing, matching, sending a message to the person, chatting, going on a date, having sex, and being in a relationship.

### 2.2. Gaze direction and facial expressions

The interaction of gaze and emotional facial expression influences the perceived intention of the person (Adams & Kleck, 2003). Previous studies have found that people are able to decode the behavioral intentions of others by using gaze cues (Csibra & Gergely, 2006), so the direction of gaze may influence fundamental parts of the person perception process (Mason, Hood & Macrae, 2004).

Gaze direction has an impact on the perception of facial attractiveness (Kampe, Frith, Dolan & Frith, 2001) and by making eye contact, the person is seen to be smarter and more competent (Nelson, Hammerle & Beall, 1988). Further, smiling or not in pictures is seen to produce significant attitude changes toward the person shown in the picture; individuals shown smiling are seen as more attractive, more intelligent, competent, likeable, and nicer than those not (Nelson et al., 1988). Different facial expressions of the same individual in pictures can lead to different impressions of that individual, but the preference of a facial expression differs depending on the context, where smiling is preferred in dating (Todorov & Porter, 2014). In regard to images in advertising,

Kotchemidova (2005a, 2005b) points towards the fact that smiling in photos has become expected since the 1930s.

Further, gaze direction influences how one perceives the individual's emotional expression; gaze behavior and emotion are associated with approach or avoid behavioral motivations. According to Adams and Kleck (2003), the combination of neutral faces with averted gaze are more likely to be attributed with avoidance-oriented emotions, like sadness and fear, while the same faces are attributed with approach-oriented emotions, like joy and anger, when using direct gaze. Individuals are able to identify faces faster when direct gaze is utilized (Adams & Kleck, 2003; Lobmaier, Tiddeman & Perret, 2008) and as spontaneous, quick decisions on dating apps during the pre-match phase consist of short response times, this is favorable to our study. It is therefore hypothesized that:

**H1:** A dating profile photo featuring a smiling male individual with direct gaze will result in more favorable FDI intentions.

### 2.3. Underlying qualities in modern dating

Expertise, trustworthiness, and homophily of online review sources has been found to have a significant relationship with purchase intention (Ismagilova, Slade, Rana & Dwivedi, 2019). When applying this to dating app usage, the online review sources are seen as the profile holder and the purchase intention is adapted to FDI intentions; as expertise is not applicable to dating app usage it is disregarded in this study. This coincides with Vangelisti (2012) who states that physical attraction and similarity are linked and provide incentive for relationship initiation.

#### 2.3.1. Perceived trustworthiness

Trustworthiness has been found to be highly important in terms of relationship building (Norris & Zweigenhaft, 1999; South Palomares & Young, 2018). In online dating, perceived trustworthiness is essential for FDI due to the anonymity of the internet and has a mediate effect on the desire for FDI (Wotipka & High, 2016; Ismagilova et al., 2019).

According to South Palomares and Young's (2018) research on facial first impressions, an individual's trustworthiness can be perceived by seeing a picture for 100 milliseconds. Moreover, individuals may react to one another based on a rapid glance at a profile picture, which falls in line with dating apps being considered spontaneous decision media. Further, according to Todorov and Porter (2014), there is a correlation between perceived trustworthiness and a person smiling; people are perceived as more trustworthy when smiling compared to when not. It is therefore hypothesized that:

**H2a:** The combination of direct gaze and smiling facial expression in a dating profile photo will lead to higher perceived trustworthiness.

**H2b:** Perceived trustworthiness is positively correlated with variables reflecting FDI intentions.

#### 2.3.2. Attitude towards the person

The dual mediation model (Brown & Stayman, 1992; MacKenzie, Lutz & Belch, 1986; MacKenzie & Lutz, 1989) shows the effect of confidence in brand evaluation and competition (Teng & Laroche, 2007). The attitude of the viewer and their FDI intentions not only depend on their attitude towards and perception of the person shown (MacKenzie et al., 1986), but also on their perceptions of competing profiles in the same consideration set (Teng & Laroche, 2007). Further, individuals' confidence in evaluating a brand increases as they increase their cognitions towards the brand and their purchase intention, and the consumer's brand attitude and confidence influences their purchase intention (Laroche, Kim & Zhou, 1996; Teng & Laroche, 2007). Furthermore, the attitude towards an ad featuring an image of a person has been found to be dependent on an individual's self-esteem, where attitude is positively impacted by the increase in the individuals' self-esteem (Aydınoğlu & Cian, 2014). In the case of dating apps, we argue that the viewer's self-esteem and prior experience with dating apps plays a vital role in this.

### 2.3.3. Perceived physical attractiveness

Decisions regarding initiation of romantic relationships center in large part around perceived physical attractiveness, partly due to the fact that people believe that physical attractiveness is associated with positive qualities (Vangelisti, 2012) and traits such as confidence and kindness (Brand, Bonatsos, D'Orazio & DeShong, 2012). This is especially applicable in short-term relationships such as dating, since, according to the matching phenomenon, the highest priority is physical attractiveness, regardless of gender identity (Li et al., 2013). Furthermore, facial attractiveness is one of the major contributors to overall perceived attractiveness (Riggio, Widaman, Tucker & Salinas 1991).

McGloin and Denes (2018) found in their study that perceived attractiveness of a dating profile picture is positively associated with an individual's desire to date the person. According to Ward (2017), the primary reason for rejecting potential matches in the prematch phase is that the person in the profile is deemed unattractive by the viewer. In the case of online dating, physical attraction is mostly communicated via photographs instead of written descriptions (Wotipka & High, 2016) and attractive pictures are more of a determining factor than attractive text (Fiore et al. 2010).

Further, facial attractiveness is a primary determinant of spontaneous evaluations (Sritharan, Heilpern, Wilbur & Gawronski, 2010). Attractiveness of an individual can be perceived by seeing a picture for 100 milliseconds (South Palomares & Young, 2018). Since the act of "swiping" on dating apps is seen as a spontaneous evaluation, this points to the importance of facial attractiveness in the pre-match phase. Further, studies within interpersonal communication suggest that the more people are attracted to each other, the more they will communicate (Hitsch, Hortacsu & Ariely, 2010). It is therefore hypothesized that:

**H3a:** The combination of direct gaze and smiling facial expression in a dating profile photo will positively affect the attitude towards the male individual.

**H3b:** A positive attitude towards the male individual featured visually in the dating profile is positively correlated with perceived physical attractiveness of the profile holder.

**H3c:** Perceived physical attractiveness is positively correlated with variables reflecting FDI intentions.

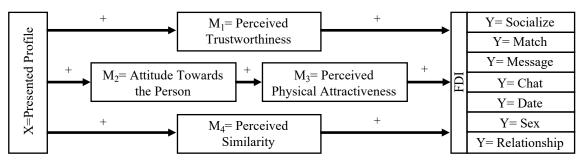
### 2.3.4. Perceived similarity

People are drawn to those who are relatively similar to themselves (Vangelisti, 2012). Similarity, or social homophily, can be found through demographic characteristics, such as gender, age, level of education, and occupation, as well as through perceived attributes, such as preferences, values, and beliefs (Lis, 2013). Similarity has been found to be an important aspect in contacting individuals, and in online dating as a whole (Fiore & Donath, 2005); individuals look for others whose characteristics and attributes are similar to their own (Ismagilova et al., 2019). When high level of similarity is found, this will influence their FDI intentions (Chu & Kim, 2011).

At the basis of interpersonal communication, which both the initiating and experimenting steps of the Relationship Development Model can be characterized as, perceived similarity increases the likelihood that there will be an attempt to communicate and that this communication will be more effective (Rogers & Bhowmik, 1970). This is further applied to the case of dating as, according to McPherson, Smith-Lovin & Cook (2001), perceived similarity between the user and the person in the dating profile has a mediate effect on the initial attraction and the willingness to date. Furthermore, people are more willing to date others that have similar interests, values, and beliefs, as these people are also perceived more positively (McPherson et al., 2001). It is therefore hypothesized that:

**H4:** The dating profile photo will affect perceived similarity which in turn will be positively associated with the user's FDI intentions.

Figure 1. Illustration of potential mediating effects



*Note:* X =The independent variables, M =The mediating variables, and Y =The dependent variables

### 2.4. Summary of hypotheses

**H1:** A dating profile photo featuring a smiling male individual with direct gaze will result in more favorable FDI intentions.

**H2a:** The combination of direct gaze and smiling facial expression in a dating profile photo will lead to higher perceived trustworthiness.

**H2b:** Perceived trustworthiness is positively correlated with variables reflecting FDI intentions.

**H3a:** The combination of direct gaze and smiling facial expression in a dating profile photo will positively affect the attitude towards the male individual.

**H3b:** A positive attitude towards the male individual featured visually in the dating profile is positively correlated with perceived physical attractiveness of the profile holder.

**H3c:** Perceived physical attractiveness is positively correlated with variables reflecting FDI intentions.

**H4:** The dating profile photo will affect perceived similarity which in turn will be positively associated with the user's FDI intentions.

## 3. Methodology

This section aims to present the methodology being used in our study. First, choice of method will be introduced, followed by the presentation of the pre-study and the main study, the study's statistical method, as well as its reliability, and validity.

