

Gossip as an Intrasexual Competition Strategy: Sex Differences in Gossip Frequency, Content, and Attitudes

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Abstract From an evolutionary perspective, gossip has been considered a putative intrasexual competition strategy that is used to vie for mates and resources linked to reproductive success. To date, no study has directly examined the relations between intrasexual competitiveness, reported tendency to gossip, and attitudes toward gossiping. Limited empirical work has also focused on whether gossip frequency, gossip content, and gossip attitudes correspond to women's and men's divergent intrasexual competition strategies and evolved mating preferences. In a sample of 290 heterosexual young adults, we found that intrasexual competition positively predicted reported gossip frequency and favorable attitudes toward gossiping. Additionally, women reported a greater tendency to gossip in comparison to men, particularly about physical appearance and social information, whereas men reported gossiping more about achievement. Women also reported greater enjoyment of, and perceived more value in, gossiping than men. Collectively, these findings provide empirical support for the hypothesis that gossip is an intrasexual competition tactic that, by and large, corresponds to women's and men's evolved mate preferences and differential mate competition strategies.

Keywords Gossip · Intrasexual competition · Mate preferences · Sex differences

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Gossip has been defined as a form of evaluative communication about any third person who may be present or absent from the group (Eder and Enke 1991; Leaper and Holliday 1995; Levin and Arluke 1985). From an evolutionary perspective, it is considered to be a psychological adaptation that permits exchanging both positive and negative information about other people who are embedded within complex social networks (Barkow 1992; Dunbar 1996, 2004; Foster 2004; McAndrew and Milenkovic 2002). Gossip has also been defined as a putative intrasexual competition strategy that is used to learn about and derogate same-sex competitors to lower their desirability as a mate (Campbell 1999, 2004); however, to our knowledge, no study has examined the relation between intrasexual competitiveness and gossiping. Over evolutionary time, women and men have encountered different adaptive problems which have led to the selection of divergent mate competition strategies and mate preferences (Buss 1988; Schmitt and Buss 1996). Women's relational orientation, their use of gossip for competitive social comparisons, their susceptibility to relational victimization, and their preference for low-risk forms of indirect aggression has led researchers to predict that gossip may be women's intrasexual competition strategy of choice (McAndrew 2014, 2017; Vaillancourt 2005, 2013). Thus, women may have a greater interest vested in knowing about and sharing gossip, both positive and malicious. Similarly, women and men are expected to gossip about different content domains and to possess varying attitudes toward gossip that reflect the unique adaptive challenges that they have recurrently faced over their phylogenetic histories. Nonetheless, few studies have examined sex differences in gossip tendency, gossip content, and gossip attitudes and results have been somewhat mixed (Litman and Pezzo 2005; Nevo et al. 1993).

The goals of the present research were to examine whether intrasexual competitiveness positively predicts a tendency to

gossip and gossip attitudes, whether women report gossiping to a greater extent in comparison to men, whether sex differences in the content of reported gossip correspond with purported sex differences in the evolved mate preferences and mate competition tactics of women and men, and if sex differences in attitudes toward the social and moral value of gossip reflect sex differences in intrasexual competition tactics. In the current study, sex is defined as a consistent yet flexible difference in reproductive function, anatomy, and physiology. Sex tends to follow a bimodal distribution (i.e., female/male) but also includes a diversity of expressions (e.g., intersexed; American Psychological Association 2015). Gender corresponds to attitudinal and behavioral patterns that are governed by, in part, cultural norms. We understand sex to be distinct from, but inseparably tied to gender, which is generally defined as social-cultural constructions of femininity and masculinity but not devoid of evolutionary processes.

Sexual Selection, Intrasexual Competition, and Gossip

Humans are argued to possess evolved cognitive architecture designed to transmit, detect, and receive socially relevant information that impacts fitness (Tooby and Cosmides 1992). In this sense, gossip may be viewed as a form of evoked culture that likely varies according to local environmental conditions such as variation in population density, the availability of mates, and the presence of same-sex rivals (Confer et al. 2010; Walsh and Yun 2016). Simultaneously, gossip may be viewed as a form of transmitted culture. It is a subset of knowledge that is acquired and conveyed to others through observation and interaction and is passed along depending on its appeal and relevance to others within a particular cultural milieu. In terms of evoked culture, researchers have tended to focus on the social control function of gossip and how it is an effective means of promoting conformity and cooperation by making salient group norms, as well as to catch cheaters and those trying to take advantage of the beneficial actions of others (i.e., free-riders; Barkow 1992; Beersma and Van Kleef 2011; Levin and Arluke 1987). However, gossip may also be instrumental in the contest for mates and used competitively to manage one's reputation relative to others (Campbell 1999, 2004; McAndrew 2014, 2017; Vaillancourt 2013; Vaillancourt and Sharma 2011). Through the theory of sexual selection (Darwin 1871), mate choice across species is argued to occur through the processes of intersexual selection (i.e., choosing preferred mates) and intrasexual competition (i.e., competing for access to and the retention of mates). Two general forms of intrasexual competition predominate. The first is self-promotion, which involves making oneself more attractive to potential mates relative to rivals (Campbell 2004; Buss and Dedden 1990; Fisher et al. 2009;

Massar et al. 2012). The second is competitor derogation, whereby action is taken to decrease the perceived desirability of a rival as a mate (i.e., their mate value; Fisher et al. 2008).

