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iObjectify: Self- and other-objectification on Grindr, a geosocial networking application designed for men who have sex with men.

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Abstract

Grindr is a smartphone application for men who have sex with men (MSM). Despite its reputation as a 'hook-up app', little is known about its users' self-presentation strategies and how this relates to objectification - this paper explores objectification on Grindr. The results of Study 1 showed that Grindr users objectified other men more than non-Grindr users. A content analysis of 1400 Grindr profiles in Study 2 showed that profile pictures with objectifying content were related to searching for sexual encounters. Finally, a survey of Grindr users in Study 3 revealed that objectification processes and sexualized profile pictures were related to some objectification-relevant online behaviors (e.g., increased use of Grindr, discussion of HIV status). Interestingly, the presence of body focused profile content was more related to sexual orientation disclosure (not being 'out') than to objectification. This paper presents evidence that Grindr usage and online presentation are related to objectification processes.

Word count: 150

Keywords: objectification, self-objectification, male objectification, MSM, Grindr, online dating.

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iObjectify: Self- and other-objectification on Grindr, a geosocial networking application designed for men who have sex with men

Rapid advances in technology and evolving societal conditions have fundamentally changed dating practices among single people. As the technology around e-dating continues to improve, and individuals are becoming increasingly time-poor, single people are finding it easier and more convenient to use online platforms to meet romantic partners. Indeed, more people than ever are using such platforms. A study by the Pew Research Center (2016) revealed that 38% of single American adults have used mobile dating apps or online dating websites to look for a partner. This constitutes 11% of all adult Americans, an increase from just 3% in 2008. Globally, there are an estimated 91 million online daters, with large portions of this population being men (62%), and under the age of 35 (70%), with the majority being relatively well-educated and from a range of socio-economic and ethnic backgrounds (Global Web Index, 2015).

The experience of online dating is undoubtedly different to traditional dating in several important ways. For example, the pool of potential partners is expanded beyond the user's existing contacts, and matching algorithms allow a simultaneous refinement of the online pool to filter out non-relevant partners based on pre-defined criteria. Online dating services may be especially efficient ways for members of particular groups to identify members of a potential dating pool. Research has suggested that online dating might be particularly useful for sexual minorities, who have a numerically restricted pool of partners and limited options for identifying them (Rosenfeld & Thomas, 2012). The topic of this paper is online dating practices of men who have sex with men (MSM), and more specifically the methods by which they choose to represent themselves online. We present a series of studies that explore how Grindr users visually present themselves on the app, focusing specifically on objectified self-presentation

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strategies. In doing so, we explore this phenomenon and its associated outcomes through the lens of objectification theory.

Grindr: A Location-Based Application Designed for Men Who Have Sex With Men

Grindr is a social network application targeted to MSM, which uses location-based technologies to identify other users. The application was launched in 2009, and it has had a brief yet successful history with over 10 million downloads and over 5 million active users spread over 192 countries, making it the most popular application of its type (Woo, 2013). Typically, Grindr is used by MSM to find partners for dating, friendship, or sex, although its reputation is for the latter (i.e., as a hook-up application; Gudelunas, 2012). The few studies that have used Grindr have reported that the application provides easy access to willing and hard to reach research samples (Burrell et al., 2012; Eslen-Ziya & Koc, 2016; Koc, 2016).

The application is straightforward to use. Grindr users create a unique profile that is comprised of a series of self-presentational elements, including a single picture of their choice, and then a series of optional text-based additions including a display name, a byline, demographic details (e.g., age, ethnicity), a short open text section, and then a series of options that can be chosen to represent what the user is ‘looking for’ (either friends, relationships, chat, dates, networking, or 'right now' [i.e., sexual encounters]). Visual examples of Grindr profiles are presented in Figure 1. The Grindr user’s smartphone device uses a GPS function to locate other users in close proximity and presents these profiles to the original user who can choose to look at their profile and then initiate an online conversation. Of particular interest to the objectification-based hypotheses explored in this paper is the ‘looking for’ element in the description of the profile owner, and the visual components of the picture used.

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FIGURE 1 ABOUT HERE

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We argue, based on the work of Confer, Perilloux, and Buss (2010), that Grindr's 'looking for' element can be used to infer evolutionarily adaptive mating orientations, which might be related to objectification processes. Specifically, when creating the profile, the user self-classifies as either having a long-term (i.e., relationship) or short-term (i.e., right now [sexual encounter]) dating goal, or an ostensibly non-dating goal (i.e., chats, friends, networking). Confer and colleagues (2010) tested the hypothesis that short-term mating goals in heterosexual men would lead to the prioritization of bodily visual cues over facial cues. To do this, they presented men with an image of a woman whose face and body were occluded by two separate boxes. Participants were instructed to consider dating the woman in either a short- or long-term capacity, and were asked which one of the boxes (i.e., the 'face box' or 'body box') to remove. They found that men assigned to the short-term mating condition were significantly more likely to remove the 'body box' than men in the long-term mating condition, suggesting that men have an adaptive mechanism that manifests as a tendency to focus on body cues under conditions where short-term mating is salient. We propose to extend the work of Confer et al. (2010) in two new directions, by examining focus on body cues in self-presentation rather than in the perception of others, and by studying non-heterosexual men. That is, we test whether a short-term mating orientation translates into a focus on one's own body among MSM. In other words, this paper explores whether MSM with short-term mating goals are more likely to present themselves in a body focused and objectifying manner. On Grindr, users self-select a profile picture to represent themselves. Although this content is typically a standard head-shot style photo (as seen in Figure 1), there is the potential for users to present themselves in an objectified way—they can choose a profile picture that is *sexualized* (e.g., wearing minimal clothing), or that has a *body focus* (e.g., with the image cropped to emphasize their body). Since MSM often use Grindr to find sex

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partners, and since Grindr users can potentially present themselves in an objectified fashion, we believe it is useful to explore self-presentation and objectification strategies through objectification theory.

