

2022

## Tinder use, gender, and the psychosocial functioning of young adults

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### Citation/Publisher Attribution

Strübel, J. & Petrie, T. A. (2022). Tinder use, gender, and the psychosocial functioning of young adults. *The Journal of Social Media in Society*, 11(2), 159-177. <https://thejsms.org/index.php/JSMS/article/view/1025>

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## Tinder use, gender, and the psychosocial functioning of young adults

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# Tinder Use, Gender, and the Psychosocial Functioning of Young Adults

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Tinder is a mobile dating app where users evaluate possible matches based primarily on posted photos; limited content is provided as to who each user is. Thus, appearance becomes paramount in users' decisions about who to swipe left (i.e., reject) or swipe right (i.e., approve). As such, and consistent with objectification theory, men and women who use this mobile app are treated as objects that are viewed, rated, used, and, in many instances, disposed of. Therefore, in a sample 18-34-year-old men (n=187) and women (n=547), we examined Tinder use and gender in relation to internalization, physical appearance comparison, body satisfaction, self-esteem, perceived sociocultural pressures, depression, negative mood, body surveillance, body

shame, body appreciation, and dietary intent. A series of MANCOVAs were used to examine the relation of gender and Tinder use to the outcomes. Regardless of gender, Tinder use (vs. nonuse) was associated with more distress across a range of measures, including sociocultural pressures, internalization of appearance ideals, body image concerns, and negative affect. Tinder use, however, was not related to psychological well-being or eating pathology. These findings extend previous studies and affirm the potentially deleterious environment that exists for Tinder users.

*Keywords:* Tinder, objectification, internalization, depression, eating pathology

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The mobile dating app, Tinder, has earned the reputation of being a “hook-up” site for people looking for casual sex (Newall, 2015). As of 2021, Tinder had an estimated 66 million users (Iqbal, 2021). Despite its popularity with multiple age groups, Iqbal reports most Tinder users were between the ages of 18-34 years in 2021. Although being “swiped right” (i.e., being liked) can boost egos, validate worth, and/or feed narcissistic tendencies, the scrutiny, evaluation, and objectification that is part of the Tinder process also may make individuals more conscious about their bodies and appearance, and lead to feelings of depression and general psychological distress (Rodgers et al. 2019; Strübel & Petrie, 2017; Tran et al., 2019). Thus, understanding the relationship of Tinder use to psychological health and

functioning deserves attention. To date, however, only a handful of studies have investigated Tinder use in relation to well-being (Her & Timmermans, 2020; Strübel & Petrie, 2017; Tran et al., 2019).

Objectification theory (Fredrickson & Roberts, 1997), as well as sociocultural models of eating disorders (Striegel-Moore & Bulik, 2007), suggest that individuals' socialization experiences, including being treated as a sexual object (i.e., being sexually objectified), regular monitoring of one's appearance, and being exposed to appearance-ideals and expectations, ultimately lead to body image concerns as well as the development of disordered eating attitudes and behaviors and general psychological distress. Consumption of contemporary media (e.g., social media, dating platforms), as well as interactions with family and friends, have been identified as the primary drivers of these potentially harmful socialization and sexualization experiences (Bell et al., 2018; Trekels et al., 2018). Over time and through repeated exposure to messages and pressures about body shape ideals, weight, dieting, appearance, and gender characteristics, men and women begin to internalize these cultural standards and then monitor their physical appearance, often viewing themselves from an objectified perspective (i.e., self-objectification; Moradi, 2010).

## **LITERATURE REVIEW**

### **Social Media, Objectification, Body Image, and Disordered Eating**

Over the last decade, social networking sites (SNS; which includes mobile dating apps like Tinder) have become increasingly popular and influential in individuals' socialization (Tanner & Huggins, 2018; Tiggemann et al., 2020). Like traditional media, SNS can promote societal appearance ideals (Trekels et al., 2018), yet its effects may be even more harmful. First, SNS' information and images are available 24/7 and individuals are constantly prompted to log on, increasing the potential for self- and other-monitoring, comparing, and evaluating (Baker et al., 2019; Hanna et al., 2017). Second, because SNS are image-centric, posting photos becomes an essential component of individuals' self-presentation and promotion. SNS have become contemporary messengers about societal appearance ideals and gender norms, which may compel users to post provocative, even sexualized, photos in hopes of receiving "likes" or swipes that represent social media's currency of validation (e.g., Hanna et al., 2017; Karsay et al., 2018).