Androcentric theorizing and the conspicuous aggressive combat of many male mammals has led to the assumption that men are more intrasexually competitive than women. Nonetheless, it is evident that women also evolved to compete for mates and resources that facilitate successful mate competition (Arnocky 2016; Arnocky and Vaillancourt 2017; Campbell 1999, 2004; Stockley and Campbell 2013; Vaillancourt 2005, 2013). Indeed, trait measures of intrasexual competitiveness are often found not to differ between women and men (e.g., Buunk and Fisher, 2009) and both sexes have been found to use a variety of self-promotion and competitor derogation tactics (Bendixen and Kennair 2015; Bleske-Rechek and Buss 2006; Buss 1988; Buss and Dedden 1990; Fisher et al. 2009; Schmitt and Buss 1996; Walters and Crawford 1994). Women are predicted to compete for mates because, relative to other primate species, human men invest significant resources in their partners and offspring, resulting in both women and men being discriminating in their mate choice (Arnocky 2016; Arnocky and Vaillancourt 2017; Clutton-Brock 1991). Additionally, men vary considerably in their value as a short-term (i.e., sexual relationship) and long-term partner (i.e., romantic relationship), resulting in a limited supply of highly desirable mates that heterosexual, and possibly bisexual, women must compete for.

In the competition for mates, our primary rivals are individuals who are vying for the same mating resources that we are (Wilson and Daly 1985). In the context of heterosexual mating, this concerns same-sex others. If intrasexual competition is linked to gossiping, then we should be particularly drawn to gossip about same-sex rivals because it can be used to diminish their reputation in an effort to enhance our own mate value (McAndrew 2014, 2017) and related factors tributary to our mating success such as status and popularity (Arnocky and Vaillancourt 2012). Indeed, previous researchers have found that people are most interested in and tend to share negative gossip about same-sex rivals of a similar age with allies (McAndrew et al. 2007; McAndrew and Milenkovic 2002; Owens et al. 2000). However, it is possible that individuals may transmit negative gossip about potential mates to same-sex rivals in order to deceptively “throw them off of the scent.” It has also been found that people are more likely to share gossip with same-sex as opposed to opposite-sex friends (McAndrew et al. 2007). This may be driven by the importance of same-sex friendships and coalitions (Shackelford 1997) and that a preference for same-sex friends predominates in adolescence and young adulthood (Parker and de Vries 1993).

Gossip may be an adaptive intrasexual competition strategy because it can disguise the identity of the person transmitting the information (i.e., the gossiper), which minimizes the probability of retaliation. Cross-culturally, from Indonesia (French

et al. 2002) to Israel (Österman et al. 1998), women, in comparison to men, have been found to proportionally favor indirect forms of aggression, which includes, but is not limited to, gossip, social exclusion, and social manipulation. In contrast, men have been found to engage in more risky and violent forms of direct aggression (e.g., physical and verbal aggression; Archer 2004, 2009; Arnocky and Vaillancourt 2017; Benenson 2013; Björkqvist 1994; Wilson and Daly 1985; Hess and Hagen 2006; Stockley and Campbell 2013; Vaillancourt 2005, 2013; Vaillancourt et al. 2010). Researchers have attributed these sex differences to the unique adaptive challenges that women and men have recurrently faced over evolutionary time. From this perspective, the key reasons why women are predicted to be more indirect with their aggression include (1) the greater importance of maternal health for the survival of offspring, (2) women's absence of evident armament designed for direct intrasexual combat that men possess (e.g., greater height, weight, and muscle mass, broader canines, etc.), (3) the use of analogous low-risk aggressive tactics by non-human female primates (e.g., interrupting copulations), and (4) to inflict the maximum amount of damage on victims while minimizing counter-aggressions (Arnocky and Vaillancourt 2017; Björkqvist 1994; Campbell 2004; Vaillancourt 2013).

Due to their proportionally greater use of indirect aggression, gossip is predicted to be women's weapon of choice within the realm of mate competition (Campbell 1999, 2004; McAndrew 2014, 2017; Vaillancourt 2013) and particularly evident during women's earlier reproductive years when mate competition intensifies (Massar et al. 2012). Gossip can also be an effective means through which to increase intimacy in interpersonal relationships. Compared to men, women attribute more value to, and their sense of self-worth is more strongly linked to, their close intimate friendships (Aukett et al. 1988; Eckert, 1990). Consequently, girls and women seek to hurt same-sex peers by damaging peer relationships and face a greater susceptibility to aversive mental health outcomes (e.g., increased risk of depression, suicidal ideation) as a result of indirect peer victimization in comparison to boys and men (Benenson et al. 2013; Crick and Grotpeter 1995; Crick and Nelson 2002; Galen and Underwood 1997; Klomek et al. 2007, 2008; Lagerspetz, Björkqvist, & Peltonen 1988; Owens et al. 2000). Women also use gossip to make competitive social comparisons with same-sex others which is positively linked to their intrasexual competitiveness (Arnocky et al. 2016; Arnocky et al. 2012; Buunk and Fisher 2009; Eckert, 1990). These findings suggest that indirect, surreptitious tactics for harming rivals, like gossip, can serve as effective intrasexual competition strategies, that such strategies may be preferentially used by girls and women, and that girls and women may have a greater vested interest in gossip and to engage in gossiping relative to boys and men (Leaper and Holliday 1995; Levin and Arluke 1985).

Despite a similar level of interest in mating reputation gossip (i.e., gossip about potential mates; De Backer et al. 2007), some researchers have shown that women gossip more often than men (Levin and Arluke 1985; Nevo et al. 1993; Watson 2012). However, few researchers have directly examined sex differences in the general tendency to gossip and some have produced mixed results (e.g., Litman and Pezzo 2005). Leaper and Holliday (1995) also found that the frequency of negative gossip was highest between female friends. Furthermore, women have been shown to express a stronger desire to hear gossip about same-sex peers and gossip at a greater frequency about same-sex friends and family members in comparison to men (Levin and Arluke 1985; McAndrew and Milenkovic 2002). Whereas men are more likely to share gossip with their romantic partners than with anyone else, women report that they are just as likely to share gossip with their same-sex friends as with their romantic partners (McAndrew et al. 2007). These results provide further support for the prediction that women may gossip to a greater extent than men.

