



## UvA-DARE (Digital Academic Repository)

### Gender Roles and Mobile Dating applications

*Exploring Links Between User Characteristics and Traditional Gender Expressions in Self-Presentations*

Konings, F.; Sumter, S.R.; Vandenbosch, L.

**DOI**

[10.1007/s10508-024-02884-8](https://doi.org/10.1007/s10508-024-02884-8)

**Publication date**

2024

**Document Version**

Final published version

**Published in**

Archives of Sexual Behavior

**License**

Article 25fa Dutch Copyright Act (<https://www.openaccess.nl/en/policies/open-access-in-dutch-copyright-law-taverne-amendment>)

[Link to publication](#)

**Citation for published version (APA):**

Konings, F., Sumter, S. R., & Vandenbosch, L. (2024). Gender Roles and Mobile Dating applications: Exploring Links Between User Characteristics and Traditional Gender Expressions in Self-Presentations. *Archives of Sexual Behavior*, 53(6), 2361–2376. <https://doi.org/10.1007/s10508-024-02884-8>

**General rights**

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

**Disclaimer/Complaints regulations**

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

*UvA-DARE is a service provided by the library of the University of Amsterdam (<https://dare.uva.nl>)*



# Gender Roles and Mobile Dating Applications: Exploring Links Between User Characteristics and Traditional Gender Expressions in Self-Presentations

Femke Konings<sup>1,2</sup> · Sindy R. Sumter<sup>3</sup> · Laura Vandebosch<sup>1,2</sup>

Received: 6 September 2023 / Revised: 25 April 2024 / Accepted: 26 April 2024 / Published online: 6 June 2024  
© The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature 2024

## Abstract

This linkage study examined the prevalence of traditional gender expressions in the textual and visual profile cues on mobile dating applications (MDA) (*n*biographies = 396, *n*pictures = 1352) of 396 young adults' (*M*age = 22.39 years, *S*D = 2.86, 73% women) with attention to users' gender, sexual orientation, and platform type. For 184 users (*M*age = 22.10 years, *S*D = 2.91, 75% women) media content data were linked to self-report survey data. Results showed that individuals aligned their self-presentations with traditional gender roles and expectations, and this link depended on their gender. No significant differences according to individuals' sexual orientation or platform type were found. Individuals' (hyper-) gender orientation also related to engagement in traditional gender expressions. Specifically, women with a stronger feminine gender orientation expressed more traditional femininity in their MDA profiles. For men, no significant associations between (aspects of) a masculine gender orientation and expressing traditional masculinity in their MDA profiles were found. Future research should further disentangle selective gendered self-presentations.

**Keywords** Sex roles · Online dating · Selective self-presentation · Gender norms

## Introduction

Mobile dating applications (MDAs) are becoming the most common way to meet romantic partners (e.g., Anderson et al., 2020; Rosenfeld et al., 2019). MDAs are smartphone applications on which users can present themselves as an available romantic/sexual partner online through predominantly visual cues (i.e., profile pictures). Due to their picture-based infrastructure, MDAs have been criticized as superficial “meat-inspection machines” (Yeo & Fung, 2018). Specifically, the reduced-cue environment and abundance of available partners on MDAs, are believed to contribute to peripherally

liking or rejecting potential partners based on heuristics (Petty & Briñol, 2012). In such peripheral-decision making processes, stereotypes can serve as heuristics for judgments (e.g., Wegener et al., 2006). In the romantic realm, these stereotypes may particularly be in line with gendered mate values (e.g., being caring for women, having status for men; Fisher et al., 2008). Hence, MDAs may intensify traditional gender role dynamics. Given that the endorsement of hyper-gender roles may result in detrimental outcomes such as gender-based violence (e.g., Aubert & Flecha, 2021), it is critical to explore the prevalence of traditional (hyper-) gender expressions in the MDA context.

To address these gaps in the literature, this pre-registered linkage study among young adults first documents the prevalence of traditional (hyper-) gender expressions in MDA users' textual and visual profile cues across two popular MDA platforms (i.e., Tinder and Bumble). Second, it explores who may be particularly susceptible to display such traditional (hyper-) gender expressions by exploring individual differences in users' gender, sexual orientation, and used platform. Moreover, the current study adopts an innovative approach in linking the prevalence of traditional

✉ Femke Konings  
femke.konings@kuleuven.be

<sup>1</sup> Leuven School for Mass Communication Research, Department of Communication Science, Faculty of Social Sciences, KU Leuven, 3000 Leuven, Belgium

<sup>2</sup> Research Foundation Flanders, Brussels, Belgium

<sup>3</sup> Amsterdam School of Communication Research, Research Institute in Communication Science, Faculty of Social and Behavioral Sciences, University of Amsterdam, Amsterdam, The Netherlands

(hyper-) gender expressions in their MDA profiles to MDA users' self-reported (hyper-) gender orientation.

### Gender Schema Theory and Self-Presentation

Individuals are socialized into their gender according to their biological sex from an early age onwards. Traditionally, individuals of the male biological sex are socialized into being masculine whereas individuals of the female biological sex are socialized into being feminine (Leaper & Friedman, 2007). Gender socialization is invoked to organize human behavior along the male–female dichotomy. In particular, children learn gender roles and expectations that are associated with their biological sex (e.g., Bussey, 2011). Traditional Western masculine socialization entails normative themes such as self-reliance, pursuit of success/status, competitiveness, and control of emotional expression (e.g., Levant et al., 2020). Contrastingly, traditional feminine socialization endorses normative themes such as domesticity, attractiveness, sweetness, and subordination to men (e.g., Mahalik et al., 2005; Parent & Moradi, 2011).

Gender schema theory (Bem, 1981) proposes that individuals internalize these traditional sociocultural gender roles and expectations within their own cognitive gender schemata to different degrees. The degree to which someone has internalized these gender roles and expectations into their schemata is referred to as their gender orientation. When someone's gender orientation is strong, individuals are referred to as having a hyper-gender orientation which can be hyper-masculine (Mosher & Sirkin, 1984) or hyper-feminine (Murnen & Byrne, 1991). Hyper-masculinity is defined as an “exaggerated adherence to a stereotypic masculine gender role”, which includes callused sex attitudes, seeing danger as exciting and seeing violence as manly (Mosher & Sirkin, 1984). An extreme continuation of endorsing such gendered (sexual) roles relates to worrisome ideas such as rape myth acceptance (Grubb & Turner, 2012), which are stereotypes that trivialize the seriousness of rape and the harm for rape victims (e.g., Hald et al., 2010; Vangeel et al., 2020). Findings of a meta-analysis showed that rape myth acceptance is also related to gender-based (sexual) violence and in particular, sexually aggressive behavior toward women (Suarez & Gadalla, 2010).

Hyper-femininity is defined as an “exaggerated adherence to a stereotypic feminine gender role” which, includes the fundamental importance of having a relationship with a man, the use of physical attributes and sexuality to attract men and to obtain relationships with them, the expectation that men are dominant, sometimes forceful initiators of sexual relationships (Murnen & Byrne, 1991). Hyper-femininity also relates to attraction to men who engage in bullying behavior, to justifying sexual coercion from potential romantic desirable partners (McKelvie & Gold,

1994; van Oosten et al., 2015) as well as tolerating sexual subordination and objectification (Murnen & Byrne, 1991). Both hyper-masculinity and hyper-femininity are related to paying greater attention to others who are engaging in traditional gender expressions (e.g., van Oosten et al., 2017).

Individuals' gender orientation regulates their behavior and hyper-gender individuals usually strongly conform to traditional sociocultural gender roles and expectations (Bem, 1981). Traditional gender behaviors may, for instance, become explicit in which traits (e.g., being sweet for a women), physical characteristics (e.g., men stressing a tall body height, women stressing a thin body), occupational statuses (e.g., men stressing professions like truck driver, women associating themselves with caring professions like being a nurse; Eisend, 2019), and language (e.g., Piersoul & Van de Velde, 2023) individuals present to others. Individuals' gender behaviors (i.e., self-presentations) may also become integrated in their self-views as their true self-concept (e.g., gender orientation) is theorized to shift towards the self they are presenting in a public space (Gonzales & Hancock, 2011). Hence, individuals gender orientation and gender behaviors seem to be reciprocally connected and to reinforce one another.

Gender literature further suggests that there are differences in the extent to which individuals internalize traditional gender beliefs into their gender orientation (Budge et al., 2018). Men typically endorse traditional gender roles stronger than women as these roles are often considered more favorable for men. Historically, men who endorsed traditional gender roles were culturally rewarded and attributed a higher social status than those who did not (e.g., non-heterosexual men, women, Connell & Messerschmidt, 2005). Over the past decades, women increasingly endorse fewer traditional feminine roles as a form of resistance against women's subordinate status (e.g., enrolling in STEM field; e.g., Banet-Weiser, 2018).

As for sexual orientation, the adoption of a masculine/feminine orientation sometimes occurs in mixed ways. Some sexual minorities have a lower tendency to conform to traditional gender roles and expectations (e.g., Ferris & Duguay, 2020). Not expressing oneself as traditionally masculine/feminine as a form of resistance within sexual minority groups may contribute to experiencing a sense of belonging and to community building (Rieger & Savin-Williams, 2012). For instance, research on visibility within queer communities indicated that some queer women have a specific aesthetic to make their sexual identity visible to others, which often is perceived as “butch” or masculine (Hayfield et al., 2013). In contrast to these groups of sexual minorities, other sexual minorities do tend to conform to traditional gender roles and expectations; conformity is seen as manner to avoid stigmatization and negative reactions (e.g., Miller & Behm-Morawitz, 2016). In the study of Levahot et al. (2011), some lesbian women indicated to present themselves as traditionally feminine as a result of

internalized homophobia and sexual identity concealment in heteronormative spaces. Moreover, due to cultural conflation of gay sexuality with femininity, queer men often experience the pressure to engage in traditional masculine self-presentations to denote that they are more masculine than feminine (e.g., Miller & Behm-Morawitz, 2016).

### Self-Presentation in the Context of Mobile Dating

MDAs (e.g., Tinder) are among the most commonly used tools for the initiation of romantic and sexual relationships. Recent reports indicate that mobile dating is becoming the most common way to meet romantic partners, displacing traditional intermediaries like friends and family (Anderson et al., 2020; Rosenfeld et al., 2019). According to recent statistics, 323 million people worldwide are currently using MDAs (Curry, 2022). Particularly, young adults report to have ever used a dating platform (18–29 years of age, 53%) and those who identify as lesbian, gay or bisexual (51%, US sample, Vogels & McClain, 2023).