Researchers investigating SNS, such as Facebook and Instagram, have reported associations between usage and internalization, depersonalization, heightened self-awareness, negative mood, and body dissatisfaction (e.g., Baker et al., 2019; Tiggemann et al., 2020). Feedback via SNS, such as “likes”, creates heightened self-awareness and focus on physical appearance, which represent the beginnings of self-objectification (Fredrickson & Roberts, 1997).

Objectification processes, such as internalization, self-monitoring, and other comparisons and evaluations, and body image concerns, are considered to be eating disorder risk factors for both men and women (e.g., Schaeffer & Thompson, 2018; Striegel-Moore & Bulik, 2007). Thus, SNS use, which is related to increases in these psychosocial processes, becomes a potentially predisposing factor for disordered eating. Because photos are a central medium of communication within SNS, social comparisons are inevitable, and may encourage disordered eating as individuals experience a psychological drive to change their appearance to more closely approximate what they see online (Holland & Tiggemann, 2016; Santarossa & Woodruff, 2017). For example, Santarossa and Woodruff (2017) found that people with problematic usage of SNSs were more likely to self-report symptoms and concerns of eating disorders (as measured by the EAT-26) in addition to body image concerns and lower self-esteem. Further, researchers have found significant associations between eating concerns (e.g., Eating Disorder Screen for Primary Care) and specific SNS activities (i.e., viewing photos, seeking feedback), as well as the frequency of social media use (measured through overall time spent on SNSs per day/week; Holland & Tiggemann, 2016).

### **Social Media and Psychological Well-Being**

An alternative perspective is that SNS involvement (e.g., time spent on SNS) can be beneficial, particularly for users who experience low self-esteem and have few offline social interactions (e.g., Cavazos-Rehg et al., 2020; Steinfeld et al., 2008). The hypothesis is that social connections created through online activities can provide low self-esteem users with social validation, which may be lacking in their in-person interactions. Yet, over time, if users do not receive validation or affirmation from their online “friends”, they may experience further erosion of self-esteem and increases in intra- and inter-personal insecurities (Hanna et al., 2017; Kross et al., 2013). Wilcox and Stephen (2013) have

suggested that the self-esteem resulting from social media interactions is temporary and, over time, will lead to lower self-control. Thus, although there may be some beneficial effects to SNS involvement, for most users those effects appear to be transitory.

Furthermore, longer and more frequent use of SNS seems to be associated with a diminution of esteem and, perhaps, an increasingly negative sense of the physical self (Hanna et al., 2017; Sherlock & Wagstaff, 2018), as well as higher levels of depressive symptoms and negative mood states (Sherlock & Wagstaff, 2018; Tiggemann et al., 2020).

### **Tinder as a Sociocultural Experience**

Although researchers have begun to establish negative associations between SNS usage and body image and psychological health (e.g., Cavazos-Rehg et al., 2020; Sherlock & Wagstaff, 2018), research has only begun to look at dating apps, such as Tinder (e.g., Her & Timmermans, 2020; Strübel & Petrie, 2017; Sumter et al., 2017; Tanner & Huggins, 2018). Tinder's popularity has grown exponentially since its inception in 2012, and some researchers have argued that Tinder usage is primarily motivated by curiosity, love, and entertainment (Sumter et al., 2017; Tanner & Huggins, 2018). Tinder also is an avenue for sexual "hookups" and for users to put their physical selves on display for evaluation and public comment (Newall, 2015; Ranzini & Lutz, 2017). As such, Tinder may provide users with social gratification in the form of direct feedback about appearance (Her & Timmermans, 2020; Tanner & Huggins, 2018). Thus, for the estimated 66 million adult Tinder users (Iqbal, 2021), being "swiped" becomes a behavioral manifestation of social comparisons and being "swiped right" represents a validation of attractiveness and worth (Tanner & Huggins, 2018).

