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Individual differences in sociosexuality predict picture-based mobile dating app use

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ABSTRACT

This study investigates individual differences, sex differences and predictors of current and prior use of Picture-Based Mobile Dating Apps (PBMDA), including level and type of PBMDA activity, and reasons for PBMDA use. Six hundred and forty-one Norwegian university students aged between 19 and 29 years completed a questionnaire in lecture breaks. Nearly half of the participants reported former or current PBMDA use. One in five was current users. We found that PBMDA-users tend to report being less restricted in their sociosexuality (as measured with the SOI-R) than participants who have never used PBMDAs. This effect was equally strong for men and women. Sociosexuality essentially accounted for the effects of other variables such as seeking a casual sex partner, being comfortable picking up strangers, and self-reported short-term mate value. As predicted, women and men's reasons for using PBMDAs differed. Relative to women, men emphasized desire for sex as a reason for using PBMDAs. When controlling for sex, age and SOI Desire there was no evidence that length of use increased lifetime casual sex partners. We conclude that the new technology provided by PBMDAs merely represents a new arena for short-term sexual behavior, and not necessarily a facilitator of new sexual behaviors.

1. Introduction

Several picture-based mobile dating apps (PBMDA) are now available, but with > 10 million active users, Tinder, introduced in 2012, is currently the most popular online dating app (Freier, 2015; Sumter, Vandenbosch, & Ligtenberg, 2017). According to the Tinder website the app has users in 196 countries, counting > 10 billion matches worldwide (Tinder, 2016). PBMDAs provide pictures of potential mates and there is no cost associated with use. Based on an impression formed from one or more photos the user can choose to like or dislike a potential mate with a right or left swipe. If two people like each other, they get the opportunity to contact each other via text message, which denotes a "match."

Despite their popularity, few studies that have investigated various aspects of PBMDA use, including motivations and reasons for their use (Sager, Alderson, & Boyes, 2016; Sumter et al., 2017). Sager et al. (2016) found that female respondents scored higher than males on sexual-motives for using mobile dating apps (as assessed with items like "I use hook-up app(s) for sexual freedom" and "I use hook-up app(s) to be sexually adventurous"). Despite this difference in sexual motivation, it was reported that men were more interested in actually hooking-up than women when using mobile dating apps. Sumter et al. (2017) who looked specifically at the use of Tinder found that men were more interested in finding a short-term partner than women. Further, different from men, women had a substantially lower motivation for casual sex compared to love (Sumter et al., 2017). Recently, Moran, Salerno, and Wade (2018) found that unrestricted Snapchat users were more likely to use that picture sharing app to gain sexual access and hookups.

Sexual Strategies Theory (SST; Buss & Schmitt, 1993, 2016) is particularly relevant for understanding sexual motivations. SST suggests there are two main human mating strategies, short-term and long-term. Long-term mating involves extended courtship, pair-bonding emotions and dedication of resources over time, while short-term mating refers to more fleeting sexual encounters. Along the continuum of these mating tactics, there are other intermediate-term relationships such as longer lasting affairs and relationships of shorter duration. Which strategy the individual applies is contingent on a number of factors, such as operational sex ratio in the local mating pool (Barber, 2000), personal attractiveness (mate value) and other individual differences, such as mating strategy. Two causal factors potentially influence the motivation for having sex: the sex of the individual and his or her mating strategy (Buss & Schmitt, 1993). Sex differences will therefore appear in areas where men and women have faced recurrently different adaptive problems through human evolution, e.g., related to mating and parental investment (Buss, 1998). Based on men's lower

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minimum parental investment (Trivers, 1972), men are expected to devote a larger proportion of their total mating effort (energy and resources) to short-term mating strategies than women because of the fitness benefits for men compared to women in having numerous sex partners (Buss & Schmitt, 1993). As such, relative to women, men will (1) desire short-term partners more, (2) desire a larger number of short-term partners, and (3) require less time before consenting to sex or desire to have sex with an attractive partner (Schmitt, Shackelford, & Buss, 2001). These sex differences are expected to be universal, and evidence suggest they are (e.g., Lippa, 2009; Schmitt, 2005). Moreover, within each sex, individual differences in the preference for short-term sexual relationships will influence mating relevant behavior. Therefore, the current paper both considers sex differences as well as individual differences in sociosexuality.

The overall orientation toward uncommitted sexual activity has been termed sociosexual orientation, and Simpson and Gangestad (1991) were the first to develop an inventory (SOI) quantifying individual differences in this preference. A revised inventory assesses individual differences in three interrelated domains of sociosexuality, including past behavior experiences, attitudes toward casual sex, and desire for casual sex (Penke & Asendorpf, 2008). As such, a person's sociosexuality should be a particularly good predictor of PBMDA use, as this provides an alternative arena for dating and short-term sexual encounters (Asendorpf, Penke, & Back, 2011). Sevi, Aral, and Eskenazi (2017) reported the only evidence that indirectly supports this claim in a recent M-Turk study of 163 Tinder users. They found that sociosexuality strongly predicted Tinder use motivation, and that sociosexuality fully accounted for the inhibiting effect of disgust on motivation to use. Further, Moran et al. (2018) found sociosexuality related to hook up behavior in the use of the Snapchat dating app. Although the primary motivation for PBMDA use may be to achieve casual sex (see preliminary findings by Kuhle et al., 2016), the extent to which sociosexuality predicts actual PBMDA use remains to be studied.