MDAs are designed to present the user as an available sexual/romantic partner online with the aim of connecting with partners who can be located through GPS technology. People use MDAs for a variety of reasons including relational, social, or entertainment purposes (Sumter et al., 2017). On MDAs, users can browse through and select profiles of others that they are interested in. This selection-procedure is predominantly based on visual cues, which enable peripheral, time-efficient and cognitively low-demanding binary decision making in rejecting or liking other users based on their self-presentation (e.g., Duguay, 2017).

Moreover, according to the hyperpersonal model of computer-mediated-communication (CMC; Walther, 2007), the affordances of CMC allow more malleability when presenting oneself online. CMC is more editable, may develop asynchronously, and has limited social-context cues as compared to face-to-face communication (Ellison et al., 2012). As such, in the digital realm, individuals have more opportunities to make selective choices as they can mask unwanted aspects of themselves and emphasize favorable attributes (Walther, 2007). Such selective choices are made by social media users when creating a profile; during this process they carefully craft which information to share in a biography and which profile picture to select (Schreurs & Vandenbosch, 2022).

Research in the field of Techno-self Studies (TSS; Lippicini, 2013) further builds on Walther's CMC literature suggesting that the construction of online identities or self-presentations are a function of new technologies. Platform affordances shape the boundary conditions for interpersonal communication and hence, the possibilities for users' self-presentations (Bucher & Helmond, 2018; Vanherle & Beullens, 2023). Moreover, in terms of platform culture, platform-specific norms may shape the ways in which users' negotiate

their self-presentations. For instance, such platform-specific norms may evoke a homogenization of constructed online identities (i.e., posting idealized pictures of oneself; Bij de Vaate et al., 2018; Lippicini, 2013; Schreurs & Vandenbosch, 2022). More precisely, the interfaces of two of the most popular MDAs, Tinder and Bumble are mostly similar. However, on Tinder either user can initiate the conversation, whereas on Bumble, only women can do so. Tinder is described as an environment for conformity to traditional gender expressions (Berkowitz et al., 2021), whereas Bumble self-stated aim is to change the dynamics of traditional dating by shaking up outdated traditional gender roles and expectations (Bumble, 2024). Considering that affordances are expected to shape user practices, and vice versa (e.g., Lippicini, 2013; Walther, 2007), it thus seems relevant to take into account platform characteristics as a contextual factor.

In sum, it is presumable that individuals' behavior is shaped by their gender, or the gendered expectations associated with their biological sex. Additionally, sexual orientation relates to differing sensitivities in complying to gender norms in certain behaviors in order to avoid stigmatization or to feel a sense of belonging (e.g., Budge et al., 2018). Also, as different platform affordances have been theorized to shape the boundary conditions for interpersonal interactions, and hence, self-presentations (e.g., Lippicini, 2013), it seems likely that different MDA platforms may evoke different self-presentation strategies. Therefore, the current study aims to explore the following research question:

*Research Question 1* To what extent are traditional masculine and feminine expressions portrayed in users' self-presentations in textual and visual MDA cues, depending on their (1) gender, (2) sexual orientation, and (3) the platform they are using?

Literature on courtship dynamics has consistently shown that interactions with (potential) dating partners evoke more selective, favorable self-presentations than interactions with non-dating partner (Ha et al., 2010; Landolt et al., 1995). Dating partners are typically selected based on their "mate value" or "the total sum of characteristics an individual possesses at a given moment and within a particular context that impacts their ability to successfully find, attract and retain a mate" (Fisher et al., 2008, p. 157). Mate values are known to differ between men and women and follow traditional gender roles. Accordingly, dating interactions typically elicit traditional gendered behaviors and self-presentations. For instance, within heterosexual couples, men typically approach women and invest in showing themselves as professionally successful, humorous, and strong, whereas women tend to emphasize their caregiving skills, emotional expressiveness, and overall beauty (e.g., Ha et al., 2010; Landolt et al., 1995; Schwarz & Hassebrauck, 2012). Given that on MDAs, users interact with potential dating partners, mate values are expected to guide digital self-presentations on MDAs.

To further understand how users create their profiles on MDAs, Goffman's (1959) dramaturgical model of social interaction can be applied. This theory suggests that individuals tend to make selective choices when presenting themselves to others (Goffman, 1959). The (imagined) target audience is theorized to be predictive for the selective choices individuals make and the ways in which individuals present themselves (Goffman, 1959). The model explains that individuals tend to emphasize aspects of the self that correspond to the norms of the group to which they want to belong to, in order to optimize their odds of being perceived as desirable and to reduce the likelihood of being rejected or stigmatized (Goffman, 1959). The goal of MDAs is to attract a dating partner (Sumter et al., 2017) and, as outlined above, dating partners are often evaluated according to their endorsement of different mate values, which typically relate to traditional gender roles (e.g., Fisher et al., 2008; Fisman et al., 2006). Although there likely is an overall tendency in dating to favor traditional gender roles, the belief that adhering to gender roles is important for attracting others may still differ between individuals (i.e., subjective norms; Goffman, 1959; Hastings et al., 2011). Accordingly, individuals are expected to alter their selective, gendered self-presentations in MDA profiles depending on the extent to which they have internalized potential partners' gendered expectations in their gender orientation.

As such:

**H1** Men with a stronger masculine orientation (i.e., hyper-masculine) include more traditional masculine expressions in their textual and visual MDA profile cues as opposed to men with a weaker masculine orientation.

**H2** Women with a stronger feminine orientation (i.e., hyper-feminine) include more traditional feminine expressions in their textual and visual MDA profile cues as opposed to women with a weaker feminine orientation.

## Method

### Participants

Participants filled out a background survey and shared screenshots of their MDA profiles. Between April and August 2022, young adults (18–30 years old) were recruited through social media advertisements. Additionally, participants were recruited at frequently visited locations (e.g., railway stations). Lastly, the researchers purposefully recruited at online and offline LGBTQ+ events (e.g., Pride week, Month). Participants were assured that their data would be treated confidentially and gave active informed consent. In the current user-centric approach of data collection, users donated their

data (i.e., screenshots of their MDA profiles). For the participants themselves, this method offers enhanced transparency in which personal information they are sharing with the researchers. In terms of research opportunities, applying such a user-centric approach allows for the collection of personal or sensitive data from participants in an ethical manner (Ohme et al., 2023). Each participant who attentively completed the survey and donated their screenshots was rewarded with a five euro gift card. A pre-data collection registration was created on OSF.<sup>1</sup>

In total, 396 cisgender 18–30 year olds shared screenshots of their MDA profiles, of which 85.10% ( $n = 337$ ) and 14.90% ( $n = 59$ ) were currently using Tinder or Bumble, respectively.<sup>2</sup> The content analytical sample consisted out of 396 biographies and 1352 profile pictures.<sup>3</sup> On average, participants were 22.39 ( $SD = 2.86$ ) years old ( $n_{women} = 73\%$ ). In total 34.8% of participants identified as being not exclusively heterosexual ( $n_{men} = 9.8\%$ ,  $n_{women} = 25\%$ ), The majority of the sample indicated to have a Western-European ethnicity (96.46%).

Part of the participants who donated their profile pictures were also invited to complete a survey ( $n = 184$ ,  $n_{Tinder} = 143$ , 77.72%,  $n_{Bumble} = 41$ , 22.28%).<sup>4</sup> Of those participants, their observed media content data were linked to self-reported survey data in the second linkage analytical part of this study,  $Age = 22.10$  years,  $SD = 2.91$ ,  $n_{women} = 75\%$ ,  $n_{non-hetero} = 34.2\%$ ,  $n_{Western-European} = 96.20\%$ ,  $n_{Tinder} = 87\%$ .

## Content Analysis

### Code Procedure and Reliability

First, a codebook was developed to identify traditional gender expressions in self-presentations in textual and visual MDA profile cues. The operationalization of these self-presentation practices was based on pre-existing conceptualizations of traditional gender expressions (trait descriptors, physical characteristics, occupational status, language use) as used in content analytical work (e.g., Evans & Davies, 2000) as well as on existing self-report measures of gendered self-presentation (e.g., CMNI-30; Levant et al., 2020; CFNI-45; Parent & Moradi, 2011). Screenshots of the participants'

<sup>1</sup> The pre-data collection registration is available on OSF: [https://osf.io/3nh74/?view\\_only=f783fddac2e24b22bf80703e8ac943ca](https://osf.io/3nh74/?view_only=f783fddac2e24b22bf80703e8ac943ca)

<sup>2</sup> Participants exclusively used either Tinder or Bumble.

<sup>3</sup> Note that on Tinder, users can upload up to nine pictures and on Bumble up to six pictures. For 221 profiles (55.8%), all pictures were coded. Yet, for feasibility reasons, only the three first pictures of the subsequent profiles were coded.

<sup>4</sup> Note that the full sample was not invited to participate in this survey to avoid survey fatigue: these participants took part in a different survey.

profiles were divided among two trained coders and the first author of this study. During the coders' training, the clarity of the coding instrument was evaluated in order to minimize ambiguous interpretations. To assess inter-coder reliability, all coders independently coded 11.09% of MDA profile pictures ( $n = 150$ ) and 12.88% of MDA captions ( $n = 51$ ) before the entire analytical sample of screenshots was coded. Krippendorff's alpha indicated a good reliability across all coded variables ( $\alpha = 0.70$ – $1.00$ ). An overview of the interrater-reliability and examples relating to each separate code is available in Table 1. The final codebook included 76 codes; 20 codes for visual cues and 56 codes for textual cues and may be found on OSF.<sup>5</sup>

**General Profile Cues** As for general textual profile cues, the presence of a biography was coded (0 = absent, 1 = present). For the general visual profile cues, the total number of profile pictures was coded, and the type of picture (1 = selfie, 2 = picture taken by someone else, 3 = mirror picture, 4 = other) was coded. Note that for feasibility reasons a subsample of individuals' profile pictures were coded.