### 3.1. Choice of approach and research method

The hypotheses of this study are based on existing theories and research. A deductive approach was then appropriate to empirically test and evaluate the theoretical framework (Bryman & Bell, 2015). Therefore, to be able to draw generalized conclusions, a quantitative method of data collection was used. The analysis was built on statistical approaches. To investigate the problem area in a suitable way an experimental method was chosen. The problem area was chosen due to the existing research gap in regard to how self-presentation in pictures on dating apps impact person perception.

To study the attitude towards the different combinations of gaze direction (direct or averted) and emotional facial expression (smiling or neutral) in men's dating app profile pictures, a pre-study and main study was conducted. The pre-study was conducted in order to choose the appropriate male subject to be used in the dating app profile in the main study treatment. The main study investigated the effect on FDIs and underlying profile qualities based on the given treatment.

### 3.2. Experiment design

In order to test the aforementioned developed hypotheses, the study was conducted as an experiment using the online survey tool Qualtrics. As the target group of the experiment was women living in Sweden, the survey was done completely in Swedish to minimize the risk of misinterpreting the language. The survey contained an introduction text and the treatment, consisting of a screenshot of a fake dating app profile featuring a photo of a young man. This was followed by question sets about the profile, the respondent's own dating habits, and general questions about the respondent. The introduction of the survey asked the respondent to imagine themselves using a dating app, and informed them that they would only see the first picture of a dating app profile that had multiple photos and a descriptive text, and that all answers were anonymous. Following the introduction, each respondent was randomly and evenly assigned to one of four treatment groups. Each treatment group was presented with one of the four dating app profile pictures. The randomization ensured that the treatment was the reason for differences in the results and that differences were non-systematic (Söderlund, 2018).

#### 3.2.1. The treatment

The manipulation in the study is the dating app profile. The dating app profile features a photo of a young man in a white t-shirt outdoors, with only the upper body showing. Both clothing and background were neutral in order to try to account for disruptions and personal preference. The age and name of the person in the profile were unknown to the respondent, in order to limit the effect on personal preference. In order to avoid effects of bias and associations towards known dating apps, the dating app profile was fictitious, but the design was based on the most popular dating apps. The treatment in our study was presented as the different combinations of facial expression and gaze direction of the man in the profile, combining to make four different profiles, and therefore four different treatments:

A\*N: Averted gaze and neutral facial expression

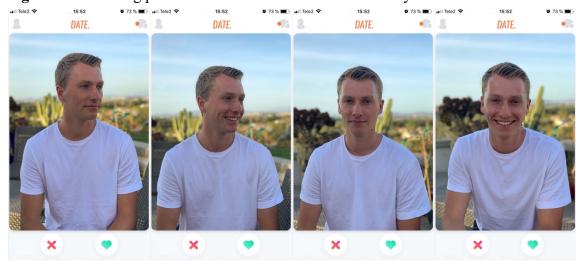
A\*S: Averted gaze and smiling facial expression

**D\*N:** Direct gaze and neutral facial expression

**D\*S:** Direct gaze and smiling facial expression

In order to make the profiles look as realistic as possible, the photos featuring a neutral facial expression could not be extremely neutral, as that is generally not found on dating apps. The neutral facial expression in this case, and the visible chest in the photo, is based on over 1,000 men's profiles on dating apps, viewed over the course of an hour in total between both researchers, to understand the average featured facial expressions and camera position. Due to this, the neutral photo is not completely neutral. The photo has a slight movement in the corner of the mouth as this is what the majority of "neutral" emotional facial expressions on the viewed dating profiles had.

**Figure 2.** The dating profiles used as the treatment in the study.



### 3.3. Pre-study

In order to design the main study, a pre-study was conducted. The purpose of the pre-study was to decide which young man would be featured in the dating profile treatment in the main study. The person who was perceived as the most common, attractive dating app user would be chosen. The pre-study was conducted through an online questionnaire via Qualtrics. Three men were presented in individual pictures, where they were smiling and looking into the camera; the pictures showed the upper body with a neutral background. In the study, each of the pictures were presented individually followed by questions that measured if they were perceived as the attractive, average dating app user.

The study was measured using five questions. The first question asked, "How old do you perceive this person to be?", was measured using a drill down question with ages 18-100 as options. The following three questions were measured on a 7-point Likert scale where 1 = not at all and 7 = extremely and asked: "Does this person look like a common person on a dating app?", "How much do you like the person in the picture?", and "How interested are you in dating this person?". The fifth question asked about the perception of the man and consisted of four items measured using 7-points semantic differential scales (1-7) where respondents indicated their answers to the following adjective pairs at the scale end-points: "Unattractive - Attractive", "Untrustworthy - Trustworthy", "Common - Unique", and "Mean - Nice".

There were also several other questions about the men in the study to distract the participant from the purpose of the study. To account for the likely comparison of pictures made by the respondent in the pre-study, the order of the men was randomized for each participant. To analyze the data, a point system was created based on the questions, where the man that scored highest on the point system was chosen.

### 3.3.1. Pre-study results

The pre-study consisted of N = 13 self-identified women interested in dating men with a mean age of 23. All of the respondents had used a dating app before. To find which man was best suited for the main study, the data of the three men was scored and summed. The measurements were ranked as high and low importance for our study, and the most important measurements were as follows. The man that was chosen scored highest on looking like the average person on a dating app with a mean of 5.38. Furthermore, he was perceived to look the most common (M = 2.77, where common = 1 and unique = 7). He was perceived as the most attractive (M = 5.00). For desire to date, he had a mean of 3.77. Furthermore, the age he was perceived to be had a mean of 23, which aligned with the common dating app user age, 18-30 years old. Therefore, this man was chosen to be featured in the treatment in the main study.

### 3.4. Main study

### 3.4.1. Parameters of the main study

#### **Perceived trustworthiness**

To measure the respondents perceived trustworthiness of the person in the dating profile, one question was asked, using a five-item, 7-points semantic differential scales (1-7) where respondents indicated their answers to the following adjective pairs at the scale end-points: "Untrustworthy - Trustworthy", "Dangerous - Safe", "Inconsiderate - Considerate", "Dishonest - Honest", and "Unfaithful - Faithful". This scale was adopted from Wheeless and Grotz (1977) and modified for this study. An index for perceived trustworthiness was computed using the five items, Cronbach's Alpha = 0.90.

### Attitudes towards the person

To measure the respondent's attitude towards the person shown in the profile, the parameters were measured through three different questions. The first question regarded the attitude towards the person in the profile based on their perception of the person, measured by a 4-item, 7-points semantic differential scales (1-7). Respondents indicated their answers to the following adjective pairs at the scale end-points: "Negative impression - Positive impression", "Bad - Good", "Dislike - Like", and "Very unfavorable - Very favorable". The scale was adopted from Teng and Laroche's (2007) attitude towards the brand and modified for this study.

The second question regarded the respondent's beliefs about the person in the profile, and was measured with one item, "He's a catch". Answers were measured on a 7-point Likert scale where 1 = not at all and 7 = extremely. The question and scale was adopted from brand cognition and modified for this study (Teng & Laroche, 2007). An index was computed using the six parameters from these combined two questions, resulting in a composite variable for attitudes towards the person in the profile, Cronbach Alpha = 0.89.

The third question regarded the perceived age of the person in the profile where answers were collected through a drill down question with ages 18-100 as options.

### Perceived physical attractiveness

To measure the perceived physical attractiveness of the person in the dating profile, four questions were asked. The first three were measured on a 7-point Likert scale where 1 = not at all and 7 = extremely and consisted of the questions: "How attractive is his appearance?", "How likeable is he?", and "How much do you like him?". The fourth question was measured using a 7-point Likert scale where 1 = strongly disagree and 7 = strongly agree for four items: "I think he is handsome", "He is sexy looking", "I find him very attractive", and "I like his style". The scale was adopted from McCroskey and

McCain (1974)'s physical attraction scale and modified for this study. An index was computed using these seven parameters for perceived physical attractiveness, Cronbach's Alpha = 0.95.

#### Perceived similarity

To measure the perceived similarity of the respondent and the person in the profile, two questions were used. The first question used a 7-point Likert scale where 1 = not at all and 7 = extremely and measured three items: "He is like me", "He behaves like me", and "He has the same cultural background as me". The second question asked, "How connected do you feel to this individual?", was measured on a 7-point Likert scale where 1 = not at all and 7 = extremely. This scale was adopted from McCroskey, Richmond, and Daly (1975) and modified for this study. An index for perceived similarity was computed using these four parameters, Cronbach's Alpha = 0.80.

### Further dating interaction intentions

The dependent variables, FDI intentions, were measured separately. The measurements included Socialize, Match, Message, Chat, Date, Sex, and Relationship. These measurements are based on the Dating App Motivation scale presented by Sumter and Vandenbosch (2019). All measurements were measured on a 7-point Likert scale.

Socialize was measured using two questions regarding how much the respondent would like to get know the man in the profile and how much they would like to hang out with him, where 1 = not at all and 7 = extremely. Pearson correlation = 0.89 and significant at the 0.01 level.