Sex Differences in Gossip Content

Through the theory of sexual selection (Darwin 1871) and sexual strategies theory (Buss and Schmitt, 1993), it is predicted that the evolved mating preferences of one sex become the traits over which the opposite sex competes (Arnocky et al. 2016; Wilson and Daly 1985). Ancestral women had greater obligatory parental investment than men (e.g., gestation, child bearing, lactation) and so benefited from biparental care and provisioning for more dependent young (Trivers 1972). Therefore, women are predicted to actively compete for partners displaying cues to resource acquisition and holding potential, such as status, achievement, ambition, and industry (Arnocky 2016; Arnocky and Vaillancourt 2017; Buss and Dedden 1990; Campbell 2004). Across cultures, women rate indicators of access to resources (e.g., status, wealth, achievement) and willingness to invest (e.g., love, relationship commitment) as particularly desirable in a long-term mate (Buss 1989; Li et al. 2011; Shackelford et al. 2005). These traits are predicted to be the focus of heterosexual men's competitor derogation to reduce the mate value of their rivals. In contrast, ancestral men, with their lower obligatory parental investment, cheap and replenishing sperm, and their inability to be sure of the genetic relationship that they shared with their offspring (i.e., paternity uncertainty), evolved to prefer women displaying cues linked to health, reproductive value, and fertility (e.g., youth, facial femininity, unblemished skin, full lips, large breasts, low waist-to-hip ratio), as well as sexual fidelity in a potential long-term mate (Buss 1989; Li et al. 2011; Shackelford et al. 2005; Singh 1993; Symons 1995). Accordingly, women are predicted to derogate same-sex rivals over aspects of their physical appearance and sexual reputation.

Examining sex differences in the strategies used to attract mates, Buss (1988) found that women reported enhancing and emphasizing their appearance more than men, whereas men reported resource display tactics more than women. Similarly, Buss and Dedden (1990) found that men were judged by others and self-reported that they were more likely to derogate the wealth (e.g., financial standing), cues to resource acquisition (e.g., achievements), and physical prowess (e.g., strength) of same-sex peers, whereas women were judged to be more likely, and self-reported a greater tendency, to derogate each other's appearance, sexual behavior, and fidelity. These above findings have since been replicated (Bendixen and Kennair 2015; Walters and Crawford 1994). Women have also reported a greater tendency to gossip about the physical appearance of others in comparison to men, whereas men appear to gossip about the achievements of others more than women (Nevo et al. 1993; Watson 2012). Furthermore, spontaneous recall for both women and men has been shown to be greater for gossip associated with the attractiveness of a fictional female character, whereas gossip linked to the status and wealth of male characters is recalled more often (De Backer et al. 2007). In support of the effectiveness of these tactics, Fisher and Cox (2009) found that women derogated a same-sex rival regarding her physical appearance that men subsequently rated the rival as less desirable. This effect was stronger when the disparaging remarks came from an attractive, in comparison to a relatively less attractive, woman. Interestingly, men's judgment of a woman's physical attractiveness is not significantly influenced by her tendency to disparage same-sex peers using gossip; however, men do evaluate the derogator as less kind and trustworthy (Fisher et al. 2010).

If girls and women place more value on their intimate friendships than boys and men, seek to hurt same-sex peers through damaging peer relationships, and are more susceptible to psychological harm caused by relational victimization, then perhaps women may gossip more about social information than men (e.g., affairs, relationships, everyday lives of others; Nevo et al. 1993). This may allow women to acquire knowledge about people in their social circles to protect their relationships and themselves. In previous work, women have been found to have conversations and gossip about people and interpersonal relationships at a greater frequency than men (Bischoping 1993; Watson 2012). Although, there appears to be no sex difference in the proclivity to gossip about culturally approved content, such as analyzing the behavior of others and sharing interesting details about people (i.e., "sublimated" gossip; Nevo et al. 1993). Nonetheless, women may benefit more than men by "honing" their ability to gossip, especially if it is one of the primary means by which women indirectly aggress against others (Campbell 2004; McAndrew 2014; Vaillancourt 2013).

There is a shortage of empirical work that has directly examined sex differences in the content of reported gossip,

and some limitations of these investigations are worth noting. In a study by Nevo et al. (1993), a relatively small sample of Israeli university students was used ($N = 120$; $n = 58$ women, $n = 62$ men) resulting in limited statistical power to detect sex differences in gossip content. Additionally, Nevo et al. (1993) regarded the factor structure of the scale used to assess reported frequency of gossip content (i.e., the Tendency to Gossip Questionnaire [TGQ]) as tentative and in need of further support. In the study by Watson (2012), the majority of participants were women ($n = 167$ of 236, 71%), as well as in the two studies by Litman and Pezzo (2005) ($n = 534$ of 710, 75%), precluding a robust test of differences between women and men. Furthermore, the key focus of Watson's (2012) investigation was on how content relates differentially to the quality of women's and men's friendships, not on exploring sex differences in gossip content. Watson (2012) also elected not to include the sublimated subscale of the TGQ (Nevo et al. 1993) due to low internal consistency, which may have resulted from a problematic factor structure for the scale.