**Prevalence of Traditional Masculine/Feminine Expressions in Textual Profile Cues** See Table 1 for an overview of all coded indicators. Indicators were grouped in eight overarching variables to capture different aspects of traditional masculinity and femininity; traditional (1) masculine/(2) feminine trait descriptors (Levant et al., 2020; Parent & Moradi, 2011), (3) masculine/(4) feminine physical characteristics (Deux & Lewis, 1984), (5) masculine/(6) feminine occupational status (Vranken & Vandenbosch, 2023), and (7) masculine/(8) feminine language use (Piersoul & Van de Velde, 2023). For traditional masculine/feminine trait descriptors and language use, multiple indicators were coded (0 = absent, 1 = present) and transformed into a mean score ranging between 0 and 1. Skewness ( $< 3$ ) and kurtosis ( $< 10$ ) indicated a normal distribution. Traditional masculine/feminine physical characteristics and occupational status were dichotomously re-coded due to their right skewed distribution (0 = absent, 1 = present). The overall profiles score of expressions of traditional masculinity and femininity in textual profile cues were expressed by two aggregated mean variables (ranging between 0 and 1).

**Prevalence of Traditional Masculine/Feminine Expressions in Visual Profile Cues** See Table 1 for an overview of all coded indicators. Indicators were grouped in four overarching variables to capture the different aspects of traditional masculinity and femininity; traditional (I) masculine/(II) femi-

nine trait descriptors (Levant et al., 2020; Parent & Moradi, 2011), and traditional (III) masculine/(IV) feminine physical characteristics (He & Van Driel, 2023; Yan et al., 2022). For each aforementioned variable, multiple indicators were coded across multiple profile pictures of each participant (0 = absent, 1 = present) and transformed into a mean score ranging between 0 and 1. Skewness ( $< 3$ ) and kurtosis ( $< 10$ ) indicated a normal distribution for all variables. The overall profile scores of expressions of traditional masculinity and femininity in visual profile cues were measured by creating two aggregated mean variables (ranging between 0 and 1).

## Linkage Analysis

### Self-Report Measures

**Sociodemographic Variables** Age, biological sex (or sex assigned at birth, 1 = male, 2 = female), gender identity ("I identify..." 1 = (mainly) as man, 2 = (mainly) as woman, 3 = neither as man nor as woman, 4 = sometimes as man, sometimes as woman, 5 = I don't know), sexual orientation ("I am attracted to..." 1 = men, 2 = mainly men, but also to women, 3 = equally as much to men as to women, 4 = mainly women, but also to men, 5 = women, 6 = I prefer not to say), and ethnicity (1 = Western-European, 2 = Eastern-European, 3 = African or Middle-Eastern, 4 = North-American, 5 = South-American, 6 = Asian, 7 = other, 8 = I don't know) were questioned. For analytical purposes, biological sex was considered in combination with gender identity in order to select cisgender individuals (i.e., person whose gender identity corresponds with their biological sex) (See footnote 2). Individuals of the female biological sex who indicated to identify (mainly) as woman and individuals of the male biological sex who indicated to identify as (mainly) man, were considered as women and men in this study, respectively. Henceforth, the dichotomous variable "gender" will be used to refer to men (=0) and women (=1). Additionally, sexual orientation was also transformed into a dichotomous variable (0 = *heterosexual*, 1 = *non-heterosexual*).

Sociodemographic variables were questioned for all participants ( $N = 396$ ).

**General MDA Use** Type of MDA (1 = Tinder, 2 = Bumble), general frequency of MDA use (1 = almost never to 7 = multiple times a day), daily time spent on MDAs (1 = less than 10 minutes–6 = more than 90 minutes), and active time period of MDA use (1 = less than three months–6 = more than 2 years) were measured for descriptive purposes.

**(Hyper-) Masculine/Feminine Gender Orientation** For men, the extent to which they had internalized traditional sociocultural definitions of masculinity in their gender orientation was measured using the Conformity to Masculine Norms Inven-

<sup>5</sup> [https://osf.io/3nh74/?view\\_only=18f62a97e8c4415d99e2513ad2923edd](https://osf.io/3nh74/?view_only=18f62a97e8c4415d99e2513ad2923edd)

**Table 1** Overview of coded indicators and inter-rater reliability*Users' textual self-presentation in biography*

Masculine trait descriptors	Masculine pronouns (i.e., nouns denoting the masculine gender, e.g., he/his; 0 = absent, 1 = present, $\alpha = .93$ , Bigler & Leaper, 2015), emotional control (e.g., “mentally stable”; 0 = absent, 1 = present, $\alpha = .89$ ), winning (e.g., “all I do is win”; 0 = absent, 1 = present, $\alpha = 1.00$ ), playboy (e.g., “experienced guy”; 0 = absent, 1 = present, $\alpha = 1.00$ ), aggressiveness (e.g., “try to fight me”; 0 = absent, 1 = present, $\alpha = 1.00$ ), heterosexual self-presentation (e.g., “I’m a masculine guy”; 0 = absent, 1 = present, $\alpha = 1.00$ ), pursuit of status (e.g., “#luxuryretreat”; 0 = absent, 1 = present, $\alpha = .86$ ), primacy of work (e.g., “my work is my passion”; 0 = absent, 1 = present, $\alpha = 1.00$ ), self-reliance (e.g., “independent goal-getter”; 0 = absent, 1 = present, $\alpha = .82$ ), financial provider (e.g., “I love taking care of my partner”; 0 = absent, 1 = present, $\alpha = 1.00$ ), risk taking (e.g., reference to drugs such as “420”; 0 = absent, 1 = present, $\alpha = .91$ , Levant et al., 2020), typical masculine interests (e.g., related to navigation, gaming, technical activities, household repairs, vehicles; 0 = absent, 1 = present, $\alpha = .84$ , Munns et al., 2022)
Masculine language use	Dominance (i.e., imperative wording; e.g., “I got a checklist with things you need to live up to”; 0 = absent, 1 = present, $\alpha = .73$ ), negatively valued words (i.e., swear/curse words; count variable, $\alpha = .90$ , Roberts & Utych, 2020), complexity (i.e., long, abstract words; count variable, $\alpha = .77$ ), report talk (i.e., information emphasis/facts; 0 = absent, 1 = present, $\alpha = .87$ , Piersoul & Van de Velde, 2023), self-reference (e.g., “me, myself, I”; Balachandra et al., 2021, count variable, $\alpha = .86$ ), taking initiative (e.g., “if you don’t know how to inline skate, I will teach you”; 0 = absent, 1 = present, $\alpha = .62$ , Deaux & Lewis, 1984)
Masculine occupation/field of study	Blue collar jobs (e.g., industrial, manual, mechanical jobs), STEM jobs (i.e., Science, Technology, Engineering and Mathematics), Leadership roles/professional experts (0 = absent, 1 = present, $\alpha = .79$ , Vranken & Vandenbosch, 2023)
Masculine physical characteristics	Tall (i.e., emphasizing tallness; e.g., “definitely taller than you”), strong (i.e., emphasizing strength; e.g., “I like lifting weights”; 0 = absent, 1 = present, $\alpha = .81$ , Deaux & Lewis, 1984)
Feminine trait descriptors	Sweet and nice (i.e., references related to environmentalism, animals, volunteering and being understanding; e.g., “an environmentalist who loves her cat”; 0 = absent, 1 = present, $\alpha = .90$ ), relational (i.e., references to friendships/family; e.g., “I love my mom”; 0 = absent, 1 = present, $\alpha = 1.00$ ), modesty (i.e., references to gratefulness, humbleness; e.g., “grateful for the little things in life”; 0 = absent, 1 = present, $\alpha = .95$ ), domestic (i.e., references to domestic activities; e.g., I fix clothing; 0 = absent, 1 = present, $\alpha = .97$ ), sexual fidelity (e.g., “loyalty comes first to me”; 0 = absent, 1 = present, $\alpha = 1.00$ ), care for children (e.g., “I want children”; 0 = absent, 1 = present, $\alpha = .90$ ), romantic/affectionate (e.g., “looking for someone to cuddle with”; 0 = absent, 1 = present, $\alpha = .70$ , Parent & Moradi, 2011), feminine interests (e.g., related to creativity, feminine sports, cozy social activities, gardening; 0 = absent, 1 = present, $\alpha = .77$ , Munns et al., 2022)
Feminine language use	Use of emoticons (count variable, $\alpha = .95$ ), use of diminutive words (e.g., “girlie”; count variable, $\alpha = .76$ ), lexical diversity (e.g., intensifying adverbs such as “absolutely, completely, ...”; 0 = absent, 1 = present, $\alpha = .76$ , Piersoul & Van de Velde, 2023), references to psychological processes (e.g., “I adore...”; 0 = absent, 1 = present, $\alpha = .66$ , Newman et al., 2008), use of overly polite forms (e.g., “please”; count variable, $\alpha = 1.00$ ), apologies (e.g., “I’m sorry”; count variable, $\alpha = 1.00$ , Lakoff, 1973), passive/not taking initiative (e.g., “my social anxiety won’t let me message first”; 0 = absent, 1 = present, $\alpha = .81$ , Deaux & Lewis, 1984)
Feminine occupation/field of study	Entertainment/creative sector, Social sciences, Service work/Pink collar jobs, Typical female white collar jobs (e.g., receptionist, 0 = absent, 1 = present, $\alpha = .78$ , Vranken & Vandenbosch, 2023)
Feminine physical features	Invest in appearance (i.e., references related to self-care; e.g., “I love shopping”; 0 = absent, 1 = present, $\alpha = .74$ , Parent & Moradi, 2011), Sexual objectification (0 = absent, 1 = present, $\alpha = 1.00$ , APA)
<i>Users' visual self-presentation in profile pictures</i>	
Masculine trait descriptors	Winning (e.g., holding a trophy; 0 = absent, 1 = present, $\alpha = 1.00$ ), playboy (e.g., being surrounded by women; 0 = absent, 1 = present, $\alpha = 1.00$ ), aggressiveness (e.g., boxing; 0 = absent, 1 = present, $\alpha = 1.00$ ), pursuit of status (e.g., holding cash money; 0 = absent, 1 = present, $\alpha = .71$ ), risk taking (e.g., rock climbing, smoking; 0 = absent, 1 = present, $\alpha = .82$ , Levant et al., 2020), masculine interests (e.g., fishing; 0 = absent, 1 = present, $\alpha = .79$ , Munns et al., 2022)