Match was measured using two questions. The first asked the respondent if they would match with the person in the profile, where 1 = not at all and 7 = extremely. The second question asked to what degree the action "Swipe right/like/match with him" was true for them, where 1 = strongly disagree and 7 = strongly agree. It was measured using three items: "I would absolutely consider it", "I absolutely plan on doing it", and "I am going to". This question, along with the questions for all of the following dating interaction intentions using the same three items was adopted from Teng and Laroche's (2007) purchase intentions and modified for this study. Cronbach's Alpha = 0.93.

Message was measured using two questions. The first asked the respondent if they would send a message to the person in the profile, where 1 = not at all and 7 = extremely. The second question asked to what degree the action "Contact him" was true for them, where 1 = strongly disagree and 7 = strongly agree. It was measured using three items: "I would absolutely consider it", "I absolutely plan on doing it", and "I am going to". Cronbach's Alpha = 0.93.

Chat was measured using one question which asked to what degree the action "Chat with him" was true for them, where 1 = strongly disagree and 7 = strongly agree. It was

measured using three items: "I would absolutely consider it", "I absolutely plan on doing it", and "I am going to". Cronbach's Alpha = 0.91.

Date was measured using three questions. The first asked the respondent if they would be interested in going on a date with the person in the profile, and the second asked how interested they were in dating him, where 1 = not at all and 7 = extremely for both. The third question asked to what degree the action "Date/meet him" was true for them, where 1 = strongly disagree and 7 = strongly agree. It was measured using three items: "I would absolutely consider it", "I absolutely plan on doing it", and "I am going to". Cronbach's Alpha = 0.94.

Sex was measured using one question which asked to what degree the action "Have sex with him" was true for them, where 1 = strongly disagree and 7 = strongly agree. It was measured using three items: "I would absolutely consider it", "I absolutely plan on doing it", and "I am going to". Cronbach's Alpha = 0.81.

Relationship was measured using one question which asked to what degree the action "Be in a romantic relationship with him" was true for them, where 1 = strongly disagree and 7 = strongly agree. It was measured using three items: "I would absolutely consider it", "I absolutely plan on doing it", and "I am going to". Cronbach's Alpha = 0.87.

An overview of all the questions and the prior research they are based on can be found in 7.1 in the appendix and the full questionnaire can be found in 7.2 in the appendix.

### **Manipulations**

In order to ensure the success of the manipulation, three questions were asked in the survey. The first served as the main control question and asked the respondent what the survey was about. All of the respondents answered a dating profile. The second question asked if the person in the profile looked into the camera. If the person answered this question wrong in regard to the profile they had seen, they were eliminated from the study. In total, 19 respondents were disqualified from the analysis on these grounds. The third question asked if the person in the profile smiled. However, after the responses were gathered, we realized that this manipulation check was formulated unclearly and was ambiguous, thus, this question was discarded (Perdue & Summers, 1986). Therefore, apart from knowing which profile the respondent was shown, this was checked using the question regarding gaze.

### 3.4.2. Experiment launch

The survey was created and distributed using the survey software program Qualtrics. The survey was distributed in Sweden in April 2019 and was active for eleven days. The respondents in the study were anonymous<sup>1</sup> (Perdue & Summers, 1986).

#### 3.4.3. Respondents

### Sampling

Participants for the study were gathered online and in-person. The choice of distribution method was based on our target segment, women between the ages of 18 and 30. Online participants were targeted via Facebook groups for women in Sweden. Participants gathered in-person were approached at different universities in Stockholm (University of Stockholm, Royal Institute of Technology, Karolinska Institutet, and Stockholm School of Economics). The online participants read a short information post about the study with a link to the survey. The in-person participants received a short, verbal brief about the study and were then taken to the survey on their own devices using a QR-code or link, the researchers then left to not interfere with the participants' responses. The short brief explained that the study was for those that identify as women, that the study was about dating apps, and that they would see a picture of a dating profile and thereafter answer questions about it.

#### Overview

As none of the respondents were 18, the data set consists of participants ranging between the ages of 19-30, with a mean age of 24 (SD = 2.48). All of the participants were women interested in dating men as the study was limited to these factors. Only respondents that answered that they identified as women and as either heterosexual, bisexual, or pansexual on the respective questions were included in the study. The majority identified themselves as heterosexual. 45% of respondents were in a relationship and 47% were not. 76% of respondents have previous experience with dating apps and the apps were mostly used to contact a potential romantic partner, find a relationship, or because it was exciting. All respondents are currently living in Sweden; 94% live in a big city and 82% live in Stockholm. 89% of respondents are currently pursuing, or have, a university education; whereof 34% are studying/have studied at Stockholm School of Economics, 22% are studying/have studied at Stockholm University, and the remaining are studying/have studied at other Swedish universities.

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<sup>&</sup>lt;sup>1</sup> Regarding the ethical considerations in the study, respondents were anonymous to secure their privacy and thus, the answers to sensitive questions should not be interfered with according to Bryman and Bell (2015). Further, participants were informed about the field of the research before starting the questionnaire in order to decrease deception (Bryman & Bell, 2015). Involvement of research participants was entirely voluntary and they could exit the questionnaire at any time and only the full responses were used in the study (Bryman & Bell, 2015).

The respondents were asked one question about their self-perception<sup>2</sup> (M = 5.37 and SD = 0.93) consisting of 4 items: "I have high self-esteem", "I am physically attractive", "I am warm and kind", and "I am trustworthy". Answers were measured on a 7-point Likert scale where 1 = not at all and 7 = extremely, Cronbach's Alpha = 0.72. Further, the respondents were asked about the span of their dating age preference. When comparing age preference with a question regarding the perceived age of the person in the profile, two respondents were seen as significant outliers and removed from the analysis. The sample of our study consists of N = 234 participants after removing incomplete responses and outliers.

#### 3.5. Data analysis tools and tests

Data was collected through questionnaires for the pre- and main study, made in Qualtrics. The data was then exported and analyzed in the statistical program IBM SPSS, version 25. As there was a total of 234 respondents, and each group had over 50 respondents, parametrics testing was possible. A two-way ANOVA test was used to compare means between the different treatment groups and if they had a significant effect on FDI intentions in order to test one of our hypotheses. To test the remaining hypotheses, regression analyses were done using the Hayes Process Macro (2019) in order to calculate significant mediation effects. The significance level was set at 1% (Söderlund, 2018).

#### 3.6. Reliability and validity

#### 3.6.1. Reliability

Reliability in a study refers to whether the results are repeatable and that the study is possible to replicate (Bryman & Bell, 2015). In order to conduct a reliable study reliability methods have been used. Internal consistency has been measured using Cronbach's Alpha, where values over 0.7 are considered as having high reliability (Söderlund, 2018). The number of respondents in each of the four treatment groups is over 50, a standard respondent amount in social research experiments. The treatments were randomly allocated to the respondents. The questions in the experiment were collected from previous research, where the questions have had high reliability.

<sup>&</sup>lt;sup>2</sup> The researchers took into consideration the questions regarding self-perception possibly encroaching on the respondents' right to privacy as well as possibly causing emotional harm to the respondents (Bryman & Bell, 2015), as the respondents can potentially be made to feel bad by being asked questions regarding the level of personal self-reflection. The questions were thus asked in a positive way in order to decrease the chances of this. Further, the questions were deemed necessary by the researchers in order for the contribution to research in the aforementioned fields be accurate and valuable.

### 3.6.2. Validity

Validity analysis, in our case, is used to measure if the experiment on a dating profile measures that of real dating app behavior. The treatment was made to resemble a real dating app profile, and questions were related to dating behaviors regarding dating apps in order for the measurements to have high validity. Internal validity is based on the study's causality. In order to have causality, the independent variable, gaze direction combined with facial expression, needs to have an effect on the dependent variable, FDI (Bryman & Bell, 2015). Moreover, by measuring the consistency of multi-item questions, internal validity was ensured. External validity refers to how the result of the study corresponds with reality (Bryman & Bell, 2015). External validity was secured by having a large sample size (N = 234). However, there would have been increased external validity if respondents were collected from all over Sweden and if non-students were approached. However, the limited time frame of this study restricted our collection approach.

The study may have a problem with ecological validity (Bryman & Bell, 2015), since the study does not align with the natural social setting of using dating apps. The respondents were asked to judge a dating profile in a survey that takes approximately 8 minutes, whereas the decision making in natural dating app behavior only takes a few seconds. However, the treatment was conducted to look as similar to a real dating app profile as possible. This was also measured with the question "Is this dating profile perceived as believable?", which scored high (yes = 69%, no = 8%, don't know = 23%).

### 4. Results

The following section presents the results of the main study. These results include an analysis based on the separate FDI intentions. First, the effect of gaze direction and facial expression on the FDI intentions were tested. Next, the relationship between the treatment, underlying qualities, and the FDI intentions were tested. Parametric tests were utilized throughout the analysis as n > 30 in each of the groups and we can assume normal distribution.