Sex Differences in Attitudes toward Gossip

As a consequence of divergent intrasexual competition tactics (Arnocky 2016; Arnocky and Vaillancourt 2017; Buss and Dedden 1990) and because gossip behavior is highly correlated with gossip attitudes (Litman and Pezzo 2005), it is possible that women and men differ in their attitudes toward gossip. If women prefer to aggress indirectly against rivals and use gossip to compete for mates, then perhaps women perceive a greater value of sharing and learning about gossiped information, as well as how it may be used to their advantage (i.e., the social value of gossip; Litman and Pezzo 2005). Additionally, women's greater reported tendency to gossip (Nevo et al. 1993) and their more encouraging responses to hearing gossip about others (Leaper and Holliday 1995) support the idea that women may enjoy gossiping and learning about others via gossip more than men. Moreover, the greater perceived social value of gossip has been found to positively predict a greater interest in, and intentions to transmit, negative gossip to harm another in both women and men (Litman and Pezzo 2005). This finding supports the putative relation between intrasexual competition and the social value of gossip, as well as women's greater potential perceptions of gossip's social importance. Research regarding sex differences in attitudes toward the social value of gossip is, however, scant and has produced equivocal results (Litman et al. 2009; Litman and Pezzo 2005).

The spreading of malicious gossip has been found to have more deleterious effects on women and their relationships, but it tends to be socially sanctioned (Beersma and Van Kleef 2011; Levin and Arluke 1987; Vaillancourt 2013). Therefore, despite potential positive attitudes toward the social value of gossip, it may be especially important for women

to denounce the transmission of gossip, particularly derogatory gossip, in order to protect themselves against its damaging effects. Perhaps then, by providing themselves with concessions to spread gossip while publicly condemning its use by others, women may effectively gain a competitive edge on same-sex rivals. Beliefs concerning whether it is ethical to share negative gossip and the trustworthiness of gossiped information have been conceptualized as the moral value of gossip by Litman and Pezzo (2005). Therefore, it may be predicted that women would condemn the spreading of gossip, whereas men may not find it as morally unacceptable. Similar to investigations concerning attitudes toward the social value of gossip, research regarding significant sex differences in the moral value of gossip has been limited with mixed findings (Litman et al. 2009; Litman and Pezzo 2005).

The Present Study

The aim of the current study was to examine the potential relations between intrasexual competition, self-reported gossip frequency, and gossip attitudes among young adult women and men. This objective was guided by an evolutionary approach, where gossip was viewed as an intrasexual competition strategy (Campbell 2004; De Backer et al. 2007; Massar et al. 2012; McAndrew 2014; Vaillancourt 2005, 2013). Given our objectives, we propose the following hypotheses:

Hypothesis 1: Intrasexual competitiveness will positively predict a reported tendency to gossip and gossip attitudes (i.e., the degree to which gossiping is viewed positively).

Hypothesis 2: Women will report a significantly greater tendency to gossip than men. Women will also report gossiping more about the physical appearance of others, social information, and culturally appropriate content (i.e., sublimated gossip) in comparison to men, whereas men will express a greater tendency to gossip about the achievements of others (a signal to resource acquisition/holding potential) in comparison to women.

Hypothesis 3: Women will express more enjoyment in sharing and receiving gossip, as well as a greater interest in learning about others through gossip (i.e., stronger attitudes toward the social value of gossip) in comparison to men. Women will be more likely than men to denounce the spreading of gossip behind the backs of others and to doubt the credibility of gossip (i.e., view gossiping as less moral).

Method

Participants

The sample consisted of 314 participants recruited from a university and college in Ontario, Canada using an online

research participation system and recruitment stations in common areas in campus buildings. Informed consent was obtained from all participants in the present study. The participants ranged from 17 to 30 years of age ($M_{\text{age}} = 20.22$, $SD = 2.07$). In response to the question “what is your sex?” 55.7% ($n = 175$) identified as female and 44.3% ($n = 139$) identified as male. In regard to relationship status, 51.6% ($n = 162$) indicated that they were currently single, whereas 48.1% ($n = 151$) indicated that they were currently in a romantic relationship with a median relationship length of 1 to 2 years ($n = 41$ of 151, 27.2%). In terms of ethnicity, 93% ($n = 292$) of the sample identified as white. In relation to sexual orientation, 92.4% ($n = 290$) of the participants identified as heterosexual. Participants identifying with a sexual orientation other than heterosexual (e.g., homosexual, bisexual) were excluded from the analyses because of the focus of the current study (i.e., intrasexual competition with same-sex peers over members of the opposite sex). This resulted in a final sample size of $N = 290$. The present research received approval from the institution’s research ethics board.

Materials

Intrasexual Competition Scale The Intrasexual Competition Scale (ICS) is a 12-item self-report instrument developed by Buunk and Fisher (2009), which measures individual differences in intrasexual competition, or rivalry with same-sex others over access to mates. Sample items include “I can’t stand it when I meet another woman/man who is more attractive than I am,” “When I go out, I can’t stand it when women/men pay more attention to a same-sex friend of mine than to me,” and “I want to be just a little better than other women/men.” Participants respond along a 7-point Likert-type response scale ranging from 1 (*Not at all applicable*) to 7 (*Very much applicable*). The internal consistency reliability (Cronbach’s alpha) for the ICS in the current study was $\alpha = 0.88$ ($\alpha = 0.90$ for women and $\alpha = 0.88$ for men).

Tendency to Gossip Questionnaire The Tendency to Gossip Questionnaire (TGQ) is a 20-item self-report measure designed by Nevo et al. (1993), which measures the tendency to gossip about other people and to seek out gossiped information. Respondents are asked to estimate the extent to which statements depict their own behavior in relation to four dimensions of gossip content: physical appearance, achievement, social information, and sublimated gossip. Each dimension of the TGQ has five items. A full list of the items on the TGQ is provided in the results section. Participants respond along a 7-point Likert-type response scale ranging from 1 (*Never*) to 7 (*Always*), with higher scores indicating a stronger tendency to gossip. A total summed score is calculated and scores may theoretically range from 20 to 140. The internal

consistency values for the TGQ fell within an acceptable range ($\alpha = 0.91$ for both women and men).