Objectification Theory and Sexual Orientation

The tenets of objectification theory (Fredrickson & Roberts, 1997) propose that women are sexually objectified in the Western world—a process which reduces them to the sum of their body parts (Bartky, 1990). As the theory suggests, this objectification encourages women to adopt and internalize a third-person perspective of the self – i.e., to *self-objectify* – which results in a host of harmful mental health outcomes (for a review see Moradi & Huang, 2008). Although objectification theory was originally applied to the lived experiences of women, recent evidence suggests that men are also vulnerable to objectification and its negative outcomes. Research has revealed that men are objectified by others (e.g., Gervais, Vescio, & Allen, 2011; Gray, Knobe, Sheskin, Bloom, & Barrett, 2011; Loughnan et al., 2010), and also engage in self-objectification (e.g., Hebl, King, & Lin, 2004; Strelan & Hargreaves, 2005; Thompson & Cafri, 2007). The outcomes of being objectified (by the self or by others) can negatively impact how men are perceived and treated (Gray et al., 2011; Loughnan et al., 2010), and objectification has been shown to contribute negatively to men's mental health (e.g., Agliata & Tantleff-Dunn, 2004; Leit, Gray, & Pope, 2002). Although a substantial body of evidence now reveals the prevalence and impact of objectification for both men and women, less is known about how these processes play out for sexual minorities.

Objectification processes differ for men and women as a function of their sexual orientation, and MSM in particular are susceptible to being targeted for objectification (for a review of the experiences and impact of objectification for samples of lesbian women, see Hill & Fischer, 2008; Kozee & Tylka, 2006). Compared to straight men, MSM place more importance on physical attractiveness (e.g., Gettelman & Thompson,

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1993; Morrison, Morrison, & Sager, 2004; Siever, 1994), strive to achieve the mesomorphic ideal (i.e., a muscular yet lean build; Swami & Tovée, 2008; Tiggemann, Martins, & Kirkbride, 2007), and are more attuned to their own bodily appearance (Sergios & Cody, 1985; Silberstein, Mishkind, Striegel-Moore, Timko, & Rodin, 1989). Research has shown that MSM score similarly to heterosexual women on measures of self-objectification (Engeln-Maddox, Miller, & Doyle, 2011), but significantly higher than heterosexual men (Dakanalis et al., 2012; Kozak, Frankenhauser, & Roberts, 2009; Martins, Tiggemann, & Kirkbride, 2007). Among MSM, high levels of self-objectification have been associated with an array of negative outcomes, including increased body shame, body dissatisfaction, and restrained eating (Duggan & McCreary, 2004; Engeln-Maddox et al., 2011; Martins et al., 2007; Yean et al., 2013; Yelland & Tiggemann, 2003). Beyond objectifying themselves, MSM also tend to objectify other men, valuing men's bodies for how they look as opposed to what they can do (Kozak et al., 2009). Taken together, these findings suggest that the prevalence and impact of objectification for MSM is greater than that of their straight counterparts, and thus further research in this domain is warranted.

Objectification, Online Media, and Self-Presentation

Research demonstrates that women are commonly presented in objectifying ways in the media, often in revealing attire (e.g., Aubrey & Frisby, 2011; Stankiewicz & Rosselli, 2008) or with a focus on their body (Archer, Iritani, Kimes, & Barrios, 1983). Women tend to be displayed in such ways more often than men, although research shows that men are increasingly presented in sexualized ways in the media (Rohlinger, 2002), and that advertisements targeting MSM commonly place an emphasis on the male body (Saucier & Caron, 2008). A large literature suggests that targets are objectified to a greater extent when they are sexualized (e.g., wearing revealing clothing) or displayed in a body-focused manner, compared to when

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displayed in plain clothes or with an emphasis on the face (e.g., Holland & Haslam, 2013; Loughnan et al., 2010). Although the relationship between how a target is presented and their tendency to be objectified by others is well-established, much less research has addressed *self*-presentation and how this relates to (self-)objectification. Existing research in this domain has exclusively focused on female self-presentation with (to our knowledge) no research exploring this phenomena with MSM.

Finally, the majority of studies in the online dating literature have examined how individuals engage in self-presentation through the written, rather than visual, component of dating profiles (e.g., Deaux & Hanna, 1984; Gonzales & Meyers, 1993). Among studies focused on visual self-presentation, gender differences in online profile pictures have been found, with women more likely to be concerned with a positive self-presentation (e.g., Haferkamp, Eimler, Papadakis, & Kruck, 2012), and thus to choose their picture based on perceived attractiveness (Strano, 2008). However, to our knowledge, no research has explored objectification and visual self-presentation (objectifying self-presentation strategies; e.g., body-focused or sexualized profile pictures). The recent increases in popularity of online dating applications provide a unique avenue to explore this relationship. Thus, we chose to explore the relationship between visual self-presentation and objectification in a sample of individuals who use Grindr.

Overview and Predictions for the Current Research

Across three studies, we explore objectifying self-presentation strategies of MSM on Grindr and how this relates to their tendencies to objectify themselves and others. Given Grindr's reputation as a short-term dating (i.e., hook-up) app, we first test whether MSM who use Grindr are more likely to objectify the self and other men than those who do not. To do this, in Study 1 we compare levels of self- and other-objectification reported by Grindr users to MSM who have not recently used Grindr.

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We then examine how objectifying self-presentation on Grindr (i.e., body focused and/or sexualized profile pictures) relates to dating goals. Note that while we construe self- and other-objectification as assessed in Study 1 as internal, psychological processes, we consider body focus and sexualization as external, visual features of a target that facilitate a view of the target in an object-like manner. To explore the relationship between self-presentation (i.e., objectification as a feature of the target) and dating goals, in Study 2 we present a content analysis of Grindr profiles and investigate whether either body-focused or sexualized representations of the self can predict users' inferred mating orientation (i.e., short- vs. long-term). Finally, we examine the relationship between objectification and online-dating behaviors. To do this, in Study 3 we conduct a survey examining the relationship between reported self- and other-objectification (i.e., objectification as a process), visual objectification (i.e., as a self-presentation feature of the target), sexual orientation disclosure, and risky behaviors on Grindr (including safer sex practices, discussion of HIV status with Grindr-based sex partners, and frequency of finding sex partners on Grindr under the influence of drugs or alcohol).

Study 1

The aim of this study was to explore if self- and other-objectification processes differ for MSM who use Grindr compared to MSM who do not. Because Grindr is classified as an online dating application (Gudelunas, 2012), and is often used as a hook-up app, its mere use likely makes short term-mating goals salient. Thus, we predicted, based on Confer et al. (2010), that Grindr users would objectify both themselves and other men more than non-users. In line with previous research (e.g., Kozak et al., 2009), we also predicted self- and other-objectification scores to be positively correlated.