1.1. The current study

This study investigates factors associated with PBMDA use among students within the framework of individual differences in sociosexuality and sex differences as predicted by SST (Buss & Schmitt, 1993, 2016). Use of dating apps may be considered a tactic for achieving traditional short-term mating opportunities, possibly enabling people to expand their mating opportunities. The main purpose of this study is to investigate factors that predict current and former use of Picture-Based Mobile Dating Apps (PBMDA) in a sample of university students from a sexually liberal and secular culture. Mating takes effort, and we believe that active use of PBMDA may be a functional tool for effectively searching for and finding potential partners. This might make short-term mating more available to other groups than those who have thus far been able to succeed in the short-term mating market. We therefore expect to find evidence of both sex differences and individual differences in use and motives.

The following hypotheses will be tested:

H1. Relative to individuals who never have used dating apps, we expect current PBMDA users to be less restricted in their sociosexuality. Further, we expect that unrestricted sociosexuality predicts being more comfortable picking up a stranger, seeking short-term mates (hooking up, casual sex) rather than long-term mates (i.e., committed relationship), and rating themselves high on short-term mate value. In predicting PBMDA use, we expect that sociosexuality accounts for the effect of the other short-term oriented indicators (Moran et al., 2018; Penke & Asendorpf, 2008; Sevi et al., 2017).

H2. From Sexual Strategies Theory (Buss & Schmitt, 1993), we predict that (1) Relative to women, men will show more mating relevant PBMDA activity such as approving and meeting up with partners following dating app use (Buss & Schmitt, 1993; Sager et al., 2016). Further, we predict that (2) the reasons (motives) given for PBMDA use will differ for women and men. We expect women to use dating apps primarily for feeling good/self-affirmation and when wanting a committed relationship, and less when desiring sex, and that men use dating apps primarily when desiring sex. We also expect that these sex differences to hold up across current and former PBMDA users.

2. Methods

2.1. Participants

Participants were recruited from lectures in social sciences, natural sciences and humanities at the two major campuses at a Norwegian University ($N = 678$). The sample eligible for analyses covered 641 (55.8% women) students aged between 19 and 29, all reporting preference for opposite-sex partners.[1] Mean age was 21.4 ($SD = 1.6$) and 21.6 ($SD = 1.5$) for women and men, respectively. Nearly six out of ten (57.6%, $N = 369$) reported being single when filling in the questionnaire (50.7% women, 66.2% men), 35.9% reported being in a committed relationship, and 6.6% reported being in an 'undefined' relationship.

2.2. Procedure

Participants filled out questionnaires during a lecture break while seated at their desks. They were informed that participation was voluntary, that they could terminate at any point without consequences, and that their responses would remain anonymous. To ensure anonymity the participants were asked not take part in any discussion, and not to write any information on the questionnaire that could identify them. When completed, they deposit their questionnaires in a sealed box by the podium. The respondents did not receive credit or any other reward for taking part in the study.

2.3. Measurements

2.3.1. Sociosexual orientation

We applied the 9-items self-report revised Sociosexual Orientation Inventory (SOI-R; Penke & Asendorpf, 2008). SOI-R covers three interrelated components reflecting unrestricted or casual sexual behavior, unrestricted attitudes toward casual sex, and casual sex desires and fantasies. Both the full SOI-R scale ($\alpha = 0.87$) and the three separate components showed good internal consistency (behavior, $\alpha = 88$; attitudes, $\alpha = 0.87$; desire, $\alpha = 0.89$). Scaling and scoring was identical to Penke and Asendorpf (2008).

2.3.2. Mate value and other personal characteristics

Self-perceived mate value was assessed applying the short version of the Mate Value Inventory (MVI; Kirsner, Figueredo, & Jacobs, 2003). Each participant rated their response to "how well does each of 17 traits/attributes apply to you" on a seven-point Likert scale with anchors 1 (*very low on this trait*) and 7 (*very high on this trait*). Explorative factor analysis (Maximum likelihood) extracted two factors reflecting short-term (MV-ST) and long-term (MV-LT) mate value. Many of the items had low factor loadings, and after removal of these we ended up with one MV-ST measure covering two items on physical attractiveness (face and body, $\alpha = 0.78$) and one three-item MV-LT measure covering being kind, dependable and loyal ($\alpha = 0.69$). Each participant also rated how strongly they sought long-term and short-term partners using two global questions (Buss & Schmitt, 1993), and how comfortable they were picking up strangers in regular (non-digital) dating contexts on a

[1] Preference was measured using a 5-point rating scale with options: 1 (men only), 2 (men mostly), 3 (men and women equally), 4 (women mostly), and 5 (women only). Additional options were provided for those having 'no preference' and 'don't know'.