**Table 1** (continued)

Masculine physical characteristics	Masculine walking (0=absent, 1=present, $\alpha = .86$ ), masculine standing (0=absent, 1=present, $\alpha = 1.00$ ), masculine sitting (0=absent, 1=present, $\alpha = .99$ , He & Van Driel, 2023)
Feminine trait descriptors	Sweet and nice (i.e., related to environmentalism, animals, volunteering; e.g., hugging a tree; 0=absent, 1=present, $\alpha = .74$ ), relational (e.g., with friends/grandmother; 0=absent, 1=present, $\alpha = .93$ ), modesty (not present), domestic (e.g., cooking; 0=absent, 1=present, $\alpha = 1.00$ ), sexual fidelity (0=absent, 1=present, $\alpha = .42$ ), care for children (not present), romantic/affectionate (e.g., in a romantic setting such as watching the sunset; 0=absent, 1=present, $\alpha = .83$ , Parent & Moradi, 2010), typical feminine interests (i.e., related to creativity, feminine sports, cozy social activities; e.g., painting; 0=absent, 1=present, $\alpha = 1.00$ , Munns et al., 2022)
Feminine physical characteristics	Sexualized face (e.g., sexualized eyes, mouth, head position; 0=absent, 1=present, $\alpha = .99$ , Yan et al., 2022), sexualized body pose (i.e., -slightly-inviting sexual activity; 0=absent, 1=present, $\alpha = .70$ , Hatton & Trautner, 2011), feminine walking (0=absent, 1=present, $\alpha = .93$ ), feminine standing (0=absent, 1=present, $\alpha = .99$ ), feminine sitting (0=absent, 1=present, $\alpha = 1.00$ , He & Van Driel, 2023)

tory (CMNI-30; Levant et al., 2020). The CMNI-30 contains 30 items representing ten subscales (i.e., three items per subscale; emotional control, winning, playboy, violence, heterosexual self-presentation, pursuit of status, primacy of work, power over women, self-reliance, risk-taking). Sample items included “I feel good when work is my first priority” and “I enjoy taking risks.” Items were translated to Dutch and rated on a 7-point Likert-type scale ranging from 1 (=strongly disagree) to 7 (=strongly agree). Reverse worded items were rescaled. A principal component analysis (PCA) with oblique rotation (direct oblimin) yielded a ten-factors forced factor structure, representing 27 items with an eigenvalue greater than 1, explaining 86% of the variance. The items “I put myself in risky situations” and “I am not ashamed to ask for help” were omitted from the analysis because of low face validity (i.e., they did not load on the theoretical anticipated factor). The item “In general, I must get my way” was removed because of having a factor loading below 0.40. Ten new variables were created; power over women ( $\alpha = 0.82$ ,  $M = 1.76$ ,  $SD = 0.92$ ), pursuit of status ( $\alpha = 0.81$ ,  $M = 3.39$ ,  $SD = 1.22$ ), violence ( $\alpha = 0.82$ ,  $M = 1.96$ ,  $SD = 1.23$ ), emotional control ( $\alpha = 0.90$ ,  $M = 2.41$ ,  $SD = 1.49$ ), primacy of work ( $\alpha = 0.92$ ,  $M = 3.54$ ,  $SD = 1.30$ ), heterosexual self-presentation ( $\alpha = 0.88$ ,  $M = 2.12$ ,  $SD = 1.16$ ), playboy ( $\alpha = 0.85$ ,  $M = 3.04$ ,  $SD = 1.49$ ), winning ( $r = .79$ ,  $M = 4.58$ ,  $SD = 1.40$ ,  $p < .001$ ), risk-taking ( $r = .74$ ,  $M = 4.53$ ,  $SD = 1.41$ ,  $p < .001$ ), and self-reliance ( $r = .47$ ,  $M = 3.51$ ,  $SD = 1.14$ ,  $p < .001$ ). Higher scores represented a stronger masculine gender orientation.

For women, the extent to which they had internalized sociocultural definitions of femininity in their gender orientation was measured using the Conformity to Feminine Norms Inventory (CMFI-45; Parent & Moradi, 2011). The CMNI-45 contains 45 items representing nine subscales (sweet & nice, relational, modesty, domestic,

sexual fidelity, care for children, romantic relationship, thinness, invest in appearance). Sample items included “being nice to others is extremely important” and “I enjoy spending time making my living space look nice.” Items were translated to Dutch and rated on a 7-point Likert-type scale ranging from 1 (=strongly disagree) to 7 (=strongly agree). Reverse worded items were rescaled. A PCA with oblique rotation (direct oblimin) yielded a nine-factors forced factor structure, representing 44 items with an eigenvalue greater than 1, explaining 65.11% of the variance. The items “I minimize my achievements” was omitted from the analysis because of low face validity (i.e., it did not load on the theoretical anticipated factor). Nine new variables were created: sweet and nice ( $\alpha = 0.67$ ,  $M = 5.30$ ,  $SD = 0.70$ ), care for children ( $\alpha = 0.93$ ,  $M = 4.09$ ,  $SD = 0.89$ ), thinness ( $\alpha = 0.89$ ,  $M = 4.32$ ,  $SD = 1.55$ ), invest in appearance ( $\alpha = 0.83$ ,  $M = 3.55$ ,  $SD = 1.40$ ), domestic ( $\alpha = 0.85$ ,  $M = 4.75$ ,  $SD = 1.12$ ), modest ( $\alpha = 0.71$ ,  $M = 2.57$ ,  $SD = 0.91$ ), relational ( $\alpha = 0.69$ ,  $M = 5.00$ ,  $SD = 0.90$ ), romantic relationship ( $\alpha = 0.78$ ,  $M = 3.93$ ,  $SD = 1.02$ ), and sexual fidelity ( $\alpha = 0.90$ ,  $M = 2.89$ ,  $SD = 1.47$ ). Higher scores represented a stronger feminine gender orientation.

### Analytical Approach

Data were analyzed in SPSS. To answer RQ1, mean scores were created to capture the different aspects of traditional masculinity and femininity in users’ textual ( $n = 396$ ) and visual profile cues ( $n = 1352$ ). For the textual scores, multiple indicators were coded in users’ profile biographies, representing four aspects of traditional gender expressions; trait descriptors, physical characteristics, language use, and occupational status. Traditional masculine/feminine trait descriptors and language use were transformed in mean



scores. Given that the values of the traditional masculine/feminine occupational status and physical characteristics showed a right skewed distribution, these variables were dichotomously re-coded as 1 as at least one indicator was present and 0 if none was present.

For the visual cues, multiple indicators of traditional masculine/feminine traits and physical characteristics were coded for each picture, representing two aspects of traditional gender expressions; trait descriptors and traditional physical characteristics. Next, all indicators were transformed into mean overarching profile score (i.e., mean scores for visual traditional masculine/feminine traits/physical characteristics). See Table 1 for an overview of all coded indicators. Descriptive statistics assessed the prevalence of these (aspects of) traditional gender expressions across all 396 MDA profiles. To answer RQ1<sub>(1)</sub> ( $n = 396$ ), Analyses of covariance (ANCOVAs) were performed to examine the differences in the prevalence of traditional gender expressions in textual and visual MDA profile cues, according to participants' gender (RQ1<sub>(1)</sub>), sexual orientation (for men and women separately, RQ1<sub>(2)</sub>), and platform type (RQ1<sub>(3)</sub>). Age was added as a covariate given the wide age range of the sample (18–30) and given that scholars have suggested that age may affect social media self-presentations (e.g., Dhir et al., 2017). For the dichotomous outcomes (i.e., textual cues: traditional masculine/feminine occupations, physical characteristics), logistic binary regressions were performed. Again, age (control), sexual orientation and platform type were entered as predictors.

To test H1–2, separate analyses were performed for men and women, controlling for age. Four separate multivariate linear regression analyses to explore the prevalence of traditional masculine/feminine expressions in the textual profile cues and four separate analyses for the visual profile cues.

As for the visual cues, four multivariate linear regression analyses tested the predictive value of individuals' gender orientation on expressing traditional masculine/feminine traits and physical characteristics in their visual profile cues. Note that for H1–2, first associations between individuals' overall gender orientations and the prevalence of traditional gender expressions in their profiles were tested. Next, the subscales (of the CMNI-30 for men, of the CFNI-45 for women) were added to the statistical models.

Normal distribution for all of the dependent variables of interest in the current study was checked, all variables were situated within the acceptable range of  $< 3$  and  $< 10$  respectively. No multicollinearity between the independent variables of interest occurred.

## Results

### Content Analysis Findings

#### RQ1<sub>(1)</sub>: Traditional Masculine and Feminine Expressions in Men's and Women's Profiles

As for the textual profile cues, almost all profiles included a biography (98.50%). The majority of men included at least one traditional expression of masculinity in their textual MDA profile cues (88.60%). When looking at the distinct aspects of traditional gender expressions, most men included traditional masculine trait descriptors (68.50%) and traditional masculine language use (67.60%) in their profile biographies. Expressions of traditional masculine occupations/fields of study (18.10%) and references to traditional masculine physical characteristics (6.70%) were only present in a few profile biographies.

The majority of women included at least one traditional expression of femininity (94.40%) in their textual MDA profile cues. Most women included traditional feminine trait descriptors (88.1%). Almost half of women used traditional feminine language use (47.40%).

Expressions of traditional feminine occupations/fields of study (25.40%) and references to traditional feminine physical characteristics (24.60%) were less prevailing.

As for the visual profile cues, participants included five pictures on average in their MDA profiles,  $M = 4.76$ ,  $SD = 1.57$ . Most profile pictures were taken by someone else (64.10%). A quarter of pictures (24.40%) were selfies, and 9.70% of the pictures were taken in a mirror. Pictures where the profile owner was not visible (e.g., picture of their cat, 1.80%) were less prevalent. Almost all men's MDA profiles included at least one traditional expression of masculinity (97.20%). In particular, among men, traditional masculine (95.30%) physical characteristics were present in the visual cues of almost all MDA profiles.

Half of men (52.40%) included indicators of traditional masculine traits in their visual MDA profile cues. As for women, almost all of them included at least one traditional expression of femininity in their visual MDA profile cues (99.70%). Traditional feminine physical characteristics (95.30%) and indicators of traditional feminine traits (61.90%) were displayed in most of women's MDA profiles. A more in depth description of the prevalence of (aspects of) traditional gender expressions by users' sexual orientation and platform type may be found as supplementary material on OSF.<sup>6</sup>

<sup>6</sup> [https://osf.io/3nh74/?view\\_only=18f62a97e8c4415d99e2513ad2923edd](https://osf.io/3nh74/?view_only=18f62a97e8c4415d99e2513ad2923edd)

**Textual Profile Cues** For the textual cues, results of the ANCOVAs showed that men,  $M=0.12$ ,  $SD=0.11$ , displayed significantly more traditional masculine expressions than women,  $M=0.07$ ,  $SD=0.09$ ,  $F(1, 385)=16.23$ ,  $p<.001$ . Results further showed (almost) significant group differences according to participants' gender for the overall presence of traditional femininity in their textual profile cues,  $F(1, 385)=3.78$ ,  $p=.052$ . Women,  $M=0.19$ ,  $SD=0.15$ , tended to express more traditional femininity in their textual profile cues as compared to men  $M=0.16$ ,  $SD=0.14$ .