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Method

Participants

Participants were 169 Australian MSM (age range: 18 - 69 years, *M* = 31.88, *SD* = 9.68). The sample comprised two groups. The first group was 103 MSM who currently used Grindr, recruited for the study via an advertisement posted on Grindr. For the second group, we attempted to recruit a sample of MSM who had never used Grindr. However, this proved to be a challenging task (most likely because of the popularity of the app). We therefore recruited 66 MSM who had not used Grindr recently (*M* = 1.57 years since last use, *SD* = 1.35) through Facebook groups for MSM. Indeed, all of these participants had used Grindr before. Of the Grindr users, 68 participants (66%) reported being single, and the remainder as being in a relationship. Of the non-Grindr users, 26 participants (39%) reported being single, and the remainder as being in a relationship. Participation was voluntary and non-incentivized.

Materials

Self-objectification. The Self-Objectification Questionnaire (SOQ; Noll & Fredrickson, 1998) was administered to measure the extent to which participants objectified themselves. The questionnaire asks participants to rank the impact of 10 different body attributes on the physical self-concept. Five are observable appearance-based attributes (e.g., physical attractiveness, sex appeal), and five are non-observable competence-based attributes (e.g., energy level, health). Participants ranked the 10 attributes from 1 (*least impact on the physical self-concept*) to 10 (*greatest impact on the physical self-concept*). For each participant we calculated a difference score reflecting the relative emphasis given to these two types of attributes, by subtracting the sum of the ranks for the competence-based attributes from the sum of the ranks for the appearance-based attributes. Differences scores ranged from -25 to 25, with higher scores reflecting greater self-objectification (i.e., greater emphasis on appearance-based attributes).

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Objectification of men. An adapted version of the SOQ was used to assess the objectification of men (Strelan & Hargreaves, 2005). Specifically, participants ranked the importance of the ten body attributes to their appraisal of other men, rather than ranking the importance of these attributes to their own self-concept. As per the SOQ, difference scores ranged between -25 and 25, with positive scores reflecting greater objectification of men.

Procedure

Potential participants were provided with a link to the survey, which was hosted by Qualtrics™. After providing informed consent, participants indicated if they were current users of Grindr (and how long since last login if they were not current users), and completed the objectification measures in a counterbalanced order. They then completed demographic information, and were debriefed.

Results

To explore if Grindr use was associated with self- and other-objectification, we conducted two independent-samples *t*-tests. The main analysis revealed that there was no significant effect of Grindr use on levels of self-objectification, $t(167) = 0.68$, $p = .500$. However, Grindr use was significantly associated with the objectification of other men, $t(167) = 2.46$, $p = .015$, Cohen's $d = .37$. As shown in Figure 2, current Grindr users were more likely to objectify other men compared to those not using Grindr.

On the basis of the literature, we had no reason to predict that relationship status would influence other-objectification. However, given that there were significantly more single Grindr users and coupled non-Grindr users than would be expected by chance, $\chi 2\ (1, N = 159) = 13.48$, $p < .001$, we ran a separate test including relationship status as a factor. Our analysis revealed no effect of relationship status on other-objectification, $F(1,165) < 1$, $p = .623$, $\eta_p^2 = .000$, nor any interaction between relationship status and Grindr usage, $F(1,165) < 1$, $p = .696$, $\eta_p^2 = .000$, suggesting that

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lower levels of other-objectification among non-Grindr users was not driven by relationship status.

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FIGURE 2 ABOUT HERE

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To test the remaining hypothesis, we conducted a series of bivariate correlations and, as expected, self-objectification and other-objectification were significantly positively correlated, $r(167) = .46$, $p < .001$.

Discussion

In this survey, we found evidence that objectification levels differ between MSM who use Grindr to those who do not. Grindr users in this sample objectified other men more than did MSM who do not use Grindr, although reported self-objectification scores did not differ between the groups. Finally, and in line with previous research (e.g., Kozak et al., 2009), objectification and self-objectification scores were strongly correlated.

It is worth noting that the categorical nature of the between-groups comparison may raise some validity concerns; we attempted to find MSM who had never used Grindr and failed because of its great prevalence in the sampling locale. Instead, we used MSM who had not recently used Grindr. Although this means that we cannot draw conclusions about how current users of Grindr differ from those who have never used it, we can validly compare current users and current non-users.

Study 2

The purpose of Study 2 was to examine the prevalence of objectifying self-presentation on Grindr (i.e., sexualized and/or body-focused presentations) and whether such self-representations are associated with short-term mating strategies (note that in

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this study, we are exploring objectification as a feature of a target). Our predictions are based in two assumptions. First, we assume that those saying they are looking for a 'relationship' have a long-term mating strategy, whereas those saying they are looking for 'right now' have a short-term mating strategy. Second, we assume that individuals choose profile pictures to represent certain aspects of themselves online, and that characteristics of that self-representation can be used to infer objectification. Drawing upon previous research (e.g., Aubrey & Frisby, 2011; Hall, West, & McIntyre, 2012; Loughnan et al., 2010), we employed two indices to document if the individual's profile picture was objectified. First, we assessed whether or not the picture was sexualized, operationalizing this by assessing whether or not the individual in the profile picture was topless. Second, we examined the extent to which the individual objectified themselves by using a body-focused picture (i.e., an image in which the body occupies the majority of space; Archer et al., 1983).

On the assumption that what an individual says they are *looking for* in their profile represents their mating goal, and the content of their profile picture can be used to infer self-objectifying processes, we can explore the relationship between visual self-presentation and mating goals or strategies. To achieve this task, we conducted a content analysis based on the information available on existing Grindr profiles. Specifically, the content analyzed was all provided by users on their existing public profile – this content included the way they choose to represent themselves visually (i.e., picture selection), their demographic details, and their reported reason for using the application. Building on the work of Confer and colleagues (2010), we expected to find that individuals who represent themselves with profile pictures that are sexualized or body-focused would be more likely to report a short-term mating strategy (i.e., report looking for 'right now'). Conversely, individuals who represent themselves with profile pictures that are not sexualized or have less of a body focus would be more likely to report a long-term mating strategy (i.e., report looking for a relationship).

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Method

Sample

The sample consisted of 1,400 Grindr profiles of users within the metropolitan Melbourne region. These profiles were accessed via smartphone across a period of four weeks. The researchers recorded the demographic information for each profile, including the user's age, ethnicity and relationship status. In addition, the researchers recorded what the user's self-reported reasons were for using Grindr from the following six categories - 'chats', 'dates', 'friends', 'networking', a 'relationship', and 'right now'. Users are able to select as many of these six options as they would like, and thus we coded each category as to whether it was selected (coded 1) or not (coded 0). A screenshot of the profile picture was also captured to allow for the calculation of body focus at a later date, and to enable the removal of duplicates from the sample.