Tinder may be particularly problematic for men's and women's well-being because of its hyper-focus on physical appearance, which is used as the primary mechanism for evaluating potential matches, whether for friendship or casual sexual hookups (Krüger & Spilde, 2020). Across broad samples of adult men and women, researchers (Strübel & Petrie, 2017; Tran et al., 2019) have found that simply being a dating app user, including Tinder, is associated with greater odds of engaging in unhealthy weight control behaviors (e.g., vomiting) and with greater distress about appearance and body. For example, Strübel and Petrie (2017) found that regardless of gender, Tinder users displayed higher levels of internalization, body surveillance, body dissatisfaction, and body shame than did

nonusers. However, studies of online dating also have suggested that the relationship between dating app usage and some outcomes may vary by gender, such as higher body shame (e.g., Rodgers et al., 2019) and lower self-esteem (e.g., Strübel & Petrie, 2017) in men. This may be especially problematic for men on Tinder where women are more discerning when it comes to who they decide to right swipe (Iqbal, 2021). Coupled with the fact that far fewer women use Tinder, men may believe they need to “right swipe” with high frequency to increase their chances of finding someone who might like them in return (www.statista.com). Yet, in doing so, they put themselves in an emotionally vulnerable position and face increased odds of being rejected by these potential connections. Conversely, other researchers have suggested that, because of traditional gender roles and expectations, women will be more likely than men to invest time and effort in their appearance, present themselves in sexually appealing ways (e.g., through photos), be objectified (other- and self-), and ultimately, experience body shame and dissatisfaction (e.g., Bell et al., 2018; Krüger & Spilde, 2020; Ranzini & Lutz, 2017; Tiggemann et al., 2020).

### **Purpose**

Given emerging evidence regarding the deleterious connections between SNS and dating app use and psychological well-being, we extended our initial study of Tinder use and psychological functioning (Strübel & Petrie, 2017) by targeting single, young adults (ages 18-34 years), assessing new health-related constructs (e.g., eating pathology, appearance pressures), and including additional measures within previously tested constructs (e.g., body image). We again examined Tinder use and gender in relation to these outcomes. We hypothesized that Tinder users would report higher levels of distress across each construct. We also included gender as an independent variable along with Tinder use to test the interaction but did not make any specific predictions given the lack of consistency in past research findings regarding how men and women may differ in how they experience and respond to SNS use (e.g., Hawes et al., 2020; Lonergan et al., 2019; Santarossa & Woodruff, 2017).

## METHOD

### Participants and Procedure

We solicited undergraduate and graduate students, aged 18-34 years, from two private and two public universities located in three geographic areas of the U.S. With IRB approval, we recruited students through fliers, class announcements and departmental research websites to participate in our online survey of social media use and psychological functioning. Students provided consent and then anonymously completed the survey; only course extra credit was offered. We oversampled the students to ensure sufficiently large groups of single (and not in a committed relationship) male and female Tinder users and nonusers; 734 met our age, relationship, and Tinder criteria.

Tinder users were 127 women (71.8%) and 50 men (28.2%); mean age was 20.45 years ( $SD = 2.31$ ); 39 (22.0%) identified as Latinx. The majority were White ( $n = 136$ ; 76.8%) and undergraduates (92.7%). Non-Tinder users were 420 women (75.4%) and 137 men (24.6%); mean age was 20.44 years ( $SD = 2.62$ ); 126 (22.6%) identified as Latinx. The majority were White ( $n = 371$ ; 66.6%) and undergraduates (95.7%). There were no gender differences on Tinder use,  $\chi^2(1) = .944$ ,  $p = .331$ .

### Instruments

**Demographics and Tinder use.** Participants indicated their Tinder account status (YES/NO) and, if yes, how often they logged on (*never, once a month, 2-3 times a month, once a week, 2-3 times per week, 4-5 times per week, daily, 2-3 times per day, 4-6 times per day, once an hour, 2 or more times per hour*). Consistent with recent research (Tran et al., 2019) and so we could make direct comparisons to our past study (Strübel & Petrie, 2017), we categorized Tinder use as: (a) Tinder user (Tinder account *and* logged on 2-3 times per month or more); and (b) Nonuser (no Tinder account).

**Sociocultural pressures.** We examined the pressures participants experienced to be lean or to lose weight from friends, family, romantic partner, and media (Stice & Agras, 1998). Participants responded from 1 (*never*) to 5 (*always*); each pressure's total score was the mean of the four sources. Cronbach's alphas were .72 (lean) and .76 (lose weight).