**Visual Profile Cues** For the visual cues, results of the ANCOVAs showed that men,  $M=0.29$ ,  $SD=0.17$ , displayed significantly more traditional masculine expressions than women,  $M=0.25$ ,  $SD=0.17$ ,  $F(1, 388)=4.90$ ,  $p=.028$ . Results further showed that women,  $M=0.29$ ,  $SD=0.12$ , displayed significantly more traditional feminine expressions than men,  $M=0.17$ ,  $SD=0.13$ , in their visual profile cues than men,  $F(1, 388)=78.29$ ,  $p<.001$ .

### RQ1<sub>(2,3)</sub>: Differences by Sexual Orientation and Platform Type in Men's and Women's Profiles

**Textual Profile Cues** When looking at the prevalence of traditional masculine expressions among men, no significant differences according to their sexual orientation,  $F(1, 101)=1.79$ ,  $p=.183$ , nor platform type,  $F(1, 101)=0.00$ ,  $p=.976$ , were found. When looking at the prevalence of traditional feminine expressions among women, no differences according to their sexual orientation,  $F(1, 281)=0.95$ ,  $p=.332$ , nor platform type,  $F(1, 281)=2.12$ ,  $p=.147$ , were found.

**Visual Profile Cues** When looking at the prevalence of traditional masculine expressions among men, no differences according to their sexual orientation,  $F(1, 102)=0.15$ ,  $p=.700$ , or platform type,  $F(1, 102)=0.02$ ,  $p=0.726$ , were found. When looking at the prevalence of traditional feminine expressions among women, no differences according to their sexual orientation,  $F(1, 283)=0.28$ ,  $p=.598$ , nor platform type,  $F(1, 283)=0.76$ ,  $p=.384$ , were found.

### Linkage Analysis Findings

#### H1–2: Gender Orientation and Traditional Gender Expressions

On average, men valued winning,  $M=4.58$ ,  $SD=1.40$ , taking risks,  $M=4.53$ ,  $SD=1.41$  and prioritizing their work,  $M=3.54$ ,  $SD=1.30$ . Having power over women was the least endorsed traditional gender norm among men,  $M=1.76$ ,  $SD=0.92$ . In general, women valued being friendly to others (i.e., sweet & nice subscale),  $M=5.30$ ,

$SD=0.70$ , maintaining their friendships (i.e., relational subscale),  $M=5.00$ ,  $SD=0.90$ , and being domestic,  $M=4.75$ ,  $SD=1.12$ , the most. Being modest was the least endorsed traditional gender norm among women,  $M=2.57$ ,  $SD=0.91$ .

**Textual Profile Cues** For men, the multivariate regression analysis showed no significant associations between holding (aspects of) a masculine gender orientation and the prevalence of traditional masculine expressions in their biographies.

For women, the multivariate regression analysis showed no significant associations between holding an overall feminine gender orientation and the prevalence of traditional feminine expressions in their biographies. When looking at the distinct aspects of a traditional feminine orientation, those who scored higher on modesty, were more likely to display more traditional femininity in their biographies,  $B=0.03$ ,  $SE=0.01$ ,  $\beta=0.20$ ,  $t=2.18$ ,  $p=.031$ , 95% CI [0.00; 0.05]. See Tables 2, 3 for an overview of the results.

**Visual Profile Cues** For men, the multivariate regression analysis showed no significant associations between holding (aspects) of a masculine gender orientation and the overall prevalence of traditional masculine expressions in their visual MDA profile cues.

For women, the multivariate regression analysis showed that women who were holding a stronger overall feminine gender orientation, displayed more overall traditional feminine expressions in their visual MDA profile cues,  $B=0.04$ ,  $SE=0.02$ ,  $\beta=0.18$ ,  $t=2.22$ ,  $p=.028$ , 95%CI [0.01; 0.08]. No separate aspects of a feminine gender orientation were found to relate to express more traditional feminine expressions in visual MDA profile cues. See Tables 4, 5 for an overview of the results.

### Discussion

While existing studies on mobile dating indicate that users tend to present themselves selectively by creating positive self-images (e.g., Berkowitz et al., 2021; Sobieraj & Humphreys, 2021), research on traditional gender expressions in the context of mobile dating is lacking. Given that engagement in traditional gender expressions may potentially be related to endorsing sexist beliefs (e.g., Ward, 2016) and engagement in or falling victim to gendered violence (e.g., Baugher & Gazmararian, 2015; Parrott & Zeichner, 2003), this study aimed to broaden current understandings on the prevalence of traditional gender expressions among male and female users' profiles on MDAs, while taking into account individual differences (i.e., gender, sexual orientation, platform type, RQ1).

**Table 2** Results of the multivariate regression analysis: Traditional masculine expression in textual MDA profile cues

Predictor	R <sup>2</sup>	SE	F	df	p	
	.03	.07	1.04	1/36	.315	
Step 1	<i>B</i>	<i>β</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95%CI
Age	.00	-.17	.00	-1.02	.315	[-.01; .00]
Step 2	ΔR <sup>2</sup>	SE	F	df	p	
	.00	.07	.10	1/35	.751	
	<i>B</i>	<i>β</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95%CI
Age	.00	-.16	.00	-.93	.358	[-.01; .01]
Overall masculine orientation	.01	.05	.02	.32	.751	[-.04; .05]
Step 3	ΔR <sup>2</sup>	SE	F	df	p	
	.08	.08	.15	1/26	.70	
	<i>B</i>	<i>β</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95%CI
Age	.00	-.08	.01	-.39	.701	[-.01; .01]
Power over women	.00	-.05	.02	-.21	.839	[-.05; .04]
Pursuit of status	.01	.10	.02	.37	.714	[-.03; .04]
Violence	.01	.08	.01	.35	.728	[-.02; .03]
Emotional control	.00	.08	.01	.37	.712	[-.02; .03]
Risk taking	.00	-.05	.01	-.19	.852	[-.03; .02]
Primacy of work	.00	.04	.01	.18	.862	[-.02; .03]
Winning	-.01	-.09	.01	-.36	.722	[-.03; .02]
Heterosexual SP	.00	.03	.01	.13	.897	[-.03; .03]
Self-reliance	.01	.12	.01	.54	.594	[-.02; .04]
Playboy	.00	-.08	.01	-.31	.762	[-.03; .02]

Dependent variable: Masculine expression in textual MDA profile cues

\*  $p < .05$

The results showed that individuals presented themselves in line with the traditional gender roles and expectations in their MDA profiles. Men included more traditional masculine expressions as compared to women and vice versa, women included more traditional feminine expressions as compared to men. This finding supports the view that individuals' behavior is shaped by their gender (Bem, 1981; RQ1<sub>(1)</sub>). Additionally, this finding supports the dramaturgical model of social interaction (Goffman, 1959) in that individuals tend to emphasize attributes of themselves that correspond to the norms of the group they want to belong to or identify with (i.e., gender group).

Moreover, this study assessed the relationship between men's and women's sexual orientation and the prevalence of traditional gender expressions (RQ1<sub>(2)</sub>). There were no differences between heterosexual and non-heterosexual individuals. A possible explanation is that sexual orientation may not be a good proxy for the engagement in traditional gender expressions on MDAs, as the MDAs Tinder and Bumble primarily target heterosexual users (Bivens & Hoque, 2018).

Techno-self studies posit that the affordances and culture of a platform may result in homogenization of media content (Lippicini, 2013). Hence, individuals may independently from their sexual orientation present themselves in ways that resonate with traditional gender roles and expectations as a result of the affordances or culture of MDAs. Relatedly, non-heterosexual individuals may conform to traditional gender roles and expectations (e.g., Ferris & Duguay, 2020), and accordingly adhere to Tinder and Bumble's perceived heteronormativity, to mitigate stigmatization and negative reactions stemming from their sexual identity (Miller & Behm-Morawitz, 2016). Alternatively, non-heterosexual users who chose not to conform to traditional gender roles may especially seek out platforms in which they can relate to more like-minded suitors, such as on Grindr or HER (Ferris & Duguay, 2020).

The results indeed showed platform differences (i.e. differences between Bumble and Tinder users) in the extent to which men and women expressed traditional masculinity/femininity in their self-presentations (RQ1<sub>(3)</sub>). This finding

**Table 3** Results of the multivariate regression analysis: Traditional feminine expression in textual MDA profile cues

Predictor	R <sup>2</sup>	SE	F	df	p	
	.01	.12	.87	1/133	.352	
	<i>B</i>	<i>β</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95%CI
Age	.00	.08	.00	.94	.352	[−.00; .01]
Step 2	ΔR <sup>2</sup>	SE	F	df	p	
	.00	.12	.48	1/132	.490	
	<i>B</i>	<i>β</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95%CI
Age	.00	.08	.00	.86	.392	[−.01; .01]
Overall feminine orientation	.02	.06	.02	.69	.490	[−.03; .06]
Step 3	ΔR <sup>2</sup>	SE	F	df	p	
	.00	.12	.06	1/124	.814	
	<i>B</i>	<i>β</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95%CI
Age	.00	.02	.00	.24	.814	[−.01; .01]
Care for children	.03	.19	.02	1.82	.071	[−.00; .06]
Thinness	−.01	−.10	.01	−1.13	.260	[−.02; .01]
Relational	−.01	−.08	.01	−.84	.401	[−.04; .02]
Domestic	.00	.04	.01	.40	.688	[−.02; .02]
Modest	<b>.03*</b>	<b>.20</b>	<b>.01</b>	<b>2.18</b>	<b>.031</b>	<b>[.00; .05]</b>
Invest in appearance	.00	.04	.01	.43	.667	[−.01; .02]
Sexual fidelity	.01	.09	.01	.90	.370	[−.01; .02]
Romantic	−.01	−.07	.01	−.71	.482	[−.03; .02]
Sweet and nice	−.01	−.07	.02	−.74	.461	[−.05; .02]

Dependent variable: Feminine expression in textual MDA profile cues

\*  $p < .05$

Bold text highlights all relevant statistics

is in line with literature on technological affordances, which argues that the affordances of a particular platform shape the boundary conditions for presenting oneself online (e.g., Bucher & Helmond, 2018; Lippicini, 2013). In particular, men using Bumble expressed more traditional masculinity in both their textual and visual MDA profile cues as compared to men using Tinder. As platform affordances likely shape platform norms (e.g., Bij de Vaate et al., 2018; Lippicini, 2013), this finding may be because of differences in platform culture.