There were a number of criteria for selecting profiles to be analyzed. First, the individual had to specify in their profile what they were looking for on Grindr. As such, users who did not select at least one of the six available reasons for using Grindr were excluded from the sample. Second, users needed to include a picture in their profile, and this picture needed to be of themselves. Thus, profiles that featured pictures of celebrities, cartoons, or objects were not included. Third, we only retained profiles in which one male was shown in the picture. Users could be shown accompanied by females in their profile picture; however, we discarded profiles in which multiple men were shown, as it was therefore impossible to determine which one of the men owned the profile. Lastly, we only selected profiles for the sample in which the user was presented vertically. This was to ensure that body focus could be calculated properly (see below for calculation method). We did, however, retain photos in which the user was presented horizontally when the head was not shown, as this did not impact calculation of body focus (see below for detail).

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The primary and secondary authors each collected half of the Grindr profiles. Once all 1,400 profiles had been collected, 48 duplicates were removed, and an extra 48 profiles were collected until the sample returned to 1,400.

Variables Coded

The variables coded for each profile are presented in Table 1, and the complete coding table is available from the first author. In line with previous research (e.g., Archer, Iritani, Kimes, & Barrios, 1983; Loughnan et al., 2010), we assessed body focus by calculating a face-ism index (i.e., the relative prominence of the face in the profile picture), which was calculated by dividing the height in pixels of the target's face (from the top of the head to the lowest point of the chin) by the height in pixels of the target's whole body (from the top of the head to the lowest visible point of the body). For ease of interpretation, facial prominence scores were reverse scored such that higher scores indicated a higher focus on the body (i.e., body focus index) – thus, possible scores ranged from 0 (in which only the face was shown) to 1 (in which none of the face was in view). Sexualization was a simple categorical variable in which raters classified the profile as being clothed or not (i.e., classification was based on the individual in the picture had clothing on the top half of their body or not). Profiles in which the individual was wearing a top were coded as 0, and profiles in which the target was not wearing a top were coded as 1. For each of these variables, higher scores thus reflect higher levels of objectification.

To establish inter-coder reliability, each profile was blind double-coded (by the second and third authors), following the suggestions of Lombard, Snyder-Duch, and Bracken (2002). Inter-rater reliability on our obtained results was exceptionally high on both the body-focus index (Pearson's $r = .99$), and the clothing index (Cohen's $\kappa = .98$). Additionally, a two-way mixed effects model revealed an intraclass correlation of .99 ($p < .001$). To determine the final code to be applied to each stimulus in the final

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dataset, we randomly divided the profiles from the sample into two groups, and the coding decision of each coder was alternatively selected for use in analyses.

Table 1 about here

Results

We conducted a series of analyses to see if objectifying self-presentation (i.e., body focus, sexualization) could be predicted by the reported purpose for using Grindr (i.e., looking for chats, dates, friends, networking, relationships, or sexual partners). A higher proportion of profiles had pictures in which the user was clothed (.70) than topless (.30), and the former ($M_{\text{body focus}}$ = .49, *SD* = .22) showed lower mean body focus than the latter ($M_{\text{body focus}}$ = .73, *SD* = .25, $t(1398) = 17.99$, $p < .001$; Cohen's d = 1.02). The majority of the sample identified as single and as Caucasian, although there was a high frequency of profiles that did not disclose either their relationship status or their ethnicity. A full description of the sample is presented in Table 1.

Sexualization

In order to predict sexualization from the reported purpose for using Grindr, we conducted a loglinear analysis. Given the six (dichotomous) purposes that could be selected, we created six models to test. The first model tested for main effects, the second for 2-way interactions, the third for 3-way interactions, and so on. An omnibus test of model coefficients revealed that only the first model testing for main effects was significant ($p < .001$; all models testing for higher order interactions were $p > .05$), and thus we chose to test a model without any interaction terms. We also ran these tests using age, ethnicity, and relationship status as predictors - as none were significant predictors, and in the name of parsimony, we opted to exclude the demographic predictors from the reported analyses.

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A test of a model with the six predictor variables (i.e., possible purposes for using Grindr) against a model with only the constant was statistically significant, suggesting that the predictors (as a set) can reliably distinguish between Grindr profile pictures that are sexualized compared to ones that are not $\chi^2(6) = 114.40$, $p < .001$, and that this model is a good fit, H-L statistic $p = .677$. Prediction success of the model was 72% (for coefficients, see Table 2). Individuals who reported that they use Grindr to find friends, relationships, or chatting were approximately one and a half times more likely to have a non-sexualized profile picture than a sexualized picture. In contrast, individuals reporting the use of Grindr to find sexual partners were approximately three times more likely to have a sexualized than a non-sexualized profile picture.

Table 2 about here

Body focus

In order to estimate the proportion of variance in the body focus index that can be accounted for by the reported reasons for using Grindr, we conducted Multiple Regression Analysis (MRA). The six possible reasons for using Grindr were dummy coded to allow their use as independent variables in the MRA. In combination, these variables accounted for a significant 9% in the variance of the body focus index, $F(6,1391) = 23.12$, $p < .001$, $R = .30$, Cohen's $f^2 = .10$. It was revealed that using Grindr to find friendship or relationships (i.e., long-term goal) predicted lower body focus (i.e., higher facial prominence), whereas using Grindr to seek out sexual partners (i.e., short-term goal) predicted higher body focus scores (i.e., lower facial prominence; see Table 3).

Table 3 about here

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Discussion

In this content analysis, we found evidence that the use of objectifying (i.e., sexualized, body-focused) profile pictures on Grindr was related to short-term mating strategies. Our hypotheses were supported. Specifically, we found that reporting a short-term dating goal (i.e., looking for 'right now') was predicted by profile pictures that were sexualized, or had more of a body focus. We also found that reporting a long-term mating strategy (i.e., looking for 'relationships') was predicted by profile pictures that were not sexualized, or less body focused (or had higher levels of facial prominence). Finally, we also found that profiles reporting that they use Grindr to find friends or chatting (i.e., indicating no mating strategy) were also more likely not to self-sexualize.

It is worth recognizing that we had no way of controlling extraneous reasons for profile picture choice beyond the hypothesized relationship with objectification. For example, a high body focus score might be the result of objectification-related processes, but it could equally be the result of an individual who is not 'out', choosing to conceal their identity by cropping their face from their profile picture. Given that this is a content analysis, this extraneous variable cannot be accounted for. However, it is worth highlighting as this could be an attenuating factor resulting in the apparently small effect sizes reported in this study (particularly for the body focus based analyses). We also acknowledge as a limitation of this content analysis that there is likely a proportion of profile pictures in this sample that might not be real pictures of the owner.