**Internalization and social comparisons.** We used the thin and athletic internalization factors from the Socio-cultural Attitudes Towards Appearance Scale (SATAQ-3; Thompson et al., 2004). Participants responded from 1 (*strongly disagree*) to 5



(*strongly agree*); each factor's total score was the mean. Cronbach's alphas were .80 (thin) and .90 (athletic).

We used the five-item Physical Appearance Comparison Scale (PACS; Thompson et al., 1991). Participants responded from 1 (*definitely disagree*) to 5 (*definitely agree*); total score was the mean. Cronbach's alpha was .89.

**Body image.** We used the eight-item Body Surveillance Scale (McKinley & Hyde, 1996) to assess body objectification. Participants responded from 1 (*strongly disagree*) to 7 (*strongly agree*); total score was the mean. Cronbach's alpha was .81.

We used the four-item body shame scale (Tripp & Petrie, 2001). Participants responded from 1 (*definitely disagree*) to 5 (*definitely agree*); total score was the mean. Cronbach's alpha was .91.

We assessed body satisfaction using the body factors from the Body Parts Satisfaction Scale for Men (BPSS-M; McFarland & Petrie, 2012) or the Body Parts Satisfaction Scale for Females (BPSS-F; Petrie et al., 2002). Participants rated their satisfaction with different body parts from 1 (*extremely dissatisfied*) to 6 (*extremely satisfied*); total score for each scale was the mean. Cronbach's alphas were .96 (men) and .89 (women).

We used the 12-item Body Appreciation Scale – 2 (Tylka & Wood-Barcalow, 2015). Participants responded from 1 (*never*) to 5 (*always*); total score was the mean. Cronbach's alpha was .96.

**Negative affect.** We used 24 items from the Positive and Negative Affect Schedule to measure sadness, anger, guilt, and fear (PANAS; Watson et al., 1988). Considering the past three months, participants responded from 1 (*very slightly or not at all*) to 5 (*extremely*); total score for each affect was the mean. Cronbach's alphas ranged from .90 to .93.

**Psychological well-being.** We used the 10-item Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965). Participants responded from 1 (*strongly disagree*) to 5 (*strongly agree*); total score was the mean. Cronbach's alpha was .90.

We used the Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001) to measure depressive symptomatology. Participants responded from 0 (*not at all*) to 3 (*nearly every day*); total score was the sum. Cronbach's alpha was .94.

**Eating pathology.** We used the 9-item Dietary Intent Scale (DIS; Stice, 1998).

Participants responded from 1 (*never*) to 5 (*always*); total score was the sum. Cronbach's alpha was .93.

We used the EDE-Q (Fairburn & Beglin, 1994) Restraint (e.g., avoidance of eating) and Eating Concerns (e.g., guilt about eating) subscales. Each item is rated along a 7-point scale (e.g., from "no days" to "every day") and scored from 0 to 6; each subscale's total score was the mean. Cronbach's alphas were .87 (restraint) and .80 (concerns).

### **Data Analysis**

Missing data did not exceed 0.1%, thus we used mean substitution. All measures' distributional properties (e.g., skewness, kurtosis) were within normal limits. Our IVs were gender (male and female) and Tinder use (user or nonuser). We grouped our DVs as: (a) sociocultural pressures (lean, lose weight); (b) internalization (general, athletic, comparisons); (c) body image (satisfaction, shame, surveillance, appreciation), (d) negative affect (sadness, guilt, anger, fear); (e) psychological well-being (self-esteem, depression); and (f) eating pathology (dietary intent, restraint, concerns). Because of different scaling, we standardized each measure's total score for our multivariate analyses; unstandardized means and *SDs* are reported in Table 1.

We tested each set of DVs via separate MANCOVAs (BMI as covariate), evaluating the interaction term first and the Tinder main effect next. Consistent with recommendations for improving multivariate post-hoc testing (Barton et al., 2016), we used descriptive discriminant analysis (DDA). DDA creates a linear composite DV (a function based on the observed measured variables) that maximizes IV group differences without the Type I error inflation common with post-hoc ANCOVAs. Within DDA, we examined the strength of the measured variables on each linear composite DV (i.e., structure coefficients), interpreting coefficients in excess of .40 (Tabachnick & Fidell, 2013). We then compared group centroids to determine significant IV differences with each identified linear composite DV. We set alpha at .05 for all analyses.