Bumble is known as an empowering and “feminist” MDA (Bivens & Hoque, 2018). According to Willer et al. (2013), men will present greater traditional masculinity, when they perceive a decrease in their masculine status. Hence, men may aim to (re-)establish their masculinity in a popular feminist digital environment (Banet-Weiser, 2018). Qualitative research should further disentangle gendered digital dating dynamics on different MDA platform types.

The findings did not provide support for H1—a linkage was expected between holding a masculine gender orientation and seeing expressions of traditional masculinity

in their MDA profiles. A possible explanation for these results may be that some aspects of men’s gender orientation (i.e., winning) are rather inherent personal values in current society and no longer part of modern masculine roles and expectations. Other research has also noticed shifts in the interpretation of gender roles in recent years (e.g., Anderson & McCormack, 2018; Banet-Weiser, 2018). For instance, societal gender discourses are shifting towards more inclusive masculinity (e.g., men are becoming less invested in traditional masculine roles, Anderson & McCormack, 2018). Relatedly, expressions of (popular) feminist, anti-patriarchal discourses are also increasingly visible in popular (media) culture (e.g., Banet-Weiser, 2018). Perhaps individuals’ heightened awareness of such changing societal gender norms may influence the choices they make in portraying themselves online.

Another possibility is that men aimed to avoid negative reactions from relevant others (i.e., potential partners). Previous research indicates that women react defensively to men adhering to traditional gender roles as a form of resistance against men’s long-seen superordinate status (e.g., Lanis

**Table 4** Results of the multivariate regression analysis: Traditional masculine expression in visual MDA profile cues

Predictor	R <sup>2</sup>	SE	F	df	p	
	.02	.19	.77	1/43	.385	
Step 1	<i>B</i>	$\beta$	<i>SE</i>	<i>t</i>	<i>p</i>	95%CI
Age	.0	.13	.01	.88	.385	[−.01; .03]
Step 2	$\Delta R^2$	SE	F	df	p	
	.03	.19	1.15	1/42	.290	
	<i>B</i>	$\beta$	<i>SE</i>	<i>t</i>	<i>p</i>	95%CI
Age	.01	.11	.01	.73	.469	[−.01; .03]
Overall masculine orientation	−.06	−.16	.05	−1.07	.290	[−.16; .05]
Step 3:	$\Delta R^2$	SE	F	df	p	
	.03	.19	1.33	1/33	.257	
	<i>B</i>	$\beta$	<i>SE</i>	<i>t</i>	<i>p</i>	95%CI
Age	.01	.20	.01	1.15	.257	[−.01; .04]
Power over women	.06	.30	.04	1.43	.163	[−.03; .15]
Pursuit of status	.05	.31	.03	1.49	.145	[−.02; .11]
Violence	.00	−.03	.03	−.14	.891	[−.06; .05]
Emotional control	.00	.02	.02	.13	.898	[−.04; .05]
Risk taking	.00	.00	.03	−.02	.983	[−.05; .05]
Primacy of work	−.02	−.13	.03	−.70	.492	[−.07; .04]
Winning	−.06	−.40	.03	−1.98	.056	[−.11; .00]
Heterosexual SP	.01	.06	.03	.30	.768	[−.05; .07]
Self-reliance	.00	−.01	.03	−.04	.970	[−.06; .06]
Playboy	−.02	−.18	.02	−.94	.354	[−.07; .03]

Dependent variable: Masculine expression in visual MDA profile cues

& Covell, 1995). In a digital context, traditional masculine expressions also may encounter negative reactions (e.g., being shamed online; Hess & Flores, 2018). Hence, although men may have internalized traditional gender roles and expectations, this may not necessarily be reflected in their self-presentations on MDAs. Possibly, other (external) factors may also have an influence on the choices that they make in presenting themselves online. Future research should disentangle the extent to which individuals are susceptible to feedback from others on their self-presentation on MDAs and whether this has transformative (self-) effects on the way men perceive and present themselves.

The results supported H2 in that women with a stronger feminine gender orientation, were more likely to display traditional femininity in their MDA profiles. This finding is in line with the gender schema theory (Bem, 1981) in that women who have internalized feminine roles and expectations to a greater extent into their gender (i.e., feminine) orientation, performed more traditional feminine behavior

in presenting themselves in their MDA profiles. Interestingly, the least endorsed aspect of feminine gender orientation (i.e., modesty) was significantly related to expressing more traditional femininity in textual MDA profile cues. This finding suggest there might be a subgroup of women who have internalized the importance of downplaying their achievements, and hence are more susceptible to presenting themselves in a traditional feminine manner to potential MDA matches. This finding is in line with previous research that suggests that some women refrain from immodest self-disclosures of their achievement to avoid others not liking them and being perceived as unfeminine (Daubman & Sigall, 1997; Rudman & Glick, 1999).

The finding that women with stronger feminine orientations present themselves in more traditionally feminine ways may be worrisome as having a stronger feminine gender orientation also has been related to paying more attention to others who are engaging in traditional gender expressions (e.g., van Oosten et al., 2017). Arguably, those (heterosexual)

**Table 5** Results of the multivariate regression analysis: Traditional feminine expression in visual MDA profile cues

Predictor	R <sup>2</sup>	SE	F	df	p	
	<b>.05**</b>	<b>.10</b>	<b>7.68</b>	<b>1/135</b>	<b>.006</b>	
Step 1	<i>B</i>	<i>β</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95%CI
Age	<b>−.01**</b>	<b>−.23</b>	<b>.00</b>	<b>−2.77</b>	<b>.006</b>	<b>[−.01; −.00]</b>
Step 2	ΔR <sup>2</sup>	SE	F	df	p	
	<b>.03*</b>	<b>.10</b>	<b>4.91</b>	<b>1/134</b>	<b>.028</b>	
	<i>B</i>	<i>β</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95%CI
Age	<b>−.01**</b>	<b>−.25</b>	<b>.00</b>	<b>−3.02</b>	<b>.003</b>	<b>[−.02; −.00]</b>
Overall feminine orientation	<b>.04*</b>	<b>.18</b>	<b>.02</b>	<b>2.22</b>	<b>.028</b>	<b>[.01; .08]</b>
Step 3	ΔR <sup>2</sup>	SE	F	df	p	
	.03	.18	3.57	1/126	.061	
	<i>B</i>	<i>β</i>	<i>SE</i>	<i>t</i>	<i>p</i>	95%CI
Age	−.01	−.18	.01	−1.89	.061	[−.02; .00]
Care for children	.00	.00	.02	.03	.978	[−.04; .04]
Thinness	.01	.05	.01	.50	.621	[−.02; .03]
Relational	−.02	−.12	.02	−1.24	.219	[−.06; .01]
Domestic	.00	−.01	.01	−.14	.887	[−.03; .03]
Modest	.01	.04	.02	.43	.666	[−.03; .04]
Invest in appearance	.00	−.03	.01	−.30	.762	[−.03; .02]
Sexual fidelity	.01	.08	.01	.80	.425	[−.02; .04]
Romantic	.01	.06	.03	.30	.768	[−.05; .07]
Sweet and nice	.02	.06	.03	.61	.542	[−.04; .07]

\*\*  $p < .01$ ; \*  $p < .05$ . Dependent variable: Feminine expression in visual MDA profile cues

Bold text highlights all relevant statistics

women may thus have higher odds to (be) attract(ed) to men endorsing traditional gender roles. Research suggests that men with more traditional gender role beliefs (i.e., hypermasculinity) are more likely to become perpetrators of (e.g., Aubert & Flecha, 2021; Parrott & Zeichner, 2003), whereas women with more traditional gender role beliefs (i.e., hyperfemininity) are more likely to tolerate gender-based violence (McKelvie & Gold, 1994).

Gender-based violence, including physical, sexual and psychological harm to women, is a pressing issue in today's society. According to the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women, 2022), almost one in three women have experienced intimate partner violence, non-partner sexual violence, or both at least once during their lives. Such violence is detrimental for women's wellbeing and relates to women's and girls' depressive symptoms and anxiety (e.g., Aubert & Flecha, 2021; Kahsay et al., 2020). Ultimately, connections between such hyper-gendered individuals may therefore be facilitated

through MDAs, which poses questions for relationship quality and individuals' physical and mental wellbeing.

### Limitations and Avenues for Future Research

Despite the contributions of the current study, the results should be interpreted in light of some limitations, which provide avenues for future research. Although young adult MDA users still seemed to have internalized traditional sociocultural definitions of masculinity and femininity, results were rather mixed in which aspects influenced portraying traditional gender expressions in their profiles. Arguably, other confounding underlying mechanisms or external factors are at play, such as motivations for MDA use (e.g., Sumter et al., 2017), heightened awareness of changing societal gender norms (e.g., Banet-Weiser, 2018) or platform culture (e.g., Lippicini, 2013). These external factors can be considered in future research. More modern measures of gender identities may also be considered.

Second, similar to other research on social media (e.g., Rodgers & Rousseau, 2022), there was a relative underrepresentation of men in the current study's sample. Hence, following Harriger et al. (2023), we recommend that researchers further investigate the experiences of men with regard to their social media use. Also, although efforts were undertaken to collect a representative sample of young adults, this study's sample only contained 12 participants (of the 396, 3.03%) who did not identify with their biological sex. To attain more insight in the ways that non-cisgender (i.e., gender queer) individuals negotiate their self-presentations on predominantly hetero- and gender normative platforms (i.e., MDAs), future research may pursue more (qualitative) investigations of this currently understudied population.

## Conclusion

The current study seems to confirm the presence of an intensification process that encourages individuals to engage in selective, gendered self-presentations in the realm of mobile dating. The findings suggest that the ways in which individuals display traditional gender expressions in their MDA profiles is a complex interplay between individuals' characteristics, the communicative context and the (imagined) target audience. Overall the findings support the gender schema theory (Bem, 1981) and (partially) Goffman's (1959) dramaturgical model of social interaction. Finally, while this study assessed potential, theoretically-based antecedents of traditional gender expressions in the realm of mobile dating, it encourages future research to explore potential other underlying mechanisms, like individuals' motivations for MDA use, awareness of evolving gender norms, and differential platform cultures, to fully disentangle their impact on gendered self-presentations on MDAs.