Attitudes toward Gossip Scale The Attitudes toward Gossip Scale (ATG) is a 12-item measure developed by Litman and Pezzo (2005) that measures a participant's attitudes about gossip, wherein six items tap the social value and the remaining six items measure the moral value of gossip. Participants respond to items along a 5-point Likert-type response scale ranging from 1 (*Disagree strongly*) to 5 (*Agree strongly*). Sample items for the Social Value subscale include "Gossiping is a great way to pass time" and "I love to know what is going on in people's lives." Sample items for the Moral Value subscale include "Gossip is often true" and "It is wrong to talk about others" (reverse-keyed). Higher scores on the Social Value subscale indicate a greater perceived value of gossip, whereas higher scores on the Moral Value subscale signal greater approval of spreading gossip and believing that gossip is more trustworthy. The internal consistency values for the Social Value ($\alpha = 0.82$ for women, $\alpha = 0.78$ for men) and Moral Value ($\alpha = 0.68$ for women, $\alpha = 0.70$ for men) subscales of the ATG fell within an acceptable range.

Results

SPSS (ver. 20) was used for all statistical analyses. Descriptive statistics were calculated for intrasexual competition, tendency to gossip, attitudes toward gossip, as well as attitudes toward the social and moral value of gossip (see Table 1). Histograms as well as skewness and kurtosis statistics were generated for each mean scale score. All variables approximated a normal distribution. Independent samples *t* tests were conducted to test whether self-reported intrasexual competitiveness and reported gossip attitudes differed significantly by sex. As expected, no significant sex differences were found

between women and men on the two variables (see Table 1 for results).

Factor Analysis

In an attempt to confirm the dimensionality of the 20-item TGQ (Nevo et al. 1993), a confirmatory factor analysis was conducted with a maximum likelihood extraction method, a promax rotation (oblique), pairwise deletion, and a forced four factor solution. This factor solution accounted for 61.20% of the variance in TGQ scores. The first factor represented 39% (social information) of the variance, the second 9.49% (achievement), the third 6.95% (appearance), and the fourth 6.13% (sublimated). These four factors were positively correlated $r = .25-.65$. The scree plot indicated that a three, rather than a four, factor solution may best fit the data. In examining the pattern matrix, only two items loaded onto the Sublimated subscale, which had poor internal consistency, $\alpha = 0.55$. Several items did not primarily load onto their original dimensions found by Nevo et al. (1993). For instance, the item "Gossip about people who left the country" had a stronger loading on the social information factor as opposed to achievement factor. Similarly, the item "tend to gossip" had a stronger loading on the social information factor compared to the physical appearance factor.

Given the above results, another confirmatory factor analysis was conducted with a forced three-factor solution, which accounted for 55.01% of the variance in TGQ scores. The items and factor loadings are presented in Table 2. The first factor, accounting for 38.55% of the variance, was a combination of items found on the Social Information and Sublimated subscales, the second achievement (9.66% of the variance), and the third physical appearance (6.80% of the variance). These factors were positively correlated with one another, $r = .60-.63$. This three-factor solution resulted in clearer and more theoretically coherent dimensions. Internal

Table 1 Descriptive statistics, sex differences, and effect size estimates

	Total		Women		Men		<i>t</i>	<i>d</i>
	<i>N</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>		
ICS	284	2.74 (0.96)	155	2.65 (1.00)	129	2.84 (0.90)	1.64	----
TGQ	290	63.95 (19.05)	158	60.20 (17.91)	132	67.09 (19.47)	-3.11**	0.37
Soc. Info.-Sub.	290	38.91 (12.15)	158	41.63 (12.56)	132	35.66 (10.81)	-4.29***	0.51
Achievement	290	14.81 (5.60)	158	14.03 (5.20)	132	15.73 (5.93)	2.61*	0.31
Appearance	289	10.27 (4.28)	158	11.43 (4.36)	131	8.87 (3.75)	-5.30***	0.63
ATG	278	2.60 (0.58)	150	2.63 (0.59)	128	2.56 (0.57)	-0.97	----
Social Value	288	2.71 (0.74)	157	2.83 (0.75)	131	2.58 (0.71)	-2.93**	0.34
Moral Value	279	2.46 (0.62)	151	2.41 (0.63)	128	2.53 (0.60)	1.69	----

Note. ICS = Intrasexual Competition Scale; TGQ = Tendency to Gossip Questionnaire; Soc. Info.-Sub. = Social Information-Sublimated; ATG = Attitudes toward Gossip Scale; Independent sample *t* test results significant at * $p < .05$, ** $p < .01$, and *** $p < .001$, two-tailed.

consistency values for the social information ($\alpha = 0.86$ for women, $\alpha = 0.86$ for men), achievement ($\alpha = 0.78$ for women, $\alpha = 0.81$ for men), and physical appearance ($\alpha = 0.88$ for women, $\alpha = 0.82$ for men) dimensions fell within an acceptable range. The descriptive statistics for the factor analyzed Social Information-Sublimated, Achievement, and Physical Appearance subscales are presented in Table 1.