Thus far we have shown that MSM who use Grindr are more likely to report objectifying other men than those who do not use Grindr, and that visual self-objectification strategies on Grindr are related to short-term mating goals. As a final step, we sought to explore the relation between reported and visual objectification among Grindr users, and how these forms of objectification relate to online dating practices, such as personal disclosure and risky behaviors.

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Study 3

The aim of Study 3 is to explore the relationship between reported self- and other-objectification (i.e., objectification as a process) and visual self-objectification on Grindr (i.e., sexualization and body focus – objectification as a visual feature of the target), and then to explore how these relate to Grindr usage, self-disclosure of sexual orientation, and relevant behaviors (including safer sex practices, discussion of HIV with Grindr-based sex partners, and frequency of finding sex partners on Grindr under the influence of drugs or alcohol). Given that objectification is associated with dehumanizing outcomes, such as an increase in pain allocation (e.g., Loughnan et al., 2010), we argue that objectification on Grindr may be linked to engagement in risky online behaviors, and that these behaviors may be harmful to the owner of the Grindr profile (in the case of self-objectification) or to the profile owner's sexual partners (in the case of other-objectification).

In this study, we operationalized objectification in multiple ways: we asked participants to report their level of objectification (both of the self and of others), and assessed their level of visual self-objectification from their profile pictures. Our specific predictions are as follows: First, we predicted that higher self-reported objectification would be related to greater visual objectification. Second, we formed a number of predictions regarding how objectification would relate to Grindr behaviors. Specifically, we predicted that both length of time using Grindr and the frequency of its use, as well as its specific use to find sexual partners, would be related to higher levels of reported and visual objectification. Third, in terms of risky behaviors, we predicted that using Grindr to find sex partners under the influence of drugs/alcohol, having unprotected sex, and being less likely to discuss one's HIV status would be related to higher levels of reported and visual objectification.

Finally, we tested an alternative explanation for body focus on Grindr: In cases where the user is not open about his sexual orientation, such profile pictures (showing little

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or none of their face) might be a tactic to conceal the user's identity. Thus, we also measured the user's level of sexual orientation disclosure to see whether this is more strongly related to body focus than objectification.

Method

Participants

The sample consisted of 300 Australian men who were current users of Grindr (age range 18 – 70 years: M = 31.55, SD = 10.99). Participants were recruited to voluntarily take part in this study via a pop-up advertisement that appeared upon logging in to Grindr. The majority of users were single (77%), with a small portion (15%) in an open relationship, and the remainder in a monogamous relationship (8%). The length of time for which participants had been using Grindr ranged from one to 68 months (M = 38 months, SD = 18 months). The majority of participants (70%) identified as completely homosexual, with 17% identifying as mostly homosexual, and a further 13% indicating bisexuality (individuals who identified as heterosexual were ineligible to participate).

Materials

Reported objectification. Levels of reported self-objectification and the objectification of men were again measured using the SOQ (Noll & Fredrickson, 1998), and the MOQ (Roberts et al., 2002; Strelan & Hargreaves, 2005), as in Study 1.

Visual objectification.

Body Focus. One question measured the extent to which the participant's profile emphasized the body. Specifically, participants were asked to select which best described their current profile picture from the following six options: 'It is a headshot' , 'It shows my head and upper body', 'It's a full body photo of me', 'It focuses on my body without showing my head', 'The photo is not of me', and 'I don't have a profile photo'. The first four of these options were then coded, in a ranked fashion, from

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lowest in body focus to highest (1-4) – the final two of these options were excluded from analyses (percentages displayed in Table 4).

Sexualization. We asked participants to describe their current profile picture in a sentence or two (providing details of where the photo was taken and what they are wearing) to ascertain whether or not participants presented themselves in a sexualized manner. These open-ended responses were subsequently blind double-coded (by the second and third author). Descriptions that indicated the participant was wearing clothes on their upper body were classified as 'clothed' and coded as '1'. Conversely, descriptions that indicated the participant was topless were coded as '0'. If participants did not indicate their clothing in the description but this information could be inferred (e.g., they described themselves as being in a swimming pool), then the inferred code was used. If participants did not mention their clothing in the description and it could not be inferred, then we did not code this variable for the participant. Across the two coders, inter-rater reliability was extremely high (Cohen's $\kappa = .95$), and inconsistencies were resolved by the first author.

Grindr usage and history. Three questions measured participants' history of Grindr use. First, participants indicated how long in months they had been using the application. Second, we asked participants how frequently they used Grindr (1 = *hardly ever*; 7 = *daily*). Third, participants were asked how frequently they used Grindr to find sex partners (1 = *never*; 5 = *always*).

Sexual orientation disclosure. A single item assessed the extent to which participants had disclosed their sexual orientation to others: participants were asked to identify how 'out' they were on a scale ranging from 0 (*not at all*) to 100 (*completely*).

Risky behaviors on Grindr. We assessed four different types of risky behaviors relevant to the use of Grindr: frequency of engaging in unprotected sex with partners, frequency of finding sex partners on Grindr under the influence of drugs, frequency of finding sex partners under the influence of alcohol, and frequency of discussing HIV

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status with partners found on Grindr before engaging in sexual activities. All items were rated on a 5-point scale (1 = *never*; 5 = *always).*

Procedure

Participants responded to the advertisement on Grindr by following a link to the study, which was hosted by Qualtrics™. Participants provided informed consent and then completed all of the measures described above - these measures were counterbalanced by the software hosting the experiment. Finally, the participants provided demographic information and then were debriefed.

Table 4 about here

Results

Table 4 presents the frequencies of the visual self-objectification variables (i.e., body focus and sexualization), and the results of correlation analyses are presented in Table 5. Self- and other-objectification scores were moderately correlated, as were the scores for body focused and sexualized profiles. Sexualized profiles and reported self-objectification were weakly correlated. No other correlations were significant.

Visual Self-Objectification

To examine the impact of body focus and sexualization on reported objectification and behaviors, we compared (a) profiles with high body focus to those with low body focus, and (b) sexualized and non-sexualized profile pictures.