**Acknowledgements** The authors would like to thank the young adults who shared their MDA profiles with the researchers.

**Funding** This work was supported by the Research Foundation Flanders (FWO Vlaanderen) under Grant G077420N and K201424N. We thankfully acknowledge the foundation's support.

**Data Availability** Data and syntaxes are available on the Open Science Framework at [https://osf.io/j5h3q/?view\\_only=65b40e3d56b04e7bbe37111c0a2be2a5](https://osf.io/j5h3q/?view_only=65b40e3d56b04e7bbe37111c0a2be2a5).

## Declarations

**Conflict of interest** The authors have no conflicts of interests to declare that are relevant to the content of this article.

**Ethical Approval** This study was approved by the Social and Societal-Ethics Committee of KU Leuven. The approval number is G-2020-1438.

**Informed Consent** Informed consent was obtained from all involved-parties.

## References

- Anderson, E., & McCormack, M. (2018). Inclusive masculinity theory: Overview, reflection and refinement. *Journal of Gender Studies*, 27(5), 547–561. <https://doi.org/10.1080/09589236.2016.1245605>
- Anderson, M., Vogels, E. A., & Turner, E. (2020). *The virtues and downsides of online dating*. Pew Research Center.
- Aubert, A., & Flecha, R. (2021). Health and well-being consequences for gender violence survivors from isolating gender violence. *International Journal of Environmental Research and Public Health*, 18(16), 8626. <https://doi.org/10.3390/ijerph18168626>
- Balachandra, L., Fischer, K., & Brush, C. (2021). Do (women's) words matter? The influence of gendered language in entrepreneurial pitching. *Journal of Business Venturing Insights*, 15, e00224. <https://doi.org/10.1016/j.jbvi.2021.e00224>
- Banet-Weiser, S. (2018). *Empowered: Popular feminism and popular misogyny*. Duke University Press. <https://doi.org/10.1515/9781478002772>
- Baughner, A. R., & Gazmararian, J. A. (2015). Masculine gender role stress and violence: A literature review and future directions. *Aggression and Violent Behavior*, 24, 107–112. <https://doi.org/10.1016/j.avb.2015.04.002>
- Bem, S. L. (1981). Gender schema theory: A cognitive account of sex typing. *Psychological Review*, 88(4), 354–364. <https://doi.org/10.1037/0033-295X.88.4.354>
- Berkowitz, D., Tinkler, J., Peck, A., & Coto, L. (2021). Tinder: A game with gendered rules and consequences. *Social Currents*, 8(5), 491–509. <https://doi.org/10.1177/23294965211019486>
- Bigler, R. S., & Leaper, C. (2015). Gendered language: Psychological principles, evolving practices, and inclusive policies. *Policy Insights from the Behavioral and Brain Sciences*, 2(1), 187–194. <https://doi.org/10.1177/2372732215600452>
- Bij de Vaate, A. J. N. B., Veldhuis, J., Alleva, J. M., Konijn, E. A., & van Hugten, C. H. (2018). Show your best self(ie): An exploratory study on selfie-related motivations and behavior in emerging adulthood. *Telematics and Informatics*, 35(5), 1392–1407. <https://doi.org/10.1016/j.tele.2018.03.010>
- Bivens, R., & Hoque, A. S. (2018). Programming sex, gender, and sexuality: Infrastructural failures in the “feminist” dating app Bumble. *Canadian Journal of Communication*, 43(3), 441–459. <https://doi.org/10.22230/cjc.2018v43n3a3375>
- Bucher, T., & Helmond, A. (2018). The affordances of social media platforms. In J. Burgess, T. Poell, & A. E. Marwick (Eds.), *The SAGE handbook of social media* (pp. 233–253). SAGE Publications. <https://doi.org/10.4135/9781473984066.n14>
- Budge, S. L., Orovecz, J. J., Owen, J. J., & Sherry, A. R. (2018). The relationship between conformity to gender norms, sexual orientation, and gender identity for sexual minorities. *Counseling Psychology Quarterly*, 31(1), 79–97. <https://doi.org/10.1080/09515070.2016.1214558>
- Bumble. (2024). *The home of making the first move*. <https://bumble.com/en-us/about>
- Bussey, K. (2011). Gender identity development. In S. Schwartz, K. Luyckx, & V. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 603–628). Springer. [https://doi.org/10.1007/978-1-4419-7988-9\\_25](https://doi.org/10.1007/978-1-4419-7988-9_25)
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity: Rethinking the concept. *Gender & Society*, 19(6), 829–859. <https://doi.org/10.1177/0891243205278639>

- Curry, D. (2022). Dating app revenue and usage statistics (2022). *Business of Apps*. Retrieved from: <https://www.businessofapps.com/data/dating-app-market/>
- Daubman, K. A., & Sigall, H. (1997). Gender differences in perceptions of how others are affected by self-disclosure of achievement. *Sex Roles, 37*, 73–89. <https://doi.org/10.1023/A:1025640720363>
- Deaux, K., & Lewis, L. L. (1984). Structure of gender stereotypes: Interrelationships among components and gender label. *Journal of Personality and Social Psychology, 46*(5), 991–1004. <https://doi.org/10.1037/0022-3514.46.5.991>
- Dhir, A., Torsheim, T., Pallesen, S., & Andreassen, C. S. (2017). Do online privacy concerns predict selfie behavior among adolescents, young adults and adults? *Frontiers in Psychology, 8*(1). <https://doi.org/10.3389/fpsyg.2017.00815>
- Duguay, S. (2017). Dressing up Tinderella: Interrogating authenticity claims on the mobile dating app Tinder. *Information, Communication & Society, 20*(3), 351–367. <https://doi.org/10.1080/1369118X.2016.1168471>
- Eisend, M. (2019). Gender roles. *Journal of Advertising, 48*(1), 72–80. <https://doi.org/10.1080/00913367.2019.1566103>
- Ellison, N. B., Hancock, J. T., & Toma, C. L. (2012). Profile as promise: A framework for conceptualizing veracity in online dating self-presentations. *New Media & Society, 14*(1), 45–62. <https://doi.org/10.1177/1461444811410395>
- Evans, L., & Davies, K. (2000). No sissy boys here: A content analysis of the representation of masculinity in elementary school reading textbooks. *Sex Roles, 42*(3–4), 255–270. <https://doi.org/10.1023/A:1007043323906>
- Ferris, L., & Duguay, S. (2020). Tinder's lesbian digital imaginary: Investigating (im) permeable boundaries of sexual identity on a popular dating app. *New Media & Society, 22*(3), 489–506. <https://doi.org/10.1177/1461444819864903>
- Fisher, M., Cox, A., Bennett, S., & Gavric, D. (2008). Components of self-perceived mate value. *Journal of Social, Evolutionary, and Cultural Psychology, 2*(4), 156–168. <https://doi.org/10.1037/h0099347>
- Fisman, R., Iyengar, S. S., Kamenica, E., & Simonson, I. (2006). Gender differences in mate selection: Evidence from a speed dating experiment. *Quarterly Journal of Economics, 121*(2), 673–697. <https://doi.org/10.1162/qjec.2006.121.2.673>
- Goffman, E. (1959). *The presentation of self in everyday life*. Penguin Books.
- Gonzales, A. L., & Hancock, J. T. (2011). Mirror, mirror on my Facebook wall: Effects of exposure to Facebook on self-esteem. *Cyberpsychology, Behavior and Social Networking, 14*(1–2), 79–83. <https://doi.org/10.1089/cyber.2009.0411>
- Grubb, A., & Turner, E. (2012). Attribution of blame in rape cases: A review of the impact of rape myth acceptance, gender role conformity and substance use on victim blaming. *Aggression and Violent Behavior, 17*(5), 443–452. <https://doi.org/10.1016/j.avb.2012.06.002>
- Ha, T., Overbeek, G., & Engels, R. C. (2010). Effects of attractiveness and social status on dating desire in heterosexual adolescents: An experimental study. *Archives of Sexual Behavior, 39*(5), 1063–1071. <https://doi.org/10.1007/s10508-009-9561-z>
- Hald, G. M., Malamuth, N. M., & Yuen, C. (2010). Pornography and attitudes supporting violence against women: Revisiting the relationship in nonexperimental studies. *Aggressive Behavior, 36*(1), 14–20. <https://doi.org/10.1002/ab.20328>
- Harriger, J. A., Thompson, J. K., & Tiggemann, M. (2023). TikTok, TikTok, the time is now: Future directions in social media and body image. *Body Image, 44*, 222–226. <https://doi.org/10.1016/j.bodyim.2023.01.005>
- Hastings, G., Angus, K., & Bryant, C. A. (2011). Understanding social norms: Upstream and downstream applications for social marketers. In P. Kenny & G. Hastings (Eds.), *The SAGE handbook of social marketing* (pp. 61–79). SAGE Publications. <https://doi.org/10.4135/9781446201008.n5>
- Hatton, E., & Trautner, M. N. (2011). Equal opportunity objectification? The sexualization of men and women on the cover of *Rolling Stone*. *Sexuality & Culture, 15*(3), 256–278. <https://doi.org/10.1007/s12119-011-9093-2>
- Hayfield, N., Clarke, V., Halliwell, E., & Malson, H. (2013). Visible lesbians and invisible bisexuals: Appearance and visual identities among bisexual women. *Women's Studies International Forum, 40*, 172–182.
- He, A., & van Driel, I. I. (2023). *(Mis)representation of lesbian and gay characters in Western European film from 1971 to 2021* [Paper presentation]. ETMAAL, Enschede, The Netherlands.
- Hess, A., & Flores, C. (2018). Simply more than swiping left: A critical analysis of toxic masculine performances on *Tinder Nightmares*. *New Media & Society, 20*(3), 1085–1102. <https://doi.org/10.1177/1461444816681540>
- Kahsay, W. G., Negarandeh, R., Dehghan Nayeri, N., & Hasanpour, M. (2020). Sexual harassment against female nurses: A systematic review. *BMC Nursing, 19*(1). <https://doi.org/10.1186/s12912-020-00450-w>
- Lakoff, R. (1973). Language and woman's place. *Language in Society, 2*(1), 45–79. <https://doi.org/10.1017/S0047404500000051>
- Landolt, M. A., Lalumière, M. L., & Quinsey, V. L. (1995). Sex differences in intra-sex variations in human mating tactics: An evolutionary approach. *Ethology and Sociobiology, 16*(1), 3–23. [https://doi.org/10.1016/0162-3095\(94\)00012-V](https://doi.org/10.1016/0162-3095(94)00012-V)
- Lanis, K., & Covell, K. (1995). Images of women in advertisements: Effects on attitudes related to sexual aggression. *Sex Roles, 32*(9–10), 639–649. <https://doi.org/10.1007/BF01544216>
- Leaper, C., & Friedman, C. K. (2007). The socialization of gender. In J. E. Grusec & P. D. Hastings (Eds.), *Handbook of socialization: Theory and research* (pp. 561–587). The Guilford Press.
- Lehavot, K., King, K. M., & Simoni, J. M. (2011). Development and validation of a gender expression measure among sexual minority women. *Psychology of Women Quarterly, 35*(3), 381–400. <https://doi.org/10.1177/0361684311413554>
- Levant, R. F., McDermott, R., Parent, M. C., Alshabani, N., Mahalik, J. R., & Hammer, J. H. (2020). Development and evaluation of a new short form of the Conformity to Masculine Norms Inventory (CMNI-30). *Journal of Counseling Psychology, 67*(5), 622–636. <https://doi.org/10.1037/cou0000414>
- Luppici, R. (2013). *Handbook of research on Technoself: Identity in a technological society*. IGI Global. <https://doi.org/10.4018/978-1-4666-2211-1>
- Mahalik, J. R., Morray, E. B., Coonerty-Femiano, A., Ludlow, L. H., Slaterry, S. M., & Smiler, A. (2005). Development of the Conformity to Feminine Norms Inventory. *Sex Roles, 52*(7–8), 417–435. <https://doi.org/10.1007/s11199-005-3709-7>
- McKelvie, M., & Gold, S. R. (1994). Hyperfemininity: Further definition of the construct. *Journal of Sex Research, 31*(3), 219–228. <https://doi.org/10.1080/00224499409551755>
- Miller, B., & Behm-Morawitz, E. (2016). “Masculine guys only”: The effects of femmephobic mobile dating application profiles on partner selection for men who have sex with men. *Computers in Human Behavior, 62*, 176–185. <https://doi.org/10.1016/j.chb.2016.03.088>
- Mosher, D. L., & Sirkin, M. (1984). Measuring a macho personality constellation. *Journal of Research in Personality, 18*(2), 150–163. [https://doi.org/10.1016/0092-6566\(84\)90026-6](https://doi.org/10.1016/0092-6566(84)90026-6)
- Munns, M. E., Tranquada-Torres, B., Chrastil, E., & Hegarty, M. (2022). *Large-scale vs small-scale spatial abilities: Development of a broad spatial activities questionnaire*. In Proceedings of the annual meeting of the Cognitive Science Society (Vol. 44, No. 44).
- Murnen, S. K., & Byrne, D. (1991). Hyperfemininity: Measurement and initial validation of the construct. *Journal of Sex Research, 28*(3), 479–489. <https://doi.org/10.1080/00224499109551620>