Hypothesis 1

Simple linear regressions were calculated to assess Hypothesis 1 that intrasexual competition would positively predict reported tendency to gossip and gossip attitudes. Participant age and relationship status were statistically controlled for because of their relation to intrasexual competitiveness (Fisher et al. 2009; Massar et al. 2012). For the first linear regression, intrasexual competition was found to predict reported gossip tendency, $\beta = 0.48, t = 9.15, p < .001$. Intrasexual competition also accounted for a significant proportion of the variance in scores on Nevo et al.’s (1993) TGQ, $F(3, 279) = 28.42, p < .001, R^2 = .23$. For the second linear regression, intrasexual competition was found to predict gossip attitudes,

$\beta = 0.36, t = 6.28, p < .001$. Intrasexual competitiveness also accounted for a significant proportion of the variance in ATG (Litman and Pezzo 2005) scores, $F(3, 268) = 13.56, p < .001, R^2 = .13$. The above results support that those who are more competitive with same-sex rivals over mates are more likely to gossip and to have favorable attitudes toward transmitting and receiving gossip.

We were also interested in assessing if participant sex interacted with intrasexual competitiveness to predict gossip tendency and gossip attitudes. To test these predictions, two hierarchical multiple regression analyses were conducted. An interaction term was created for sex X intrasexual competitiveness (mean centered). For both models, age and relationship status were entered at the first step, intrasexual competitiveness at the second step, and our interaction term at the third step. For the first regression analysis, sex did not significantly moderate the relation between intrasexual competitiveness and gossip tendency, $\beta = -0.10, t = -0.56, p = .578$. For the second regression analysis, sex did not significantly moderate the relation between intrasexual competitiveness and gossip attitudes, $\beta = -0.02, t = -0.08, p = .937$.

Table 2 Confirmatory factor analysis for tendency to gossip questionnaire

Items	Factor		
	1	2	3
<i>Social Information/Sublimated</i>			
I Talk with friends about relationships between men and women	0.54		0.32
I Tend to gossip	0.57		0.27
I Gossip about people who have left the country	0.33	0.22	
I Talk with friends about other people’s problems at work	0.38	0.33	
I analyze with friends the compatibility of couples	0.65		
I know what is going on, who is dating who, etc.	0.73		
I talk with friends about other people’s love affairs	0.82		
I read gossip columns in newspapers or magazines	0.36		
I analyze with friends other people’s motives	0.61	0.25	
I read biographies of famous people	0.24	0.21	
I tell friends interesting details about others	0.66		
I prefer listening to conversations about other people, rather than taking part in them	0.34		
<i>Achievement</i>			
I talk with friends about other people’s grades and achievements		0.56	
I talk with friends about the education level of celebrities		0.53	
I talk with friends about other people’s salaries		0.83	
I talk with friends about other people’s success at work	- 0.23	0.88	
I can contribute interesting information in conversations about other people	0.43	0.49	
<i>Physical Appearance</i>			
I talk with friends about other people’s clothes			0.70
I talk with friends about other people’s personal appearance			0.86
I discuss the personal appearance of others after social events			0.81

Note. Bolded items indicate the strongest factor loading

Hypothesis 2

A series of independent samples *t* tests were used to test Hypothesis 2 that women would report a greater tendency to gossip than men. Additionally, in regard to gossip content, women were predicted to report gossiping more about physical appearance and social information, whereas men were predicted to gossip more about achievement. A significant sex difference was found in the reported tendency to gossip, with women reporting a higher frequency of gossip relative to men (see Table 1 for results). Furthermore, significant sex differences were found for each type of gossip content, such that women reported gossiping more about physical appearance and social information relative to men, whereas men reported gossiping more about achievement-related content relative to women.

Hypothesis 3

Two additional independent samples *t*-tests were used to assess Hypothesis 3 that women would report stronger attitudes toward the social value of gossip, whereas men would find it more morally acceptable to gossip about others and to believe in the trustworthiness of gossip. A significant sex difference was found for the social value of gossip, with women expressing stronger attitudes toward gossip's social value relative to men (see Table 1 for results). However, no significant sex difference was found for the moral value of gossip.

Discussion

From an evolutionary perspective, gossiping has been argued to be an effective means of acquiring information about mates, allies, and rivals, as well as to derogate competitors by impugning their reputation. The results of the present study support the argument that gossip is an intrasexual competition strategy (Arnocky 2016; Arnocky and Vaillancourt 2017; Buss and Dedden 1990; Campbell 1999, 2004; De Backer et al. 2007; McAndrew 2014, 2017; Vaillancourt 2005, 2013). Controlling for age and relationship status, intrasexually competitive attitudes were found to positively predict a self-reported tendency to gossip, as well as more favorable attitudes toward transmitting and receiving gossip in a sample of young heterosexual women and men (Hypothesis 1). Moreover, women were found to report a greater tendency to gossip in comparison to men (Hypothesis 2). In regard to gossip content, women were significantly more likely to report gossiping about physical appearance and social information in comparison to men, while men reported more gossip about achievement than women. In relation to specific gossip attitudes, women perceived a greater social value associated with gossiping than men, whereas no sex difference was found for the perceived moral value of gossip (Hypothesis 3).

In the current student, we provide the first evidence for positive links between intrasexual competitiveness, reported gossip behavior, and gossip attitudes. Gossip has also been posited to be women's intrasexual competition strategy of choice (McAndrew 2014, 2017). This is due to women's relational orientation, their penchant for competitive social comparisons via gossip, their susceptibility to relational victimization, and their preference for indirect aggressive tactics, leading to the prediction that women may have a greater vested interest in receiving and transmitting both positive and negative gossip. In the present work, we found evidence that women reported gossiping significantly more than men (Levin and Arluke 1985; Nevo et al. 1993; Watson 2012). This result indirectly suggests that women may favor gossip as their primary means of competing against others for mates, which manifests in their everyday gossip about various subjects. This may also allow women to "hone" their ability to gossip. However, we did not find evidence that participant sex moderated the relation between intrasexual competitiveness, gossip tendency, and gossip attitudes. This may have resulted because women and men did not differ significantly on our measure of intrasexual competitiveness. Social role theory could be used to interpret this finding. Perhaps women reported a greater tendency to gossip in comparison to men because gossip is associated with a female gender role resulting in women acting out socially prescribed behavior (Eagly and Wood 2013, 2016).