### 4.1. No significant connection between treatment and FDI

When testing the effect of the independent variables, the treatment, on the dependent variables, FDI intentions, a two-way ANOVA test was used. A correlation matrix for the independent and dependent variables can be found in 7.3 in the appendix. The results of the two-way ANOVA were as follows:

Table 1. ANOVA test results of the treatments effect on FDI intentions

Treatment	A*N		A*S		D*N		D*S	
	n=61		n=59		n=58		n=56	
FDI	M	SD	M	SD	M	SD	M	SD
Socialize	3.07	1.45	2.95	1.49	2.72	1.35	2.86	1.39
Match	2.98	1.64	2.76	1.44	2.56	1.46	2.69	1.61
Message	2.43	1.44	1.96	1.14	1.95	1.14	2.03	1.41
Chat	2.49	1.56	2.18	1.29	2.13	1.27	2.29	1.53
Date	2.51	1.50	2.12	1.27	2.12	1.12	2.04	1.33
Sex	1.89	1.03	1.66	0.94	1.50	0.66	1.70	1.11
Relationship	1.86	1.15	1.72	1.00	1.71	1.09	1.64	1.00

*Note:* Non-significant results where all means differ at p > .01.

Since F(1, 230) = 0.48 p > 0.01 for Socialize, F(1, 230) = 0.75 p > 0.01 for Match, F(1, 230) = 2.71 p > 0.01 for Message, F(1, 230) = 1.57 p > 0.01 for Chat, F(1, 230) = 0.84 p > 0.01 for Date, F(1, 230) = 2.93 p > 0.01 for Sex, F(1, 230) = 0.06 p > 0.01 for Relationship, the profile shown does not have a significant effect on any of the FDI intentions. Thus, H1 did not have empirical support.<sup>3</sup>

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<sup>&</sup>lt;sup>3</sup> While the respondents were asked to imagine that they were using a dating app, thus putting themselves in the mindset of being single, in order to minimize the effect of the respondent's current relationship status on the study, it could potentially still have an impact. The respondents were given the following options for their relationship status: Single, In a relationship, In an open relationship, It's complicated, or Prefer not to answer. As previously mentioned, the majority of respondents were either single or in a relationship, and the responses were similar despite relationship status. The descriptive statistics for these options across the different treatments for the dependent and mediating variables in the study can be found in 7.4 in the appendix.

### 4.2. Underlying quality analysis

Using the Hayes Process Macro (2019), the underlying qualities necessary for success were tested as mediators through a regression analysis.<sup>4</sup>

#### 4.2.1. Perceived trustworthiness affects FDIs

The underlying quality perceived trustworthiness of the person in the profile  $(M_1)$  (M = 4.96, SD = 1.32) was tested as a mediator for the relationship between the independent variable and the dependent variables. The results are presented in Table 2 below:

Table 2. Mediation analysis test results showing the effect of perceived trustworthiness

	β	df	t	p
For all	·			•
$X$ on $M_1$	-0.09	232	-1.20	0.23
Y = Socialize				
X on Y	-0.06	231	-0.74	0.46
$M_1$ on $Y$	0.31	231	4.47	<0.0001**
Y = Match				
X on Y	-0.09	231	-0.99	0.33
$M_1$ on $Y$	0.24	231	3.21	0.002*
Y = Message				
X on Y	-0.11	231	-1.44	0.15
M <sub>1</sub> on Y	0.18	231	2.80	0.006*
Y = Chat				
X on Y	-0.05	231	-0.61	0.55
M <sub>1</sub> on Y	0.20	231	2.91	0.004*
Y = Date				
X on Y	-0.12	231	-1.64	0.10
M <sub>1</sub> on Y	0.20	231	3.05	0.003*
Y = Sex				
X on Y	-0.07	231	-1.21	0.23
$M_1$ on $Y$	0.06	231	1.31	0.19
Y = Relationship				
X on Y	-0.05	231	-0.85	0.39
M <sub>1</sub> on Y	0.15	231	2.86	0.005*

*Note*: \*Significant at the level of p < .01. \*\*Significant at the level of p < .001.

There is not a statistically significant connection between the treatment and any of the FDIs, however, the direct effect between trustworthiness and FDIs are significant,

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<sup>&</sup>lt;sup>4</sup> Additionally, a two-way ANOVA test was used to see the effect of the independent variables, the treatment, on the underlying qualities, the mediators. The results of the two-way ANOVA test can be found in 7.5 in the appendix. Further, F(1,233) = 1.34 p > 0.01 for Perceived trustworthiness, F(1,233) = 0.39 p > 0.01 for Attitude towards the person, F(1,233) = 0.01 p > 0.01 for Perceived physical attractiveness and F(1,233) = 0.79 p > 0.01 for Perceived similarity, thus the profile shown does not have a significant effect on any of the underlying qualities.

except in regard to sex. The indirect effect in the different variations of the model is not significant (see 7.6 in the appendix). In sum, H2a did not have empirical support, while H2b was empirically supported.

# 4.2.2. The relationship between attitudes towards the person, perceived physical attractiveness, and FDIs

The underlying qualities of attitude towards the person in the profile (M2) (M = 4.22, SD = 1.21) and the perceived physical attractiveness of the person in the profile (M3) (M = 3.27, SD = 1.31) were tested as mediators for the relationship between the independent variable and dependent variables. The results are presented in Table 3 below:

**Table 3.** Mediation analysis test results showing the effect of attitude towards the person and perceived physical attractiveness

	β	df	t	p
For all				
X on M <sub>2</sub>	-0.08	232	-1.08	0.28
X on M <sub>3</sub>	-0.07	231	-1.16	0.25
M <sub>2</sub> on M <sub>3</sub>	0.68	231	12.22	<0.0001*
Y = Socialize				
X on Y	0.01	230	-0.24	0.81
M <sub>2</sub> on Y	0.09	230	1.40	0.16
M <sub>3</sub> on Y	0.78	230	13.06	<0.0001*
Y = Match				
X on Y	-0.00	230	-0.01	0.99
M <sub>2</sub> on Y	-0.02	230	-0.23	0.82
M <sub>3</sub> on Y	0.91	230	14.26	<0.0001*
Y = Message				
X on Y	-0.04	230	-0.73	0.46
M <sub>2</sub> on Y	-0.08	230	-1.24	0.22
M <sub>3</sub> on Y	0.75	230	12.84	<0.0001*
Y = Chat				
X on Y	0.02	230	0.31	0.76
M <sub>2</sub> on Y	-0.03	230	-0.36	0.72
M <sub>3</sub> on Y	0.74	230	10.91	<0.0001*
Y = Date				
X on Y	-0.05	230	-1.00	0.32
M <sub>2</sub> on Y	-0.06	230	-0.94	0.35
M <sub>3</sub> on Y	0.80	230	14.66	<0.0001*
Y = Sex				
X on Y	-0.02	230	-0.48	0.64
M <sub>2</sub> on Y	-0.08	230	-1.58	0.12
M <sub>3</sub> on Y	0.49	230	9.84	<0.0001*
Y = Relationship				
X on Y	-0.01	230	-0.13	0.90
$M_2$ on $Y$	-0.04	230	-0.59	0.55

M<sub>3</sub> on Y 0.52 230 9.57 <0.0001\*

*Note:* \*Significant at the level of p < .001.

There is not a statistically significant connection between the treatment and any of the FDIs, however there is a significant direct effect between attitude and physical attractiveness as well as between physical attractiveness and FDI. Thus, the attitude towards the person in the profile affects the underlying quality of perceived physical attractiveness, which in turn has a significant connection to FDI intentions. The indirect effect in the different variations of the model is not significant (see 7.7 in the appendix). Thus, H3a lacked empirical support, while H3b and H3c were empirically supported.

### 4.2.3. Perceived similarity affects FDIs

The underlying quality perceived similarity with the person in the profile (M4) (M = 3.32, SD = 1.22) was tested as a mediator for the relationship between the independent variable and dependent variables. The results are presented in Table 4 below:

**Table 4.** Mediation analysis test results showing the effect of perceived similarity

	β	df	t	p
For all				
X on M <sub>4</sub>	-0.03	232	-0.37	0.72
Y = Socialize				
X on Y	-0.07	231	-1.00	0.32
M <sub>4</sub> on Y	0.59	231	8.86	<0.0001*
Y = Match				
X on Y	-0.10	231	-1.17	0.24
M <sub>4</sub> on Y	0.51	231	6.73	<0.0001*
Y = Message				
X on Y	-0.12	231	-1.61	0.11
M <sub>4</sub> on Y	0.37	231	5.58	<0.0001*
Y = Chat				
X on Y	-0.06	231	-0.74	0.46
M <sub>4</sub> on Y	0.43	231	6.02	<0.0001*
Y = Date				
X on Y	-0.13	231	-1.87	0.06
M <sub>4</sub> on Y	0.45	231	6.96	<0.0001*
Y = Sex				
X on Y	-0.07	231	-1.26	0.21
M <sub>4</sub> on Y	0.25	231	5.10	<0.0001*
Y = Relationship				
X on Y	-0.06	231	-1.00	0.32
M <sub>4</sub> on Y	0.35	231	6.81	<0.0001*

*Note:* \*Significant at the level of p < .001.