- Newman, M. L., Groom, C. J., Handelman, L. D., & Pennebaker, J. W. (2008). Gender differences in language use: An analysis of 14,000 text samples. *Discourse Processes*, 45(3), 211–236. <https://doi.org/10.1080/01638530802073712>
- Ohme, J., Araujo, T., Boeschoten, L., Freelon, D., Ram, N., Reeves, B. B., & Robinson, T. N. (2024). Digital trace data collection for social media effects research: APIs, data donation, and (screen) tracking. *Communication Methods and Measures*, 18, 124–141. <https://doi.org/10.1080/19312458.2023.2181319>
- Parent, M. C., & Moradi, B. (2011). An abbreviated tool for assessing conformity to masculine norms: Psychometric properties of the Conformity to Masculine Norms Inventory-46. *Psychology of Men & Masculinity*, 12(4), 339–353. <https://doi.org/10.1037/a0021904>
- Parrott, D. J., & Zeichner, A. (2003). Effects of hypermasculinity on physical aggression against women. *Psychology of Men & Masculinity*, 4(1), 70–78. <https://doi.org/10.1037/1524-9220.4.1.70>
- Petty, R., & Briñol, P. (2012). The elaboration likelihood model. In P. A. M. Van Lange, A. W. Kruglanski & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (pp. 224–245). SAGE Publications Ltd. <https://doi.org/10.4135/9781446249215>
- Piersoul, J., & Van de Velde, F. (2023). Men use more complex language than women, but the difference has decreased over time: A study on 120 years of written Dutch. *Linguistics*, 61(3), 725–747. <https://doi.org/10.1515/ling-2021-0022>
- Rieger, G., & Savin-Williams, R. C. (2012). Gender nonconformity, sexual orientation, and psychological well-being. *Archives of Sexual Behavior*, 41(3), 611–621. <https://doi.org/10.1007/s10508-011-9738-0>
- Roberts, D. C., & Utych, S. M. (2020). Linking gender, language, and partisanship: Developing a database of masculine and feminine words. *Political Research Quarterly*, 73(1), 40–50. <https://doi.org/10.1177/1065912919874883>
- Rodgers, R. F., & Rousseau, A. (2022). Social media and body image: Modulating effects of social identities and user characteristics. *Body Image*, 41, 284–291. <https://doi.org/10.1016/j.bodyim.2022.02.009>
- Rosenfeld, M. J., Thomas, R. J., & Hausen, S. (2019). Disintermediating your friends: How online dating in the United States displaces other ways of meeting. *Proceedings of the National Academy of Sciences*, 116(36), 17753–17758. <https://doi.org/10.1073/pnas.1908630116>
- Rudman, L. A., & Glick, P. (1999). Feminized management and backlash toward agentic women: The hidden costs to women of a kinder, gentler image of middle managers. *Journal of Personality and Social Psychology*, 77(5), 1004–1010. <https://doi.org/10.1037/0022-3514.77.5.1004>
- Schreurs, L., & Vandenbosch, L. (2022). *Adolescents' social media literacy: A theoretical and empirical analysis of its development and empowering role in social media positivity bias effects* [Doctoral dissertation, KU Leuven]. Lirias KU Leuven.
- Schwarz, S., & Hassebrauck, M. (2012). Sex and age differences in mate-selection preferences. *Human Nature*, 23(4), 447–466. <https://doi.org/10.1007/s12110-012-9152-x>
- Sobieraj, S., & Humphreys, L. (2021). Forced empowerment and the paradox of mobile dating apps. *Social Media + Society*, 7. <https://doi.org/10.1177/20563051211068130>
- Suarez, E., & Gadalla, T. M. (2010). Stop blaming the victim: A meta-analysis on rape myths. *Journal of Interpersonal Violence*, 25(11), 2010–2035. <https://doi.org/10.1177/0886260509354503>
- Sumter, S. R., Vandenbosch, L., & Ligtenberg, L. (2017). Love me Tinder: Untangling emerging adults' motivations for using the dating application Tinder. *Telematics and Informatics*, 34(1), 67–78. <https://doi.org/10.1016/j.tele.2016.04.009>
- UN Women. (2022). *Facts and figures: Ending violence against women*. <https://www.unwomen.org/en/what-we-do/ending-violence-against-women/facts-and-figures>
- van Oosten, J. M., Peter, J., & Boot, I. (2015). Exploring associations between exposure to sexy online self-presentations and adolescents' sexual attitudes and behavior. *Journal of Youth and Adolescence*, 44(5), 1078–1091. <https://doi.org/10.1007/s10964-014-0194-8>
- van Oosten, J. M., Vandenbosch, L., & Peter, J. (2017). Gender roles on social networking sites: Investigating reciprocal relationships between Dutch adolescents' hypermasculinity and hyperfemininity and sexy online self-presentations. *Journal of Children and Media*, 11(2), 147–166. <https://doi.org/10.1080/17482798.2017.1304970>
- Vangeel, L., Eggermont, S., & Vandenbosch, L. (2020). Does adolescent media use predict sexual stereotypes in adolescence and emerging adulthood? Associations with music television and online pornography exposure. *Archives of Sexual Behavior*, 49(4), 1147–1161. <https://doi.org/10.1007/s10508-020-01677-z>
- Vanherle, R., & Beullens, K. (2023). *Likes and liquor: A mixed-methods project to unravel the impact of alcohol-related social network site use on youths' (underage) drinking behaviors* [Doctoral dissertation, KU Leuven]. Lirias KU Leuven.
- Vogels, E., & McClain, C. (2023). *Key findings about online dating in the U.S.* Pew Research Center.
- Vranken, I., & Vandenbosch, L. (2023). *(Social) media portrayals of professions: An exploration of professional portrayals in popular (social) media and their effects on late adolescents*. Doctoral seminar, KU Leuven, Leuven, Belgium
- Walther, J. B. (2007). Selective self-presentation in computer-mediated communication: Hyperpersonal dimensions of technology, language, and cognition. *Computers in Human Behavior*, 23(5), 2538–2557. <https://doi.org/10.1016/j.chb.2006.05.002>
- Ward, L. M. (2016). Media and sexualization: State of empirical research, 1995–2015. *Journal of Sex Research*, 53(4–5), 560–577. <https://doi.org/10.1080/00224499.2016.1142496>
- Wegener, D. T., Clark, J. K., & Petty, R. E. (2006). Not all stereotyping is created equal: Differential consequences of thoughtful versus non-thoughtful stereotyping. *Journal of Personality and Social Psychology*, 90(1), 42–59. <https://doi.org/10.1037/0022-3514.90.1.42>
- Willer, R., Conlon, B., Rogalin, C. L., & Wojnowicz, M. T. (2013). Overdoing gender: A test of the masculine overcompensation thesis. *American Journal of Sociology*, 118(4), 980–1022. <https://doi.org/10.1086/668417>
- Yan, K., Salmon, J., & Aubrey, J. S. (2022). A sexy post a day brings the “likes” your way: A content analytic investigation of sexualization in fraternity Instagram posts. *Sexuality & Culture*, 26(2), 685–706. <https://doi.org/10.1007/s12119-021-09915-9>
- Yeo, T. E. D., & Fung, T. H. (2018). “Mr right now”: Temporality of relationship formation on gay mobile dating apps. *Mobile Media & Communication*, 6(1), 3–18. <https://doi.org/10.1177/2050157917718601>

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.