Prior to examining predicted sex differences in reported gossip content, we conducted a confirmatory factor analysis on our gossip tendency measure (i.e., the Tendency to Gossip Questionnaire [TGQ]; Nevo et al. 1993). The original factor structure of Nevo et al.'s (1993) TGQ was regarded as tentative and to our knowledge had yet to be evaluated since its initial conception. We found that a three-factor solution (social information, achievement, and physical appearance) best explained the data and produced more theoretically coherent dimensions. We found that items originally appearing on the Sublimated subscale of the TGQ (e.g., "Analyze with friends other people's motives") aggregated with items on the social information factor, which makes sense given the high degree of theoretical overlap between the two constructs. This factor structure also remedied the poor internal consistency of the items that were purportedly part of the sublimated dimension. We used this three-factor version of the TGQ to analyze sex differences in reported gossip content.

Women have been argued to express an evolved preference for traits in men that signal the ability to acquire and maintain reproductively relevant resources (e.g., wealth, ambition, achievement), particularly in a long-term mate (Buss 1989;

Li et al. 2011; Shackelford et al. 2005). In contrast, men have been posited to possess an evolved desire for indicators of reproductive value and fertility, such as youth, health, and physical attractiveness. In the context of heterosexual mating, these traits then become the focus of intrasexual competition against same-sex others in order to reduce the mate value of rivals relative to oneself (Buss and Dedden 1990). Consistent with Nevo et al. (1993) and Watson (2012), in the present study, we found that women reported that they gossiped significantly more than men about physical appearance. Women promote and augment aspects of their physical appearance for the purpose of competing against same-sex rivals for mates (Arnocky and Piché 2014; Buss 1988; Hill and Durante 2011), as well as to derogate competitors over their attractiveness to enhance their own mate value (Buss and Dedden 1990; Campbell 2004; Fisher et al. 2009, 2010, Vaillancourt 2013). These putatively evolved proclivities appear to predominate women's everyday gossip about appearance-related topics.

Social role theory could also be used to interpret the finding above. From this perspective, women may be predicted to report more gossip about the physical appearance of others because of women's and men's socially constructed mate preferences that reflect divisions of labor in society (Eagly and Wood 2013). Similarly, through objectification theory (see Engeln-Maddox et al. 2011), women living in cultures where their bodies are continually being evaluated may be predicted to report more gossip about appearance. Presumably, this occurs through self-objectification, where women internalize men's objectifying perspectives and begin to closely monitor their appearance.

A significant sex difference was also found for achievement, such that men reported that they gossiped significantly more about the successes, grades, and salaries of others in comparison to women. This result supports the argument that men gossip significantly more about achievement-oriented topics because of women's putatively evolved preference for indicators of resource acquisition and holding potential in men (Buss 1989; Buss and Dedden 1990; Li et al. 2011; Shackelford et al. 2005).

In comparison to men, women greatly value close, intimate friendships (Aukett et al. 1988; Eckert, 1990), are more susceptible to indirect forms of peer victimization (Benenson et al. 2013; Klomek et al. 2007, 2008), and are more likely to favor indirect aggression (Archer 2004, 2009; Vaillancourt 2005, 2013). Therefore, we predicted that they would gossip more about social information in comparison to men. In line with Watson (2012), we found that women reported gossiping to a greater extent about analyzing the behavior of others, people's problems at work, the compatibility of couples and people's dating lives, as well as people's love affairs in comparison to men (i.e., the Social Information subscale of the TGQ; Nevo et al. 1993). This finding also parallels research regarding sex differences in conversation topics, where women have been found to talk about people and interpersonal relationships more

than men (see Bischooping 1993 for review). Social information gossip is an efficient means of evaluating group norms and provides insight into how to effectively obtain and spread information about others (Foster 2004). If women primarily use gossip to compete with same-sex rivals over mates, it is logical that they may benefit more than men from obtaining and spreading gossip regarding the social lives of others.

Women and men were predicted to vary in their reported gossip attitudes because of women's and men's divergent intrasexual competition tactics (Arnocky 2016; Arnocky and Vaillancourt 2017; Buss and Dedden 1990). Moreover, it is intuitive that differences in gossip behavior would be underpinned, to some extent, by differential gossip attitudes as these have been highly correlated in previous work (Litman and Pezzo 2005). We found support for our hypothesis that women would perceive a greater social value of gossip in comparison to men. Gossip may carry critical information about allies, mates, rivals, and poachers. Although women and men have a similar interest in mating reputation gossip (De Backer et al. 2007), it makes sense for women to value and enjoy gossiping more than men if it is the primary means by which women compete for mates. The social value of gossip has also been linked to intentions to transmit malicious gossip (Litman and Pezzo 2005), supporting the evolutionary reasoning that women may be more approving of the social value of gossip so that this information can be used to later derogate a competitor.

Contrary to our hypothesis, we found no sex difference concerning whether it is morally permissible to share gossip about others behind their back and the trustworthiness of gossip (i.e., the moral value of gossip; Litman and Pezzo 2005). We reasoned that because spreading gossip about others, particularly negative gossip, tends to be publicly condemned and censured (Beersma and Van Kleef 2011; Levin and Arluke 1987), openly endorsing the belief that it is appropriate to gossip about others would be met with denunciation and social exclusion. This would be particularly harmful to the social capital and reputation of women who may preferentially use gossip to compete with rivals over valued mates. Furthermore, women are especially sensitive to the damage caused by various forms of indirect aggression (Benenson et al. 2013; Galen and Underwood 1997; Klomek et al. 2007, 2008) and condemning the spread of gossip may be an effective way to manage its transmission and reduce the likelihood of being targeted.