Table 1

*Unstandardized Means and Standard Deviations by Tinder Use*

	<i>Tinder User</i>	<i>Tinder NonUser</i>
	<i>(n = 177)</i>	<i>(n = 557)</i>
Variables	<i>M (SD)</i>	<i>M (SD)</i>
PSPS-Lean	2.47 (0.87)*	2.08 (0.84)
PSPS-Lose	2.26 (0.96)*	1.89 (0.87)
SATAQ-Thin	3.39 (0.79)*	3.21 (0.89)
SATAQ-Athletic	3.08 (0.97)*	2.83 (1.03)
PACS	3.80 (0.87)*	3.53 (1.02)
BPSS-Body	3.46 (1.04)*	3.61 (1.09)
Shame	3.17 (1.12)	3.10 (1.19)
Surveillance	4.81 (0.97)*	4.54 (1.02)
BAS-2	3.45 (0.84)	3.48 (0.95)
PANAS-Fear	2.39 (0.93)*	2.18 (0.93)
PANAS-Anger	2.15 (0.83)*	1.98 (0.86)
PANAS-Guilt	2.35 (1.12)*	2.16 (1.08)
PANAS-Sad	2.63 (1.17)*	2.54 (1.16)
SES	3.38 (0.77)	3.51 (0.82)
Depression	11.85 (8.25)	10.97 (7.65)
DIS	2.14 (0.89)	2.10 (0.93)
EDEQ-Restraint	1.48 (1.35)	1.54 (1.49)
EDEQ-Eating	1.09 (1.22)	1.06 (1.18)

*Note.* PSPS= Perceived Sociocultural Pressures Scale, Lean Body and Lose weight; SATAQ= Sociocultural Attitudes Toward Attractiveness Questionnaire-3, General and Athletic; PACS= Physical Appearance Comparison Scale; BPSS= Body Parts Satisfaction Scale for Men and Women – body factor; Shame= Body Shame Scale; Surveillance= Body Surveillance Scale; BAS= Body Appreciation Scale-2; PANAS= Positive and Negative Affect Schedule-X; SES= Rosenberg Self-Esteem Scale; Depression= Patient Health Questionnaire-9; DIS= Dietary Intent Scale; EDE-Q= Rest and Weight - Eating Disorder Examination Questionnaire, Restraint and Weight concerns subscales.

\* designates significant dependent variable on the linear composite within the DDA and a significant mean group difference between Tinder users and Nonusers.

## RESULTS

In Table 2, we present the correlations among measured variables by Tinder Use. Across the six initial MANCOVAs, gender by Tinder interactions were not significant ( $p_s > .25$ ); BMI was significant in all ( $p_s < .005$ ). Thus, we present only the MANCOVAs and DDAs (where appropriate) for Tinder use. By examining the log determinants and Box's M Test (Barton et al., 2016), we determined that the assumption of homogeneity of covariances was met in each DDA.