There is not a statistically significant connection between the treatment and FDI, however, the direct effect between perceived similarity and FDIs are significant. The indirect effect in the different variations of the model is not significant (see 7.8 in the appendix). Thus, H4 lacked empirical support.

## 4.3. Summary of results

Table 5. Summary of hypotheses and results

H1	A dating profile photo featuring a smiling male individual with direct gaze will result in more favorable FDI intentions.	Rejected
H2a	The combination of direct gaze and smiling facial expression in a dating profile photo will lead to higher perceived trustworthiness.	Rejected
H2b	Perceived trustworthiness is positively correlated with variables reflecting FDI intentions.	Supported
Н3а	The combination of direct gaze and smiling facial expression in a dating profile photo will positively affect the attitude towards the male individual.	Rejected
НЗЬ	A positive attitude towards the male individual featured visually in the dating profile is positively correlated with perceived physical attractiveness of the profile holder.	Supported
НЗс	Perceived physical attractiveness is positively correlated with variables reflecting FDI intentions.	Supported
H4	The dating profile photo will affect perceived similarity which in turn will be positively associated with the user's FDI intentions.	Rejected

### 5. Discussion and implications

### 5.1. Discussion

The purpose of the study was to investigate how men who are interested in dating women should present themselves in pictures on dating apps to increase their success on the platform. This was limited to the combination of gaze direction and facial expression used in the first picture of a dating app profile. Success was defined as FDIs and specified as wanting to socialize with the person, matching with the person, sending a message to the person, chatting, going on a date, having sex, and being in a relationship. The underlying qualities included perceived trustworthiness, attitudes towards the person, perceived physical attractiveness, and perceived similarity.

#### 5.1.1. The effects of gaze direction and facial expression

The results of the study suggest that the photo composition does not have a significant effect on FDI intention. Thus, none of the proposed models regarding the treatment hold. While the effect is not significant, the A\*N profile had the highest mean for all of the FDIs. The D\*N profile had the lowest mean except for date and relationship FDIs, where the D\*S profile scored the lowest. The profile we hypothesized as most successful, D\*S, scored second to last, in all but the two previously mentioned FDIs. All the means were in the lower half of FDI intention scale.

Albeit it was not a significant difference, a potential reason for these results are gender norms. Tracy and Beall (2011) found that pride was the most attractive in male faces in a study comparing happy, proud, and shameful emotional expressions effect on the attractiveness levels of men and women. As the "neutral" emotional facial expressions in our study can be perceived as prideful this can explain the results.

Further, the treatments did not have a significant effect on any of the underlying qualities, suggesting that there was potentially not enough in the treatment to signal these qualities or impact person perception. According to Mason, Tatkow, and Macrae (2005), gaze-related effects on evaluation of physical attractiveness was only significant when men were evaluating. This can explain why the direction of gaze did not have a significant effect on perceived physical attractiveness in our study.

Todorov and Porter (2014) found that the direction of gaze and the emotion of an individual's facial expression work together to impact the perception of the individual. These studies have often shown multiple faces or facial expressions to their respondents, while the respondents in our study were only shown one picture. Further, these studies did not focus exclusively on dating behavior, as ours does. However, our study shows that the effect of the combination of gaze direction and emotional facial

expression in a picture does not have a significant effect in terms of FDI intentions on dating apps.

#### 5.1.2. The effects of underlying qualities

The study showed that attitudes towards the person had a significant effect on the perceived physical attractiveness. Further, perceived trustworthiness, perceived physical attractiveness, and perceived similarity all have a significant relationship with, and thus impact on, the FDI intentions, with the exception of perceived trustworthiness not having a significant relationship with sex. Thus, an individual's desire for FDI increases when each of the mentioned perceptions of the dating profile increases.

Perceived physical attractiveness had the lowest mean, but the largest effect on FDI intentions, complementing Walster, Aronson, Abrahams & Rottmann's (1966) previous findings that physical attraction is the largest determining factor for FDIs. This can be seen as an explanation to why the FDI scores were so low; perceived physical attraction was seen as the most important factor, but he was not viewed as physically attractive by the respondents.

The results coincide with Ismagilova et al.'s (2019) findings that trustworthiness and similarity had a significant relationship with purchase intention. McGloin and Denes's (2018) found that perceived trustworthiness of a person in a dating profile positively influences an individual's desire to date them. Our findings are consistent with this as perceived trustworthiness had the highest mean but lowest impact on FDI intentions, although, the relationship was not strong. Hence, trustworthiness can be interpreted to have a basic underlying impact on an individual's desire for FDIs. Our findings suggest that individuals' perceived trustworthiness online is important, but once it is fulfilled, an increase may not have a large impact on FDI intentions. Perceived similarity had the second largest effect on FDI, which is consistent with previous research showing that perceived similarity of others increases the willingness to date (Fiore & Donath, 2005; Vangelisti, 2012) and people's tendency to have homogenous relationships (McPherson et al, 2001).

There are several possible reasons for the disparity between the studies presented previously in the theoretical framework and our own, in regard to the impact on perceived physical attractiveness. Previous research has found that while physical attractiveness is the best overall predictor of attraction, it is valued much more by men than women. In online dating contexts, men place more value on the photos than the text while women value these two equally (Hitsch et al., 2010; de Vries, 2010). The studies conducted by Hitsch et al. (2010) and de Vries (2010) focus on browser-based online dating, where photos and text have a more equal presence on a dating profile than on a dating app, however, their findings may be applicable in the case of dating apps as well. Further, attractiveness in dating situations is dynamic. Even though facial

attractiveness contributes to the overall judgement of attractiveness of a potential dating partner, so does their dynamic expressiveness, e.g. their non-verbal expressive behavior, conversational skills, and sense of humor (Miller, Berg & Archer, 1983, as cited in Riggio et al., 1991). Further, single images do not accurately capture personalities (Todorov & Porter, 2014), which could lead to uncertainty towards the person and can have contributed to the low FDI scores.

A possible explanation to why the FDI intention means were so low is that women contact and reply to potential romantic partners more selectively than men (Fiore et al., 2010; Hickey, 2013). Furthermore, men are more risk-taking in regard to online dating (McGloin & Denes, 2018). Due to aforementioned reasons, we believe that our results would differ if we redid our study and asked men about women.

### 5.2. Conclusion

The main research question that this thesis aimed to answer was which combination of gaze direction and emotional facial expression would have the largest impact on the success of men's dating app profiles and what underlying qualities were necessary for this success, in terms of FDIs. The experimental study conducted in this thesis indicated that the photo composition used in marketing oneself on a dating app does not have an effect on the success of a profile belonging to a man interested in dating women. However, the underlying qualities of perceived trustworthiness, attitude towards the person, perceived physical attractiveness, and perceived similarity have a significant effect on the FDI intentions of women viewing the profile, and thus the profile's success.

### 5.3. Implications

#### 5.3.1. Practical

While the combination of gaze direction and emotional facial expression in the first photo of a dating app profile did not have an impact on its success, the underlying qualities found in the profile did. Thus, for men interested in dating women it may not be necessary to focus on gaze direction and facial expression in dating app profile pictures, but instead to focus on their self-presentation by building perceived trust, physical attractiveness, and similarity, as well as create a positive attitude towards oneself, in the eyes of the women viewing their profile. While we do not have the empirical evidence for what increases these qualities, previous research points to the importance of them, and our study has found that an increase in the perception of these characteristics will increase the likelihood of FDIs.

#### 5.3.2. Theoretical

While previous research on person perception has pointed towards the combination of gaze and facial expression having an impact on the viewer, our study shows that it is not enough in order to be successful on dating apps. Thus, while the use of smiling facial expression in pictures and in advertisements is considered the norm (Kotchemidova, 2005a; 2005b), the effort may be unnecessary as it does not have a significant effect on FDI intentions of women interested in dating men. Further, this could point to the fact that smiling in advertisements may not have a significant effect on all consumer behavior when not focusing solely on purchasing, as the majority of Kotchemidova's (2005a, 2005b) analysis does.

As the underlying qualities found in a dating app profile had a significant impact on the different FDIs, and previous research in consumer purchasing behavior has found that these same characteristics increase the likelihood of a purchase, the authors therefore propose that consumer purchasing behavior studies should be extended to include multiple different consumer paths that do not all end with a purchase.

### 5.4. Critique and Limitations

A possible reasoning for the results in the study is that the effects of competition were not accounted for. As stated in section 2.1, the evaluation of the profile is affected by previous or simultaneous stimuli (Spielmann & MacDonald, 2016). By only including one profile in the study, we cannot measure personal preference or the competition (Teng & Laroche, 2007) effects that multiple profiles would have. By including more profiles, the credibility would have increased as it would bear more resemblance to actual dating apps. It would also have potentially increased the FDI intention scores due to personal preference and the comparative nature of the survey design.

The low mean on perceived similarity points to a remarkable difference between the respondent and the subject, and as only one man was featured, the lack of perceived similarity is not accounted for and can have impacted the low FDI scores. Further, in order to account for the underlying quality of personal preference, a more explicit question should have been asked.