Body focus. Forty participants (13%) indicated that they either did not have a profile picture, or it was not of themselves, thus the reported analyses only include participants who reported that their Grindr profile picture was of themselves (*n* = 260). We conducted a series of one-way between subjects ANOVAs to explore for

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differences in our variables of interest as a function of the level of body focus in the profile picture. The analysis exploring level of sexual orientation disclosure (i.e., 'outness') revealed significant differences between the groups, $F(3, 256) = 5.25$, $p = .002$, $\eta_p^2 = .06$, and post hoc pairwise comparisons revealed that individuals with only their body on display in their profile picture ($M = 59.77$, $SD = 39.04$) were significantly less likely to be 'out' than individuals who displayed a headshot ($M = 76.99$, $SD = 29.78$, $p = .011$), their head and upper body ($M = 77.42$, $SD = 26.64$, $p = .006$), or their full body ($M = 82.26$, $SD = 23.73$, $p = .003$). None of the other analyses reached significance ($ps > .303$). We also conducted Spearman's Rho correlation analyses to explore for non-parametric relationships between these variables, and contrary to our predictions, we found a weak but significant relationship between greater body focus and lesser frequency of unprotected sex with partners found on Grindr (see Table 5). Body focus was unrelated to all other factors, including self- and other-objectification scores (all $ps > .213$).

Sexualization. The analyses reported only include participants for whom a clothing code could be determined (i.e., $n = 210$). In line with our predictions, an analysis of the data revealed that individuals with a sexualized profile picture were significantly higher in levels of self-objectification than individuals with a non-sexualized profile picture $t(206) = 1.98$, $p = .049$, Cohen's $d = 0.31$. They were also significantly more likely to use Grindr to find sex partners $t(206) = 2.37$, $p = .019$, Cohen's $d = .37$, but tended to be less likely to find sex partners under the influence of alcohol $t(206) = -1.89$, $p = .060$, Cohen's $d = -.28$. All other variables were unrelated to sexualization (all $ps > .237$).

Reported Objectification

Self-objectification. As shown in Table 5, and in line with our prediction, self-objectification was associated with increased frequency of using Grindr to find sex

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partners, finding said partners under the influence of alcohol, a reduced frequency of discussing HIV status with partners, and greater disclosure of one's sexual orientation.

Other-objectification. Also in line with our predictions, greater objectification of men was associated with an increased frequency of using Grindr, an increased frequency of using Grindr to find sex partners, finding said partners under the influence of drugs, and a reduced frequency of discussing HIV status with partners prior to sexual activities, with the latter effect being marginally significant.

Table 5 about here

Discussion

In this study, we aimed to explore how reported and visual objectification related to one another and impacted Grindr usage, risky sexual behavior, and self-disclosure. Overall, we found mixed evidence for our hypotheses. First, although we found the two visual objectification variables correlated with one another, as did reported self- and other-objectification scores, overall there was little relationship between reported and visual objectification. Body focus did not significantly correlate with either self- or other-objectification, and sexualization only marginally correlated with SOQ scores.

Second, in terms of the relationship between objectification and the behavioral measures, reported and visual objectification were largely unrelated to frequency of Grindr use overall. However, profile sexualization, self-objectification, and other-objectification scores were associated with a greater frequency of using Grindr to find sex partners. In regards to risky sexual behaviors, we found limited support for our hypotheses. Reported self- and other-objectification were correlated with a number of risky behaviors; however, although some relationships were in the predicted direction

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(e.g., self-objectification positively correlating with frequency of finding sex partners under the influence of alcohol), others were in the reverse direction to what we hypothesized (e.g., both self- and other-objectification negatively correlating with frequency of finding sex partners under the influence of drugs). Further, the visual objectification measures were largely unrelated to risky behaviors.

Finally, although we did not have concrete predictions regarding sexual orientation disclosure, we found that it was positively associated with sexualization and self-objectification, and that individuals not displaying their face in their profile picture disclose their sexual orientation less. Taken together, the findings provide some evidence that self- and other-objectification are related to increased Grindr usage and risky sexual behaviors. However, they demonstrate much less of an association between these behaviors and visual self-objectification in Grindr profiles. In particular, body focus was unrelated to the majority of variables tested, perhaps indicative of its purpose to conceal users' identity rather than to self-objectify.

General Discussion

Despite the increased popularity of online dating applications on mobile phones, and their prevalence of use among MSM, little is known about how MSM present themselves in such contexts, and how this relates to their objectification, mating goals, and sexual behaviors. Based on the premise that Grindr use can be driven by short-term mating goals, we tested a series of objectification-relevant hypotheses across three studies. In Study 1, we found a relationship between Grindr usage and other-objectification, whereby Grindr users were more likely to objectify men compared to MSM not using Grindr. In Study 2, we explored how mating goals may relate to visual self-objectification. We demonstrated that Grindr users with a short-term mating strategy were more likely to present themselves in a sexualized and body-focused manner, and that Grindr users with a long-term mating strategy (i.e., looking for a

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relationship) were less likely to do so. Finally, in Study 3, we found mixed support for predictions that visual and reported objectification were related to risky behaviors on Grindr, and little evidence overall of a relationship between visual and reported objectification.

Across the studies, we found support for the claim that viewing both the self and others in objectifying ways is related to short-term mating goals among MSM on Grindr. Reported self- and other-objectification scores were correlated with a higher frequency of using the app to find sexual partners, ostensibly a short-term mating strategy. Further, our content analysis revealed that men who were looking for short-term relationships on Grindr were more likely to present themselves in an objectifying way in their profile picture (i.e., by self-sexualizing or placing an emphasis on their body). Our findings extend on those by Confer et al. (2010), revealing that short-term mating orientations not only promote an objectifying view of potential mates, but also facilitate objectifying perceptions and presentations of the self.

Although objectification was related to short-term mating strategies on Grindr, such as using the app to find sexual partners, we found little evidence that it was related to unsafe sexual behaviors. We originally argued that, by virtue of facilitating a dehumanizing view of the self or other (e.g., Loughnan et al., 2010), objectification may be related to harmful sex practices. In other words, if a man views himself (or a sexual partner) in an objectifying way, then he may be less likely to engage in sexual practices that demonstrate concern for his own welfare (or the welfare of his partner). However, overall we found little evidence to support this claim. Visual self-objectification (i.e., profile picture sexualization and body focus) was largely unrelated to such practices, and findings were mixed for reported objectification (e.g., correlating negatively with frequency of discussing HIV status, but also negatively with frequency of finding sex partners under the influence of drugs). Overall, our findings suggest that although viewing oneself and one's partner as

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sexual objects facilitates using Grindr to find sexual partners, this does not translate into engaging in more risky behaviors.

