



Eroticism Versus Nurturance

How Eroticism and Nurturance Differs in Polyamorous and Monogamous Relationships

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Abstract: Romantic partners provide both erotic and nurturing experiences, though these may emerge more strongly in different phases of a relationship. Unlike individuals in monogamous relationships, those in polyamorous relationships can pursue multiple romantic relationships simultaneously, potentially allowing them to experience higher levels of eroticism and nurturance. This research examined eroticism and nurturance among individuals in polyamorous and monogamous relationships. As expected, polyamorous participants experienced less eroticism but more nurturance in their relationships with their primary partner compared to secondary. Furthermore, people in polyamorous relationships reported more nurturance with primary partners and eroticism with secondary partners compared to people in monogamous relationships. These findings suggest that polyamory may provide a unique opportunity for individuals to experience both eroticism and nurturance simultaneously.

Keywords: polyamory, monogamy, nurturance, eroticism, relationship length

Romantic relationships are important to health and well-being (Coombs, 1991; Lillard & Waite, 1995; Putzke, Elliott, & Richards, 2001; Simon, 2002), in part because they often meet people's needs for emotional support, care, and sexual gratification (Hazan & Shaver, 1994).

However, fulfilling these needs simultaneously can be challenging, as the experience of eroticism (i.e., feeling of arousal, passion, lust, sexual pleasure) and nurturance (i.e., feelings of intimacy, warmth and love) often follow different time courses in a relationship (Hatfield, Traupmann, & Sprecher, 1984; Sprecher & Regan, 1998; Tennov, 1979; Winston, 2004). As a result, individuals in relationships are often stuck trying to balance their need for eroticism and their need for nurturance (Hazan & Shaver, 1994), as experiences of eroticism are more prominent in the early stages, and experiences of nurturance develop over time as erotic desires decline. People in polyamorous relationships – relationships that involve consensual intimate relationships with more than one partner – may seek out additional relationships in order to fulfill multiple needs by different partners. In the current research we sought to assess whether partners in polyamorous relationships differ with regard to their experienced eroticism and nurturance, and whether individuals in polyamorous relationships are able to maintain higher levels of eroticism and nurturance than individuals in monogamous relationships through having multiple relationships.

Theoretical Framework

Van Anders Sexual Configuration Theory (2015) advances that eroticism, or “aspects of sexuality tied to bodily pleasure, orgasm, arousal, tantalization, and related concepts,” and nurturance, or “warm loving feelings and closeness,” serve fundamental roles in relationships.

Sexual Configuration Theory proposes that individuals may pursue some intimate relationships for eroticism, others for nurturance, and still others for both of these qualities. While van Anders (2015) provides a theoretical context for the role of eroticism and nurturance in relationships, and while research related to these concepts – such as passionate and companionate love – can help provide insight into how eroticism and nurturance may be experienced in relationships, to date it remains unclear if engaging in relationships with multiple partners results in different experiences with eroticism and nurturance. That is, do individuals who engage in polyamorous relationships and thus have multiple simultaneous partners experience higher levels of eroticism and nurturance than those who rely on one partner to meet their needs?

Passionate and Companionate Love

While the current paper seeks to assess eroticism and nurturance, the fulfillment of these needs has most often been studied in the context of love, which is frequently

conceptualized as either passionate or companionate (Hatfield & Walster, 1978). Consequently, we rely on research on passionate and companionate love to serve as a proxy for what might be found when exploring eroticism and nurturance in relationships.

Passionate love is characterized as an intensely emotional state that involves longing for union with another person and strong sexual desire between partners. With companionate love, in contrast, strong sexual desire is replaced by increased intimacy (e.g., caring, understanding, attachment) that requires time to develop fully (Sprecher & Regan, 1998). Although passionate and companionate love are not mutually exclusive, they may be more prominent at different stages of a relationship. More specifically, passionate love is most closely associated with the early stages or the “honeymoon” period of a relationship (though passion can still be experienced in the later stages, it tends to decline on average), and companionate love with the later stages (Hatfield et al., 1984; Sprecher & Regan, 1998).

Outsourcing Needs in Relationships

The differing time courses of passionate and companionate love are also consistent with evolutionary perspectives about the formation of adult pair bonds. Since pair bonds require time and close physical proximity to form, the characteristics of the early stage of a relationship include an intense longing for closeness with a partner (Hazan & Diamond, 2000; Tennov, 1979). However, over time, an attachment bond is thought to form, reducing the intensity of the desire for physical proximity as the relationship becomes more predictable and familiar (Eagle, 2007). Therefore, from an evolutionary perspective, feelings of passionate love are the mechanism by which initial attraction becomes attachment, facilitating the initiation of longer term romantic relationships. Social and evolutionary psychologists even agree on a timeframe for this shift, such that passionate love is thought to last approximately 2 years, ± 6 months (Tennov, 1979), while attachment bonds typically form 1.5–3 years after a relationship is initiated (Winston, 2004).