The majority of the previous research used as the basis of this study occurred outside of Sweden, and mostly in the USA. To account for this, we discussed dating and dating app usage with five Americans of different gender identities in Southern California in March 2019 and ten Swedes of different gender identities in Stockholm between January and April 2019, where all individuals were between 18-30. During these individual discussions we found that the views on dating, dating apps, and gender norms are viewed differently between these two countries, which has implications on our

study. It can be argued that our results show such large discrepancies to the theories and hypotheses because of this culture gap.

Ecological validity may be a problem in our study since the treatment did not align with the natural social setting of using a dating app. The extensive amount of time respondents were asked to evaluate the dating profile through the questionnaire did not coincide with the 100 milliseconds it takes to get a perception of a person in a picture (South Palomares & Young, 2018). By having the respondent answer multiple questions, there is a chance that they overthought their decision, compared to the more spontaneous act of swiping. Moreover, dating might be an intimate and sensitive topic, where respondent may not be completely honest in their answers, even though anonymity was ensured. The respondents that were approached in person may have felt uncomfortable with answering in public and we could not control how the the online respondents took the questionnaire.

#### 5.5. Future research

Future research within this field should study the effect on FDI intentions of dating profile description text. Previous research has found that text was as important as pictures for women in online dating, thus, this could have a large impact on FDI intentions (de Vries, 2010). Further research should also include replicating the study using the profiles of women interested in dating men and having men who are interested in dating women evaluate the profiles in order to see if there is a significant effect there, and to see if this evaluation greatly differs between gender identities. The study should also be replicated on the basis of including other sexual orientations, such as homosexuality. Further, to account for the fact that only one man's profile was shown and the implications this has for perceived similarity, future research should either include multiple, diverse profiles or have more specific respondent targeting. Further, while the study coincides with previous findings that trustworthiness impacts purchase intentions, the findings show that it has an underlying impact for the FDIs. Thus, we suggest that further research should be done on the extent to which trustworthiness impacts consumer behavior, or if, once it reaches a certain point, it no longer has an effect on purchase intention. Also, as the underlying qualities had a significant effect of FDI intentions, further research should be done to see what impacts the perception of these qualities in dating app profiles.

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## 7. Appendix

## 7.1. Survey questions based on prior research

Parameters	Question	Literature base
Perceived	$\hbox{``Untrustworthy}-Trustworthy\hbox{''}$	McGloin & Denes, 2018; Wheeless &
Trustworthiness		Grotz, 1977; Wotipka & High, 2016
	"Dangerous – Safe"	
	"Inconsiderate – Considerate"	Wheeless & Grotz, 1977;
	"Dishonest – Honest"	Wotipka & High, 2016
	"Unfaithful – Faithful"	
Attitude	"Negative impression – Positive impression"	
Towards	"Bad – Good"	
the Person	"Dislike – Like"	Teng & Laroche, 2007
	"Very unfavorable –Very favorable"	
	"He's a catch"	
	"How old do you think the person in the profile is?	Toma & Hancock, 2010
Perceived	"How attractive is his appearance?"	Riggio et al., 1991;
Physical		Morrison, Morris & Bard, 2013
Attractiveness		
	"How likeable is he?"	Riggio et al., 1991
	"How much do you like him?"	Berger & Barasch, 2018
	"I think he is handsome"	
	"He is sexy looking"	McCroskey & McCain, 1974
	"I find him very attractive"	
	"I like his style"	Riggio et al., 1991
Perceived	"He is like me"	
Similarity	"He behaves like me"	McGloin & Denes,2018
	"He has the same cultural background as me"	
	"How connected do you feel to this individual?"	Berger & Barasch, 2018
FDI Intentions:		
Socialize	"Would you like to get to know him?"	Berger & Barasch, 2018 Srithran et al., 2010
	"How much would you like to hang out with him"	" Berger & Barasch, 2018
Match	"Would you like to match with him?"	Wotipka & High, 2016
	Swipe right/like/match with him:	
	"I would absolutely consider it"	
	"I absolutely plan on doing it"	Teng & Laroche, 2007
	"1 am going to"	-
Message	"Would you send a message to him?"	Wotipka & High, 2016; Shaw Taylor,

	Contact him:	
	"I would absolutely consider it"	
	"I absolutely plan on doing it"	Teng & Laroche, 2007
	"1 am going to"	
Chat	Chat with him:	
	"I would absolutely consider it"	
	"I absolutely plan on doing it"	Teng & Laroche, 2007
	"1 am going to"	
Date	"Would you be interested in going on a date with him?"	Srithran et al., 2010; Wotipka & High, 2016; de Vires, 2010
	"How interested are you in dating him?"	Riggio et al., 1991; Berger & Barasch, 2018
	Date/meet him:	
	"I would absolutely consider it"	
	"I absolutely plan on doing it"	Teng & Laroche, 2007
	"1 am going to"	
Sex	Have sex with him:	
	"I would absolutely consider it"	
	"I absolutely plan on doing it"	Teng & Laroche, 2007
	"1 am going to"	
Relationship	Be in a romantic relationship with him:	
	"I would absolutely consider it"	
	"I absolutely plan on doing it"	Teng & Laroche, 2007
	"1 am going to"	

### 7.2. The main study questionnaire

Hej!

Stort tack för att du tar dig tiden för att medverka i vår studie. Föreställ dig att du använder en dejtingapp. **Du kommer nu få se första bilden av en profil från en dejtingapp som vi ber dig kolla noggrant på**. Denna dejtingprofil har flera bilder och en text, men du kommer bara se första bilden. Därefter ställs frågor om denna profil. Alla svar är anonyma och enkäten bedöms ta cirka 10 minuter att besvara. Vissa frågor kan kännas svåra att besvara, men det viktiga är att du svarar utifrån din magkänsla.

Stort tack! Alisa Bandell och Olivia Krall

#### (Treatment images displayed)

Hur upplever du personen i profilen?

	1	2	3	4	5	6	7	
Opålitlig	0	0	0	0	0	0	0	Pålitlig
Farlig	0	0	0	0	0	0	0	Ofarlig
Hänsynlös	0	0	0	0	0	0	0	Omtänksam
Oärlig	0	0	0	0	0	0	0	Ärlig
Otrogen	0	0	0	0	0	0	0	Trogen
Negativ intryck	0	0	0	0	0	0	0	Positiv intryck
Väldigt motbjudande	0	0	0	0	0	0	0	Väldigt tilltalande
Väldigt vanlig	0	0	0	0	0	0	0	Väldigt unik
Dålig	0	0	0	0	0	0	0	Bra
Gillar inte	0	0	0	0	0	0	0	Gillar

Till vilken grad passar följande påståenden in på personen i profilen:

	1 Inte	2	3	4	5	6	7 Väldigt mycket
Han har en framträdande personlighet.	0	0	0	0	0	0	0
Han är ett kap.	0	0	0	0	0	0	0

Hur gammal upplever du personen i profilen?

Ålder:

▼ 18 100			

Till vilken grad passar följande påståenden om personen i bilden:

	1 Inte alls	2	3	4	5	6	7 Väldigt mycket
Han är lik mig själv.	0	0	0	0	0	0	0
Han beter sig som jag.	0	0	0	0	0	0	0
Han har samma kulturella bakgrund som jag.	0	0	0	0	0	0	0

Vänligen besvara följande frågor om personen i profilen.

	1 Inte alls	2	3	4	5	6	7 Väldigt mycket
Hur mycket relaterar du till honom?	0	0	0	0	0	0	0
Hur genuin tycker du han är?	0	0	0	0	0	0	0

Hur upplever du denna dejtingprofil?

	1	2	3	4	5	6	7	
Väldigt tvivelaktig	0	0	0	0	0	0	0	Väldigt övertygande
Innehållslös	0	0	0	0	0	0	0	Väldigt informativ
Icke trovärdig	0	0	0	0	0	0	0	Väldigt trovärdig
Ointressant	0	0	0	0	0	0	0	Intressant

Vänligen besvara följande frågor om personen i profilen.

	1 Inte alls	2	3	4	5	6	7 Väldigt mycket
Hur attraktivt utseende tycker du han har?	0	0	0	0	0	0	0
Hur tilltalande är han?	0	0	0	0	0	0	0
Hur mycket gillar du honom?	0	0	0	0	0	0	0

## Till vilken grad passar de följande påståenden:

	l Instämmer inte alls	2	3	4	5	6	7 Instämmer helt
Jag tycker han är snygg.	0	0	0	0	0	0	0
Han är sexig.	0	0	0	0	0	0	0
Jag tycker han är väldigt attraktiv.	0	0	0	0	0	0	0
Jag tycker inte om hans utseende.	0	0	0	0	0	0	0
Denna person har inte ett attraktivt utseende.	0	0	0	0	0	0	0
Jag tycker om hans stil.	0	0	0	0	0	0	0

Till vilken grad passar de följande påståenden om personen i profilen:

	l Instämmer inte alls	2	3	4	5	6	7 Instämmer helt
Jag är intresserad av att prata med honom.	0	0	0	0	0	0	0
Det skulle vara svårt att prata med honom.	0	0	0	0	0	0	0
Han skulle kunna vara min vän.	0	0	0	0	0	0	0
Han skulle inte passa in i min vänskapskrets.	0	0	0	0	0	0	0
Vi skulle aldrig kunna utveckla en vänskap.	0	0	0	0	0	0	0

Vänligen besvara följande frågor om personen i profilen.