Interestingly, as Study 3 revealed, there was little relationship between reported objectification scores (i.e., valuing bodily appearance over bodily competence) and objectifying self-presentation (i.e., self-sexualizing and emphasizing one's body). As predicted, the two reported measures of objectification (self- and other) correlated significantly with each other (Strelan & Hargreaves, 2005), as did the two self-presentation objectification measures. However, correlations between these measures were minimal, with the only marginally significant effect between SOQ and self-sexualization. Given that the two self-presentational strategies were visual forms of *self*-objectification, we potentially anticipated a stronger relationship with SOQ than other-objectification scores. However, overall the findings suggest that a general tendency to view the self in a more objectifying way does not necessarily lend itself to presenting the self in such a way in the specific context of Grindr profiles, at least for body focus. Indeed, it could well be that presenting oneself in a body-focused manner is more tied to non-disclosure of sexual orientation, stemming from a desire to conceal one's identity rather than from a tendency to self-objectify.

Limitations and Future Directions

This paper presents the first empirical exploration of objectification within an online dating context and how this affects the online presentation and behaviors of MSM. However these studies have some limitations that warrant consideration when interpreting their findings. These limitations largely come from the specificities of the sample. For example, Grindr users represent a specific subset of MSM, and thus might differ from the wider gay population in specific ways. It has been argued that Grindr users are particularly homogenous in terms of certain social categories, specifically, being disproportionately Caucasian, young, educated, and stereotypically attractive

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(Zou & Fan, 2016). Given the nature of the app, users are also more likely to be single, and those who are not can be assumed to be in an open relationship or to be concealing their use of the application from their partner. Although this might limit the generalizability of the results to MSM as a whole, it does increase the ecological validity of the study. Similarly, the data presented in this paper might differ from data collected on a different geosocial networking application that is designed for a different subculture of men who have sex with men. *Scruff*, for example, is another application that is similar to Grindr, but is targeted to MSM who are typically older and hairier. Our Grindr-based findings might not be generalizable to all MSM, and thus interpretation of our findings should be with a level of caution.

The reported objectification levels reported in these studies might also have been amplified by the sexual nature of the application, resulting in contextual effects. For example, previous research has demonstrated that using sex goal priming techniques can increase or activate sexual objectification processes (e.g., Confer et al., 2010; Vaes, Paladino, & Puvia, 2011). Although not all men on Grindr are trying to find sex, it is a very sexualized online environment. When individuals log into Grindr (in the case of Study 2) or are asked to think about their Grindr usage (in the case of Study 3), they may therefore have been primed with a type of sex goal activation, resulting in augmented objectification processes. As such, the data presented within might not represent how these Grindr users would present offline. Although this warrants consideration, it does not impact the interpretations of the main hypotheses of this study.

This set of findings leaves several pathways for exploration. One primary limitation of this paper is the assumption that people reporting ‘right now’ on their Grindr profile are indeed oriented toward short-term mating goals. We did not measure long- or short-term mating interests to assess this assumption. Future work could empirically establish that link. An interesting avenue for future work may be to

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experimentally manipulate the variables in question to explore for causal relationships, for example, whether inducing a short-term mating orientation changes online presentation and behaviors among MSM. Finally, future work could examine other online dating apps that have less of a short-term mating focus (e.g., match.com) to examine if objectification occurs to the same extent in such contexts.

Concluding Remarks

Although much research has explored the tendency to objectify the self and others, little research has examined how objectification is manifested in online self-presentation or how this relates to mating orientations. Given the increases in popularity of online dating apps, and their potential for facilitating short-term sexual encounters, it is imperative to understand how objectification and related behaviors occur in online setting. Apps such as Grindr have the potential to be an important tool in the application of sexual health interventions and the education of safer-sex behaviors. For example, Grindr recently added a menu element where people can disclose their HIV status (e.g., ‘negative’, ‘positive', and 'undetectable’) and an information button next to it explaining what these categories mean and where people can have access to relevant information. We believe that further research into the interplay of objectification processes online with both risky and non-risky sexual behaviors is a vital step in how psychology can contribute to contemporary social issues surrounding sexuality and sexual health.

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Table 1

Mean (SD) or Frequency of Variables Used in Content Analysis as a Function of Demographic Information Available on Grindr Profile (N=1400; Study 2).

Variable	Clothed	Shirtless	Total	Statistic statement
Body focus index	.49 (.23)	.73 (.25)	-	**$t(1395) = 17.49$, $p < .001$, $d_{Cohen} = 0.86$****
Age	29.21 (7.70)	29.55 (7.15)	-	$t(1141) = -.69$, $p = .488$, $d_{Cohen} = 0.04$
Ethnicity				
Caucasian	575	227	802	**$\chi^2(1) = 151.00$, $p < .001$**
Asian	112	65	177	**$\chi^2(1) = 12.48$, $p < .001$**
Middle Eastern	9	3	12	$\chi^2(1) = 3.00$, $p = .080$
Latino	15	9	24	$\chi^2(1) = 1.50$, $p = .227$
Other[a]	66	37	103	**$\chi^2(1) = 7.686$, $p = .006$**
Did not disclose	206	76	282	**$\chi^2(1) = 59.92$, $p < .001$**
Relationship status				
Single	610	238	848	**$\chi^2(1) = 163.19$, $p < .001$**
Partnered	41	16	57	**$\chi^2(1) = 10.97$, $p < .001$**
Open relationship	20	12	32	$\chi^2(1) = 2.00$, $p = .157$
Other[b]	8	2	10	$\chi^2(1) = 3.60$, $p = .058$
Did not disclose	**303**	**149**	**452**	**$\chi^2(1) = 52.47$, $p < .001$**
Total				
Entire Sample	**983**	**417**	**1400**	**$\chi^2(1) = 228.18$, $p < .001$**

Note: Body focus index is ratio level of measurement; Clothing index is ordinal level of measurement (scores represent frequency of clothed profiles); Significant statistical statements are presented in boldface; Other[a] is constituted of respondents identifying as Black, South Asian, mixed race or other (*n*'s = 5, 8, 73, & 16, respectively); Other[b] is constituted of respondents who indicated they were dating, married, exclusive, discreet, or committed (*n*'s = 6, 1, 1, 1, & 1, respectively).

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Table 2

Coefficients of the Model Predicting Sexualized Content of Profile Picture [Bootstrap Confidence Intervals Based on 1000 Sample] from Reported Purpose for Using Grindr (N=1400; Study 2).