Table 2 Correlations Among Measured Variables for Tinder Users (N = 177) and NonUsers (N = 557)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. PSPS-Lean	-	.854	.458	.210	.414	-.450	.492	.299	-.451	.302	.290	.417	.317	-.430
2. PSPS- Lose	.846	-	.453	.182	.368	-.505	.517	.305	-.478	.311	.320	.467	.330	-.430
3. SATAQ-G	.321	.342	-	.426	.524	-.452	.518	.419	-.462	.196	.196	.359	.297	-.422
4. SATAQ-A	.001	-.004	.253	-	.263	-.109	.163	.087	-.135	.050	.063	.146	.054	-.163
5. PACS	.427	.344	.541	.102	-	-.432	.502	.560	-.436	.187	.181	.333	.284	-.430
6. BPSS-Body	-.480	-.530	-.438	.056	-.394	-	-.705	-.431	.711	-.243	-.299	-.486	-.385	.550
7. Shame	.557	.534	.410	.042	.495	-.691	-	.438	-.704	.308	.272	.526	.403	-.607
8. Surveillance	.316	.278	.419	-.131	.618	-.298	.416	-	-.461	.142	.189	.273	.281	-.311
9. BAS	-.435	-.398	-.382	-.446	-.446	.640	-.688	-.410	-	-.304	-.341	-.593	-.456	.766
10. PANAS-Fr	.230	.239	.276	.311	.311	-.235	.324	.224	-.368	-	.538	.591	.616	-.432
11. PANAS-An	.215	.177	.097	.190	.190	-.195	.250	.061	-.263	.599	-	.606	.570	-.407
12. PANAS-Gu	.286	.267	.366	.061	.400	-.359	.478	.309	-.531	.626	.621	-	.693	-.665
13. PANAS-Sad	.272	.205	.259	-.023	.346	-.370	.353	.173	-.385	.622	.615	.708	-	-.566
14. SES	-.301	-.234	-.299	.000	-.410	.455	-.544	-.261	.720	-.450	-.405	-.693	-.584	-
15. Depression	.252	.207	.269	.097	.331	-.349	.378	.094	-.403	.474	.500	.618	.640	-.571
16. DIS	.483	.597	.439	.056	.270	-.315	.347	.280	-.323	.212	.120	.258	.086	-.165
17. EDEQ-Rest	.371	.433	.356	.212	.279	-.227	.299	.177	-.185	.278	.290	.294	.147	-.131
18. EDEQ-Eat	.460	.549	.398	.057	.382	-.425	.501	.298	-.443	.322	.245	.354	.254	-.329

### Sociocultural Pressure

Tinder main effect was significant, Wilk's  $\Lambda = .967$ ,  $F(2, 728) = 12.47$ ,  $p = .000$ , partial  $\eta^2 = .033$ . DDA revealed one significant function (i.e., linear composite DV), Wilk's  $\Lambda = .962$ ,  $\chi^2(2) = 28.28$ ,  $p = .000$ ,  $R^2_c = .04$ . Pressures to be lean ( $r_s = .99$ ) and lose weight ( $r_s = .87$ ) contributed significantly to the linear composite. Based on group centroid analysis,  $F(1, 731) = 28.77$ ,  $p = .000$ , partial  $\eta^2 = .04$ , Tinder users ( $M = .34$ , 95% CI [.20 to .48]), vs. nonusers ( $M = -.107$ , 95% CI [-.61 to -.28]), scored higher, indicating they experienced more pressures to be lean and lose weight.

## Internalization

Tinder main effect was significant, Wilk's  $\Lambda = .980$ ,  $F(2, 727) = 5.00$ ,  $p = .002$ , partial  $\eta^2 = .02$ , as was the DDA function, Wilk's  $\Lambda = .980$ ,  $\chi^2(3) = 14.68$ ,  $p = .002$ ,  $R^2_c = .02$ . All three measures contributed significantly: internalization-thin ( $r_s = .60$ ), internalization-athletic ( $r_s = .75$ ), and appearance comparisons ( $r_s = .82$ ). Based on group centroid analysis,  $F(1, 731) = 14.52$ ,  $p = .000$ , partial  $\eta^2 = .02$ , Tinder users ( $M = .25$ , 95% CI [.10 to .40]) scored significantly higher than nonusers ( $M = -.08$ , 95% CI [-.16 to .00]), experiencing more internalization and making more comparisons.

## Body Image

A significant Tinder effect emerged, Wilk's  $\Lambda = .985$ ,  $F(4, 726) = 2.77$ ,  $p = .027$ , partial  $\eta^2 = .015$ . With the significant DDA function, Wilk's  $\Lambda = .983$ ,  $\chi^2(4) = 12.81$ ,  $p = .012$ ,  $R^2_c = .017$ , surveillance ( $r_s = .83$ ) and satisfaction ( $r_s = -.47$ ), but not shame ( $r_s = .30$ ) or appreciation ( $r_s = -.12$ ), contributed significantly. Group centroid analysis indicated that Tinder users ( $M = .24$ , 95% CI [.08 to .38]), vs. nonusers ( $M = -.07$ , 95% CI [-.16 to .01]), scored higher and were more likely to self-objectify and be less satisfied,  $F(1, 731) = 12.42$ ,  $p = .000$ , partial  $\eta^2 = .02$ .