	1 Inte alls	2	3	4	5	6	7 Väldigt mycket
Hur intresserad är du av att lära känna honom?	0	0	0	0	0	0	0
Hur mycket skulle du vilja träffa honom?	0	0	0	0	0	0	0
Skulle du vilja vara vän med honom?	0	0	0	0	0	0	0
Skulle du vilja gå på dejt med honom?	0	0	0	0	0	0	0
Hur intresserad är du av att dejta honom?	0	0	0	0	0	0	0

Vänligen besvara följande frågor om personen i profilen.

	1 Inte	2	3	4	5	6	7 Väldigt mycket
Skulle du vilja matcha med honom?	0	0	0	0	0	0	0
Skulle du skicka ett meddelande till honom?	0	0	0	0	0	0	0
Vad är sannolikheten att han skulle ha en positiv respons om du kontaktade honom?	0	0	0	0	0	0	0

Skulle du vilja interagera med personen i profilen?

1 Inte alls	2	3	4	5	6	7 Väldigt mycket
0	0	0	0	0	0	0

Hur säker är du i ditt svar på föregående fråga?

	1	2	3	4	5	6	7	
Väldigt osäker	0	0	0	0	0	0	0	Väldigt säker

Vänligen besvara till vilken grad följande ageranden passar in på dig:

## Swipea höger/ likea/ vilja matcha med personen i profilen

	l Instämmer inte alls	2	3	4	5	6	7 Instämmer helt
Jag skulle absolut kunna tänka mig det.	0	0	0	0	0	0	0
Jag planerar att göra det.	0	0	0	0	0	0	0
Jag kommer att göra det.	0	0	0	0	0	0	0

## Kontakta personen i profilen

	l Instämmer inte alls	2	3	4	5	6	7 Instämmer helt
Jag skulle absolut kunna tänka mig det.	0	0	0	0	0	0	0
Jag planerar att göra det.	0	0	0	0	0	0	0
Jag kommer att göra det.	0	0	0	0	0	0	0

## Chatta med personen i profilen

	l Instämmer inte alls	2	3	4	5	6	7 Instämmer helt
Jag skulle absolut kunna tänka mig det.	0	0	0	0	0	0	0
Jag planerar att göra det.	0	0	0	0	0	0	0
Jag kommer att göra det.	0	0	0	0	0	0	0

## Träffa/ dejta personen i profilen

	l Instämmer inte alls	2	3	4	5	6	7 Instämmer helt
Jag skulle absolut kunna tänka mig det.	0	0	0	0	0	0	0
Jag planerar att göra det.	0	0	0	0	0	0	0
Jag kommer att göra det.	0	0	0	0	0	0	0

Ligga med personen i profilen

	l Instämmer inte alls	2	3	4	5	6	7 Instämmer helt
Jag skulle absolut kunna tänka mig det.	0	0	0	0	0	0	0
Jag planerar att göra det.	0	0	0	0	0	0	0
Jag kommer att göra det.	0	0	0	0	0	0	0

Vara i ett förhållande med personen i profilen

	1 Instämmer inte alls	2	3	4	5	6	7 Instämmer helt
Jag skulle absolut kunna tänka mig det.	0	0	0	0	0	0	0
Jag planerar att göra det.	0	0	0	0	0	0	0
Jag kommer att göra det.	0	0	0	0	0	0	0

Tittade personen i profilen in i kameran?

- o Ja
- o Nej
- o Vet ej

Log personen i profilen?

o Ja

- o Nej
- o Vet ej

Upplevs denna dejtingprofil som trovärdig?

- o Ja
- o Nej
- o Vet ej

Jag har svarat på en enkät om

- o Grodor i regnskogen
- o En dejtingprofil
- o Glödlampors energiförbrukning

Du kommer nu ställas ett antal frågor om ditt egna dejtingbeteende. Vissa frågor kan upplevas som svåra, vänligen besvara dem enligt din magkänsla.

Jag har använt, eller använder, en dejtingapp för att:

	l Instämmer inte alls	2	3	4	5	6	7 Instämmer helt
Kontakta en potentiell partner för ett förhållande och/ eller hitta ett förhållande.	Ο	0	0	0	0	0	0
Hitta någon at ha sex med och/ eller ha engångsligg.	0	0	0	0	0	0	Ο
Jag är mindre blyg online och/ eller det är lättare att kommunicera online.	Ο	0	0	0	0	0	0
Förbättra min självkänsla och/ eller känna mig snygg.	0	0	0	0	0	0	0
Känna mig mindre ensam.	0	0	0	0	0	0	0
Det är spännande och/ eller för nöje.	0	0	0	0	0	0	0

Till vilken grad passar följande påståenden in på dig:

	1 Inte alls	2	3	4	5	6	7 Väldigt mycket
Jag har hög självkänsla.	0	0	0	0	0	0	0
Jag har ett attraktivt utseende.	0	0	0	0	0	0	0
Jag är snäll och välkomnande.	0	0	0	0	0	0	0
Jag är pålitlig.	0	0	0	0	0	0	0

#### Var bor du?

- o Stockholm
- o Göteborg
- o Malmö
- o Uppsala
- o Linköping
- Annan ort

Högsta påbörjade/slutförda utbildning?

- o Grundskola
- o Gymnasium
- o Folkhögskola
- o Universitet/Högskola
- o Vill ej uppge

Om du svarade Universitet/Högskola i föregående fråga, vilket studerar/studerade du på?

- o Stockholms Universitet
- o Kungliga Tekniska Högskolan
- o Handelshögskolan i Stockholm
- o Karolinska Institutet
- o Södertörns Högskola
- o Konstfack

<ul><li>Kungliga</li><li>Annat</li></ul>	a Musik Högskolan	
När är du född?		
Årtal:		
<b>▼</b> 2019 1930		

#### Könsidentitet

- o Kvinna
- o Man
- o Annat
- o Vill ej uppge

#### Sexuelläggning

- o Heterosexuell
- o Homosexuell
- o Bisexuell
- o Pansexuell
- o Annat
- o Vill ej uppge

#### Är du i ett förhållande?

- o Nej
- o Ja
- o Öppetförhållande
- o It's complicated
- o Vill ej uppge

Om du skulle dejta, vad har du för ålderspreferens på personen du dejtar?

Undre åldersgräns

**▼** 18 ... 100

Om du skulle dejta, vad har du för ålderspreferens på personen du dejtar?

## Övre åldersgräns

▼ 18 ... 100

Har du erfarenhet av dejtingappar?

- o Ja
- o Nej
- o Vill ej uppge

# 7.3. Correlation Matrix for the independent and dependent variables

Treatment	Socialize	Match	Message	Chat	Date	Sex	Relationship
A*N (n=61)	r	r	r	r	r	r	r
Socialize	-	0.85*	0.83*	0.79*	0.88*	0.67*	0.63*
Match	0.85*	_	0.93*	0.93*	0.90*	0.85*	0.73*
Message	0.83*	0.93*	-	0.95*	0.91*	0.79*	0.73*
Chat	0.79*	0.93*	0.95*	-	0.92*	0.84*	0.70*
Date	0.88*	0.90*	0.91*	0.92*	_	0.83*	0.77*
Sex	0.67*	0.85*	0.79*	0.84*	0.83*	-	0.80*
Relationship	0.63*	0.73*	0.73*	0.70*	0.77*	0.80*	-
Treatment 2	Socialize	Match	Message	Chat	Date	Sex	Relationship
A*S (n=59)	r	r	r	r	r	r	r
Socialize	-	0.79*	0.75*	0.75*	0.82*	0.48*	0.62*
Match	0.79*	-	0.76*	0.83*	0.86*	0.63*	0.69*
Message	0.75*	0.76*	-	0.90*	0.86*	0.62*	0.72*
Chat	0.75*	0.83*	0.90*	-	0.83*	0.61*	0.72*
Date	0.82*	0.86*	0.86*	0.83*	-	0.75*	0.84*
Sex	0.48*	0.63*	0.62*	0.61*	0.75*	-	0.82*
Relationship	0.62*	0.69*	0.72*	0.72*	0.84*	0.82*	-
Treatment 3	Socialize	Match	Message	Chat	Date	Sex	Relationship
D*N (n=58)	r	r	r	r	r	r	r
Socialize	-	0.74*	0.72*	0.74*	0.84*	0.59*	0.68*
Match	0.74*	-	0.83*	0.88*	0.84*	0.73*	0.75*
Message	0.72*	0.83*	-	0.93*	0.92*	0.76*	0.73*
Chat	0.74*	0.88*	0.93*	-	0.93*	0.72*	0.81*
Date	0.84*	0.84*	0.92*	0.93*	-	0.73*	0.77*
Sex	0.59*	0.73*	0.76*	0.72*	0.73*	-	0.71*
Relationship	0.68*	0.75*	0.73*	0.81*	0.77*	0.71*	-
Treatment 4	Socialize	Match	Message	Chat	Date	Sex	Relationship
D*S (n=56)	r	r	r	r	r	r	r
Socialize	-	0.74*	0.78*	0.75*	0.78*	0.55*	0.53*
Match	0.74*	_	0.87*	0.79*	0.87*	0.81*	0.76*
Message	0.78*	0.87*	-	0.89*	0.95*	0.79*	0.70*
Chat	0.75*	0.79*	0.89*	-	0.87*	0.79*	0.63*
Date	0.78*	0.87*	0.95*	0.87*	-	0.85*	0.75*
Sex	0.55*	0.81*	0.79*	0.72*	0.85*	-	0.88*
Relationship	0.53*	0.76*	0.70*	0.63*	0.75*	0.88*	

*Note:* \* Correlation is significant at the 0.01 level (2-tailed).