	B	*SE b*	*95% CI for Odds Ratio*			*Wald*	*p*
			Lower	*Odds*	*Upper*		
Constant	-0.819	0.136		.441			
Chats	**-0.297**	**0.141**	**1.021**	**1.346**	**1.775**	**4.426**	**.035**
Dates	0.031	0.149	0.725	0.970	1.298	0.010	.836
Friends	**-0.545**	**0.158**	**1.266**	**1.725**	**2.349**	**11.950**	**.001**
Networking	0.048	0.134	0.733	0.954	1.240	0.125	.724
Relationships	**-0.363**	**0.139**	**1.095**	**1.438**	**1.889**	**6.809**	**.009**
Right Now	**0.918**	**0.127**	**0.311**	**0.399**	**0.513**	**51.965**	**<.001**

Notes: Significant predictors and their statistics are presented in boldface; CI = confidence interval; Final model $\chi^2(6) = 114.40$, $p < .001$; This model predicts if the individual portrayed in the profile is shirtless (vs. fully clothed).

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Table 3

Unstandardised (B) and Standardised (β) Regression Coefficients, and Semi-Partial Correlations for Predictors in a Multiple Regression Model Predicting the Body Focus Index from Reported Reasons for using Grindr (N=1400; Study 2).

	B [95% CI]	*SE B*	*β*	*p*	*Sr*
Constant	99.601 [99.56, 99.64]	.021			
Chats	-0.014 [-0.045, 0.017]	.016	-0.024	.388	-.022
Dates	-0.005 [-0.037, 0.027]	.016	-0.009	.764	-.008
Friends	**-0.085 [0.121, -0.049]**	**.018**	**-0.132**	**<.001**	**-.119**
Networking	0.011 [-0.070, 0.039]	.014	0.021	.437	.020
Relationships	**-0.041 [-0.070, -0.011]**	**.015**	**-0.078**	**.007**	**-.070**
Right Now	**0.112 [0.085, 0.139]**	**.014**	**0.217**	**<.001**	**.208**

Notes: Significant predictors and their statistics are presented in boldface; CI = confidence interval. This model predicts increases in body focus (which corresponds to a decrease in facial prominence).

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Table 4

Profile Picture Characteristics: Frequencies of Body Focus and Sexualization (Study 3).

		N	%
Body Focus	Headshot	78	26%
	Head and upper body	95	32%
	Full body photo	39	13%
	Body only	48	16%
	Photo not of self	18	6%
	No profile photo	22	7%
	Total	300	100%
Sexualization	Non-sexualized	153	51%
	Sexualized (i.e., topless)	57	19%
	Unspecified	90	30%
	Total	300	100%

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Table 5

Descriptive Statistics and Correlation Correlations Among the Objectification Variables and Related Outcomes (Study 3)

	Scale Range	Mean (SD)	1	2	3	4	5	6	7	8	9	10
1.Body Focus	1 – 4		-									
2. Sexualization	0 - 1		**.39*** **	-								
3. SOQ	-25 - +25	5.58 (11.40)	-.07	**.13#**	-							
4. Objectification of men	-25 - +25	8.88 (9.90)	-.07	.07	**.47*** **	-						
5. Frequency of using Grindr	1-7	6.32 (1.10)	-.08	-.04	.09	**.11#**	-					
6. Frequency of using Grindr to find sex partners	1-5	3.18 (1.07)	.04	**.17***	**.17****	**.21*** **	**.19*** **	-				
7. Frequency of having unprotected sex with partners on Grindr	1-5	1.62 (0.96)	**-.13***	-.01	.02	.04	**.13***	**.29*** **	-			
8. Frequency of finding sex partners under the influence of alcohol	1-5	1.93 (0.99)	-.03	-.11	**.13***	.05	.07	**.15****	.03	-		
9. Frequency of finding sex partners under the influence of drugs	1-5	1.30 (0.71)	.01	-.05	**-.11#**	**-.14***	**-.18****	.09	.08	**.37*** **	-	
10. Frequency of discussing HIV status	1-5	3.06 (1.42)	.09	-.04	**-.12***	**-.10#**	**.19*** **	**.19*** **	**.17****	.00	.06	-
11. Sexual orientation disclosure	0-100	71.37 (32.85)	-.11	**.12#**	**.12***	.04	-.03	.01	**.14***	**.14***	.07	.07

Note: *** $p < .001$, ** $p < .01$, * $p < .05$, # $p < .06$; positive correlations with sexualized profile indicate a point-biserial correlation in which the individuals in the picture is topless. Correlations with Body focus are Spearman's Rho correlation coefficients. All other coefficients are

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Pearson's correlation coefficients. Coded variables: body focus (1 = headshot, 2 = head and upper body, 3 = full body, 4 = body focus without head); sexualized (0 = non-sexualized, 1 = sexualized). SOQ = Self-Objectification Questionnaire.

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Figure 1. Example screen shots from a Grindr profile; the screen shows nearby users (left) or an individual profile (right). Images courtesy of Grindr's press kit.

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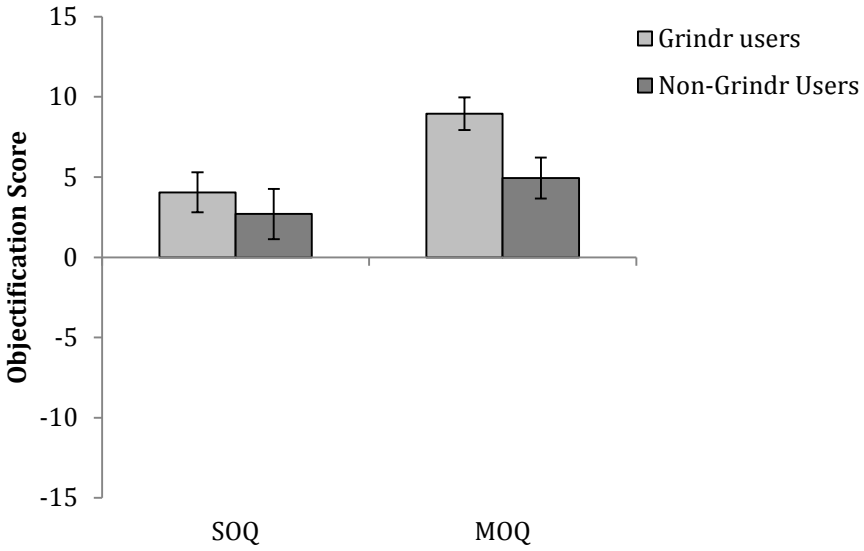


Figure 2. Mean self- and male-objectification scores among current Grindr users, and non-Grindr users (Study 1). Error bars represent ±1 SE.

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