## Negative Mood

Tinder effect was significant, Wilk's  $\Lambda = .982$ ,  $F(4, 726) = 3.34$ ,  $p = .010$ , partial  $\eta^2 = .018$ , as was the DDA function, Wilk's  $\Lambda = .987$ ,  $\chi^2(4) = 9.53$ ,  $p = .049$ ,  $R^2_c = .013$ . All negative moods contributed: sadness ( $r_s = .92$ ), fear ( $r_s = .83$ ), anger ( $r_s = .74$ ), and guilt ( $r_s = .65$ ). Based on group centroid analysis,  $F(1, 731) = 9.69$ ,  $p = .002$ , partial  $\eta^2 = .013$ , Tinder users ( $M = .20$ , 95% CI [.06 to .35]) scored significantly higher than nonusers ( $M = -.07$ , 95% CI [-.15 to .02]), suggesting that users experienced more negative affect.

## Psychological Well-Being

Tinder effect was not significant, Wilk's  $\Lambda = .996$ ,  $F(2, 728) = 1.28$ ,  $p = .278$ , partial  $\eta^2 = .004$ , suggesting that users and nonusers did not differ on their well-being.

## Eating Pathology

Tinder effect was not significant, Wilk's  $\Lambda = .999$ ,  $F(3, 727) = 0.21$ ,  $p = .893$ , partial  $\eta^2 = .001$ ; users and nonusers did not differ on these measures of eating pathology.

## DISCUSSION

Consistent with our past study (Strübel & Petrie, 2017), the tenets of sociocultural perspectives (e.g., Striegel-Moore & Bulik, 2007) and objectification theory (Moradi, 2010), regardless of participant gender, Tinder use (vs. nonuse) was associated with significantly elevated scores (representing more distress) across a range of measures, including sociocultural pressures, internalization processes, body image, and negative affect. Tinder use, however, was not related to participants' psychological well-being or eating pathology. The use of Tinder infers a level of self-promotion and impression management (e.g., selection of "attractive" photos) because it is the principal means of presenting one's ideal self to potential partners. Furthermore, Tinder use assumes men's and women's willingness to undergo examination and evaluation by others as they peruse each profile. Thus, the higher levels of psychological distress and body image concerns reported by the Tinder users in this study may have resulted from engaging in these self-promotional processes and, perhaps, not having their efforts validated by being "swiped right" (i.e., selected), which defines a user's success on Tinder. The uncertainty of one's desirability by potential partners may cause or exacerbate distress.

Interestingly, and consistent with past SNS studies (e.g., Lonergan et al., 2019), gender did not interact with Tinder use to differentiate among the young adults' psychological functioning and body image concerns. Typically, women have reported higher levels of body image, and eating, concerns (e.g., Schaefer & Thomson, 2017), suggesting that objectification processes (e.g., internalization, body surveillance) and general sociocultural pressures may not be as salient to men. However, regarding participation on potentially sexualizing SNS (i.e., Tinder), such gender differences appear to fall away. For the women *and* men in our study, using their Tinder profile (even minimally) was associated with equally high levels of sociocultural pressures, internalization, self-objectification, body disparagement, and negative emotional states, which corroborates findings from past research (e.g., Rodgers et al., 2019; Tran et al., 2019). Based on our findings and those of other researchers (e.g., Daniels, 2020; Lonergan et al., 2019), being male does not appear to provide a protection against the potentially deleterious effects associated with SNS use, such as being a Tinder user.

Our findings also extend past studies (e.g., Strübel & Petrie, 2017) in several important ways. First, we included a measure of sociocultural pressures, finding that Tinder use was associated not only with internalization of the thin ideal, but also experiencing more pressures to be thin and lean/athletic. These results make sense given that the experience of societal pressures has been identified as a precursor to internalization for women and men (Moradi, 2010). Second, consistent with recommendations for SNS research (Karsay et al., 2018), we extended how we conceptualized internalization, measuring both the thin, and athletic, ideals. From our findings, it appears that Tinder users have adopted schema regarding the importance of being not only thin, but also having athletic looking bodies. Third, given that pressures and objectification processes (e.g., internalization) ultimately may result in eating pathology (Moradi, 2010), we tested this construct as well. Tinder use was not associated with the young adults' eating pathology, despite users reporting significantly more internalization, body image concerns and negative affect, all of which are precursors in the development of disordered eating. Given our cross-sectional methodology, we are unable to determine if extended Tinder use might lead to increases in eating pathology; future studies could address this question through longitudinal designs.