## 7.4. Descriptive statistics based on relationship status

Single

Treatment	A <sup>2</sup>	*N	A*	*S	D*	'N	D*	'S	
	n=	30	n=	n=29		n=28		n=23	
	M	SD	M	SD	M	SD	M	SD	
Socialize	3.35	1.44	3.05	1.51	2.83	1.48	3.00	1.52	
Match	3.29	1.73	3.28	1.65	2.84	1.78	3.11	1.78	
Message	2.68	1.51	2.26	1.37	2.05	1.47	2.20	1.43	
Chat	2.83	1.70	2.55	1.55	2.36	1.62	2.61	1.70	
Date	2.83	1.64	2.39	1.50	2.30	1.42	2.31	1.32	
Sex	2.06	1.19	1.86	1.21	1.63	0.79	2.01	1.16	
Relationship	2.10	1.35	1.92	1.23	1.90	1.31	2.00	1.15	
Perceived trustworthiness	5.13	1.34	5.17	1.27	4.60	1.28	4.97	1.16	
Attitude towards person	4.29	1.16	4.50	1.31	4.09	1.19	4.08	1.03	
Physical attractiveness	3.63	1.30	3.44	1.28	3.24	1.46	3.12	1.25	
Perceived similarity	3.48	1.19	3.18	1.36	3.34	1.37	3.13	1.18	

## In a relationship

Treatment	A <sup>2</sup>	*N	A:	*S	D,	*N	D;	*S
	n=	27	n=	28	n=24		n=27	
	M	SD	M	SD	M	SD	M	SD
Socialize	2.80	1.64	2.73	1.47	2.73	1.51	2.75	1.37
Match	2.55	1.64	2.19	0.99	2.32	1.32	2.30	1.42
Message	2.21	1.60	1.67	0.78	1.96	1.12	1.87	1.42
Chat	2.13	1.56	1.83	0.88	2.00	1.32	2.06	1.35
Date	2.22	2.51	1.78	0.93	2.09	1.19	1.81	1.42
Sex	1.68	0.89	1.40	0.51	1.53	0.78	1.38	0.88
Relationship	1.64	0.96	1.48	0.66	1.54	0.98	1.40	0.87
Perceived trustworthiness	5.19	1.01	4.81	1.52	4.96	1.32	4.89	1.70
Attitude towards person	4.47	1.15	4.03	1.40	4.18	1.29	4.20	1.36
Physical attractiveness	3.26	1.47	3.13	1.32	3.40	1.31	2.95	1.41
Perceived similarity	3.34	1.09	3.31	1.37	3.35	1.08	3.49	1.24

## Open relationship

Treatment	A*N		A	A*S		D*N		D*S	
	n-	=0	n=	=0	n=	n=2		n=0	
	M	SD	M	SD	M	SD	M	SD	
Socialize	-	-	-	-	1.50	0.71	-	-	
Match	-	-	-	-	2.50	1.77	-	-	
Message	-	-	-	-	2.75	2.47	-	-	
Chat	-	-	-	-	2.17	1.65	-	-	
Date	-	-	-	-	2.00	1.41	-	-	
Sex	-	-	-	-	1.33	0.47	-	-	

Relationship	-	-	-	-	1.33	0.47	-	-
Perceived trustworthiness	-	-	-	-	4.20	0.28	-	-
Attitude towards person	-	-	-	-	3.10	0.42	-	-
Physical attractiveness	-	-	-	-	1.86	0.61	-	-
Perceived similarity	-	-	-	-	1.38	0.18	-	-

## It's complicated

Treatment	A*N		A*	A*S		D*N		D*S	
	n=	=3	n=	=2	n=	4	n=	n=5	
	M	SD	M	SD	M	SD	M	SD	
Socialize	3.33	0.58	4.50	0.71	3.50	0.91	2.80	1.10	
Match	4.33	0.76	3.25	0.35	3.06	1.33	3.45	2.30	
Message	2.75	0.87	1.63	0.88	2.00	0.89	2.90	2.35	
Chat	2.77	0.69	1.67	0.47	2.42	1.03	3.07	2.77	
Date	2.47	0.76	2.90	0.14	2.25	1.06	2.88	2.42	
Sex	2.33	1.20	2.33	0.00	1.17	0.19	2.86	2.43	
Relationship	1.89	0.84	2.33	0.00	2.33	0.94	1.93	1.74	
Perceived trustworthiness	5.27	1.50	5.40	0.28	4.70	1.32	5.16	0.71	
Attitude towards person	4.60	0.20	4.50	0.14	4.25	1.08	4.44	1.27	
Physical attractiveness	3.67	0.73	4.14	0.00	3.61	0.96	3.57	1.48	
Perceived similarity	3.75	1.09	4.00	0.71	2.75	0.20	3.35	0.80	

#### Prefer not to answer

Treatment	A*	*N	A <sup>3</sup>	*S	D,	*N	D*	S
	n=	=1	n=	=0	n=	=0	n=	1
	M	SD	M	SD	M	SD	M	SD
Socialize	4.00	-	-	-	-	-	4.00	-
Match	5.00	-	-	-	-	-	4.00	-
Message	4.00	-	-	-	-	-	2.75	-
Chat	4.67	-	-	-	-	-	2.00	-
Date	4.00	-	-	-	-	-	2.00	-
Sex	3.00	-	-	-	-	-	2.00	-
Relationship	2.33	-	-	-	-	-	2.00	-
Perceived trustworthiness	5.60	-	-	-	-	-	6.40	-
Attitude towards person	4.80	-	-	-	-	-	5.00	-
Physical attractiveness	4.57	-	-	-	-	-	3.86	-
Perceived similarity	3.50	-	-	-	-	-	5.25	-

# 7.5. Two-way ANOVA test results of the treatments effect on the underlying qualities

Treatment	A*N		A*	A*S		D*N		D*S	
	n=	=61	n=	59	n=5	58	n=	56	
	M	SD	M	SD	M	SD	M	SD	
Perceived trustworthiness	5.17	1.18	5.00	1.37	4.74	1.27	4.97	1.41	
Attitude towards person	4.40	1.11	4.27	1.34	4.10	1.20	4.19	1.20	
Physical attractiveness	3.49	1.35	3.32	1.29	3.29	1.36	3.09	1.33	
Perceived similarity	3.43	1.12	3.27	1.34	3.24	1.23	3.36	1.19	

*Note:* Non-significant results where all means differ at p > .01.

## 7.6. Total indirect effect of perceived trustworthiness model

Total Indirect Effect of Perceived Trustworthiness Model						
	β	BootLLCI	BootULCI			
Y = Socialize	-0.03	-0.08	0.02			
Y = Match	-0.02	-0.07	0.01			
Y = Message	-0.02	-0.55	0.01			
Y = Chat	-0.02	-0.06	0.01			
Y = Date	-0.02	-0.06	0.01			
Y = Sex	-0.01	-0.02	0.00			
Y = Relationship	-0.01	-0.05	0.01			

*Note:* There is no significant indirect effect.

## 7.7. Total indirect effect of attitude toward person and perceived physical attractiveness model

Total Indirect Effect of Attitude Toward the Person	Total Indirect Effect of Attitude Toward the Person and Perceived Physical Attractiveness Model							
	β	BootLLCI	BootULCI					
Y = Socialize	-0.10	-0.23	0.03					
Y = Match	-0.11	-0.25	0.02					
Y = Message	-0.09	-0.19	0.02					
Y = Chat	-0.09	-0.20	0.02					
Y = Date	-0.09	-0.21	0.02					
Y = Sex	-0.05	-0.12	0.01					
Y = Relationship	-0.06	-0.14	0.02					

*Note:* There is no significant indirect effect.

## 7.8. Total indirect effect of perceived similarity model

Total Indirect Effect of Perceived Similarity Model						
	β	BootLLCI	BootULCI			
Y = Socialize	-0.02	-0.10	0.06			
Y = Match	-0.01	-0.09	0.06			
Y = Message	-0.01	-0.06	0.03			
Y = Chat	-0.01	-0.07	0.05			
Y = Date	-0.01	-0.08	0.05			
Y = Sex	-0.01	-0.04	0.03			
Y = Relationship	-0.01	-0.06	0.04			

Note: There is no significant indirect effect.