Limitations and Future Research Directions

Despite the strengths of the current study (e.g., relatively large sample size, comparably sized subsamples of women and men, novelty), several limitations are worth mentioning. The use of participants from Western, educated, industrialized, rich, and democratic societies limits the generalizability of

our findings and the implications of our arguments from an evolutionary perspective (Azar 2010). Moreover, our research focused on young adult women and men and cannot speak to other age groups. We focused on young adults because members from this population are predicted to compete more fiercely for mates (Campbell 2004; Massar et al. 2012; McAndrew 2014; Vaillancourt 2013). The relation between intrasexual competition and reported gossip would be expected to diminish over time after young adulthood, as mate competition decreases in intensity. However, this relation may hold in certain populations that continue to actively vie for mates, such as an older group of unmarried women who vigorously pursue young attractive men in North America (i.e., “cougars”; Montemurro and Siefken 2014). Future researchers could directly test these predictions.

Like De Backer et al. (2007), we situated the current study in a heterosexual framework to keep in line with previous evolutionary research based on sexual dimorphisms. Therefore, our results do not speak to other sexual orientations. Lesbian and heterosexual women have been found to rank character traits (e.g., emotional stability, family orientation) as particularly important in a mate, whereas gay and heterosexual men have ranked physical appearance and facial attractiveness highly (Lippa 2007). These trends were found to be consistent across 53 nations. Perhaps then gay men, like heterosexual women, would gossip significantly more about physical appearance in comparison to lesbian women and heterosexual men. Lesbian women may also proportionally favor more indirect forms of aggression and report gossip at a similar frequency to heterosexual women. Our focus on sex in the current investigation also precluded an analysis of how varying gender identities may interact with mate preferences, mate competition, and reported gossip.

Another potential limitation is that women’s greater reported tendency to gossip in comparison to men may have been an artifact of the gossip tendency measure (i.e., the TGQ; Nevo et al. 1993). Specifically, the gossip content measured (physical appearance, achievement, social information) may relate more to topics that women prefer to gossip about in comparison to men. It is worth mentioning that if the TGQ (Nevo et al. 1993) is clearly assessing gossip content of interest primarily to women in comparison to men, then it is peculiar that some studies have found a greater reported frequency of gossip in men using the same scale (e.g., Litman and Pezzo 2005). Regardless, in future empirical work, it would be beneficial to employ, or to create, measures that equally assess gossip content predicted to differ among the sexes. This may be challenging because of the limited amount of research directly examining sex differences in gossip content, but it would be a valuable contribution to the gossip literature. One topic of greater relevance to men in comparison to women would be gossip relating to athletics and sport (Buss and Dedden 1993).

It is also important to mention that two of the measures used in the current work, the Intrasexual Competition Scale (ICS; Buunk and Fisher 2009) and the TGQ (Nevo et al. 1993), have only positively keyed items. Therefore, there could have been a response bias with these scales, which may have produced statistical artifacts (Paulhus 1991). In future work, it would be fruitful to employ measures of these constructs that have both positively and negatively keyed items to help circumvent this potential issue.

Practice Implications

The findings of the current study help to demonstrate that gossip is intimately linked to mate competition and not solely the product of a female gender stereotype that may be viewed as pejorative. This result encourages an alternative construal of gossip for therapists, counselors, educators, and the lay public as a highly evolved social skill essential for interpersonal relationships, rather than a flaw of character (McAndrew 2016). It also supports the idea that women’s greater use of gossip is strategic rather than garrulous. Our results further suggest that women’s greater reported gossip about physical appearance may reflect an adaptation to increase their mate value. Therefore, it may be problematic to assume that women’s gossip regarding appearance is necessarily evidence of internalized misogyny and a harbinger of self-objectification. However, frequency of indirect aggression in women has been linked to poor mental health outcomes, such as a negative body image and disordered eating (see Vaillancourt 2013). These deleterious outcomes have also been linked to intrasexual competition, which helps to show how adaptations may promote societally and/or personally damaging cognitions, emotions, and behavior (Abed et al. 2012; Vaillancourt 2013) and how we may intervene. Our findings also support revisiting the factor structure of Nevo et al.’s (1993) TGQ for researchers looking to use this measure at the subscale level.

Conclusion

Gossip is of great evolutionary relevance and can function as an efficient means to learn about others and to enforce group norms (Dunbar 1996, 2004). It may also function as a means of learning about and impugning the reputation of rivals who are vying for the same reproductive resources that we are (i.e., romantically and/or sexual desirable mates; Arnocky and Vaillancourt 2017; Campbell 1999, 2004; De Backer et al. 2007; Massar et al. 2012; McAndrew 2014, 2017; Vaillancourt 2013). In the present study, we provide the first empirical evidence for the positive relations between intrasexual competitiveness, reported gossip frequency, and favorable attitudes toward gossiping. Our results support the

argument that women express a greater tendency to gossip about others in comparison to men, which may be linked to women's preferential use of gossip as an intrasexual competition tactic. In line with men's evolved preference for physically attractive women, we found that women reported gossiping significantly more about appearance in comparison to mate. In line with women's evolved preference for cues to resource holding, men were found to report gossiping significantly more about achievement. Furthermore, women reported gossiping more about social information, which may owe to women's and men's divergent mate competition strategies. Women also perceived greater social value associated with gossip, which may enable them to gather information relevant to mate competition and to "hone" their ability to gossip.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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