Finally, we expanded our conceptualization of psychological well-being by including self-esteem *and* depression. Unlike in our past study (Strübel & Petrie, 2017), where Tinder use and gender interacted in relation to self-esteem, we found no significant associations with this construct (or depression); Tinder users, however, did report higher levels of negative affect. Similar to eating pathology, Tinder use's influence on psychological well-being, which may be viewed as more stable than mood states, may take time to emerge and thus might be seen more readily in men and women who are long-term users or who are consistently "swiped left" (i.e., not selected) and thus receive no positive validation as to their attractiveness. Longitudinal and qualitative methodologies would be able to delineate among these and other possible explanations.

### **Limitations and Directions for Future Research**

We incorporated recent SNS research recommendations (Karsay et al., 2018) to improve upon and extend past research (Strübel & Petrie, 2017); specifically, we delineated the young adults we studied, included additional constructs and measures, and

used recommended statistical procedures for post-hoc tests. Even so, our study had limitations, such as a cross-sectional methodology and sampling only college students. These limits, though, do not undermine the validity of our findings, which extend past research (e.g., Rodgers et al., 2019; Santarossa & Woodruff, 2017; Tran et al., 2019) and are consistent with theoretical predictions (Moradi, 2010; Striegel-Moore & Bulik, 2007).

Evidence regarding the potentially deleterious effects of dating app usage is accumulating (e.g., Tran et al., 2019), though researchers will want to extend the methodologies they are using to examine the temporality of relationships and understand how users' experiences with dating apps affect them at a fundamentally human level. Interviewing users, which would allow them to share their lived experiences, could illuminate the connections they make between their involvement on dating apps and how they think and feel about themselves.

### **Implications**

Our findings have implications for interventions (e.g., media literacy programs). First, although current body image interventions (e.g., Stice et al., 2019) primarily have been directed towards women, our findings suggest that men report equally negative views of self and body in relation to their SNS use (and not just in relation to Tinder; e.g., Rodgers et al., 2019). Thus, programs may be expanded to address men's socialization and objectification experiences, particularly those associated with SNS and dating app usage, and tested to determine their efficacy. Second, interventions generally have been focused on educating women on how media outlets communicate standards of beauty that are unattainable for most and how they can behave in ways to counter such pressures (Stice et al., 2019). Given our findings, as well as those from studies on SNS and dating apps (e.g., He et al., 2020; Rodgers et al., 2019; Tran et al., 2019), interventions will need to broaden their definition of what is considered to be "media", address the unique dimensions of online platforms, such as 24/7 access and comparisons made to peer groups, and help women and men become more discriminating users of the SNS and dating apps and the information and images that are presented there.

Finally, within body image prevention programs, social media can be used as a tool to facilitate growth and development among participants. For example, it can serve as a forum where participants can support each other as they expose, and challenge,



sociocultural appearance ideals. Nonetheless, when working individually with men and women who present with body image concerns and/or low self-esteem, psychologists might do well to inquire about their clients' use of SNS and dating platforms. Further, they may want to discuss the purposes of such usage and the potential effects their involvement may be having on their psychological well-being.

## Conclusion

This study represents one of the few to examine the connection between Tinder use and men's and women's psychosocial functioning. Consistent with sociocultural perspectives (Striegel-Moore & Bulik, 2007) and objectification theory (Moradi, 2010), we found that being actively involved with Tinder was associated with the experience of societal pressures to be thin and lean, body dissatisfaction, self-objectification, internalization of societal appearance ideals, comparing oneself physically to others, and negative affect. Our findings suggest that being involved with Tinder is associated with decrements in several aspects of psychosocial functioning and these negative effects exist equally for male and female users. The objectifying effects of SNS and dating apps, however, may be more pernicious than those associated with more traditional media outlets because of its availability, constant scrutiny and evaluation by others, and portrayal of similar others' life narratives that seem almost perfect.

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## **Funding and Acknowledgements**

The authors declare no funding sources or conflicts of interest.