Importantly, Eagle (2007) argues the features of attachment work against erotic desire. According to Eagle, for a romantic partner to serve as an attachment figure they need to be available, familiar, and predictable. These characteristics, however, thwart feelings of sexual desire, which she argues is conversely ignited by novelty and unpredictability. If, in fact, familiarity and predictability are key features of an attachment figure and if sexual desire for a partner is diminished by these characteristics, then once an attachment bond is formed in a relationship, it is likely that sexual desire will decrease. Similar ideas are echoed by Mitchell (2002) and Perel (2007) who have independently argued that initial erotic desire – and related feelings of passion – wanes as

partners impose boundaries on one-another to reduce relational insecurity, and that sexual desire can be negatively impacted by increasing closeness and familiarity. Clinical reports (Levine, 2003), along with qualitative (Sims & Meana, 2010) and quantitative research (Levy, 1994) provide additional support for these arguments, such that familiarity, monotony, preoccupation with non-sexual matters, and predictability are shown to undermine erotic desire.

To the extent that passionate and companionate love are related to eroticism and nurturance, this research and theorizing may suggest differing trajectories for the experience of erotic desire and nurturance. If this is the case, like different forms of love, it may be challenging to experience high levels of eroticism and nurturance with one romantic partner at a single point in time. In fact, this problem is likely compounded by the burden of contemporary expectations about the functions of romantic relationships. Today, it is commonly assumed that committed relationships should meet many higher order needs like happiness and personal fulfillment, while at the same time, many couples find it challenging to invest the time and energy needed to fulfill all these needs (see Finkel, Hui, Carswell, & Larson, 2014). One solution to this problem is to alter expectations about romantic relationships and outsource needs. Indeed, it has been proposed that couples could alter their expectations about relationships; that is, rather than relying on one partner to meet both erotic and nurturant needs, individuals could outsource their needs to other relationships, diversifying their need fulfillment across multiple romantic or sexual partners (Conley, Matsick, Moors, & Ziegler, 2017; Conley & Moors, 2014).

In consensually non-monogamous relationships, all partners agree it is acceptable to have additional romantic or sexual partners (Conley, Ziegler, Moors, Matsick, & Valentine, 2013).

Given that consensually non-monogamy provides the opportunity to simultaneously pursue relationships, it may be possible for individuals in consensually non-monogamous relationships to concurrently experience high levels of eroticism along with nurturance through relationships with various partners. Thus, if relationships tend to decline in eroticism and increase in nurturance over time, it is possible that individuals in consensually non-monogamous relationships seek out secondary relationships to experience both eroticism and nurturance.

Relationship Orientation

In the current research we focus on polyamory, the practice and acceptance of having multiple emotionally close relationships with the consent of all partners involved (Barker

& Langdridge, 2010). Polyamorous relationships are particularly useful to study in this context because unlike other popular forms of consensually non-monogamous relationship (e.g., open and swinging), partners are permitted to seek both eroticism *and* nurturance outside of a dyad. The most common polyamorous relationship configuration is characterized by a distinction between primary and secondary relationship partners (Balzarini, Dharma, Kohut, Campbell, Lehmler, et al., 2018; Veaux, 2011; Veaux, Hardy, & Gill, 2014). In this configuration, a primary relationship is between two partners who have been together for a longer duration, typically share a household and finances, who are married, and who have or are raising children together (if children are desired) (Balzarini et al., 2017; Balzarini, Dharma, Kohut, Campbell, Lehmler, et al., 2018; Sheff, 2013; Veaux, 2011). In such arrangements, partners beyond the primary relationship are often referred to as 'secondary' partners and consist of less ongoing commitments and a shorter relationship duration (Balzarini et al., 2017; Balzarini, Dharma, Kohut, Campbell, Lehmler, et al., 2018).

Previous research has shown that meaningful differences also emerge among partners in polyamorous and monogamous relationships. For example, Mogilski and colleagues (2017) found that individuals engage in more mate retention behaviors (i.e., public signals of possession, direct guarding) and report greater satisfaction with monogamous and primary partners compared to secondary partners. Furthermore, Balzarini, Dharma, Kohut, Campbell, Lehmler, et al. (2018) found that participants reported greater acceptance from friends and family, as well as higher investment, satisfaction, and commitment in relationships with monogamous or primary partners compared to secondary partners. In contrast, participants reported greater quality of alternatives, higher romantic secrecy (e.g., they hid more aspects of their relationship to others) and a greater proportion of time spent on sexual activity in their relationship with secondary partners compared to their relationships with primary partners and to reports for monogamous partners (Balzarini, Dharma, Kohut, Campbell, Lehmler, et al., 2018). This research suggests that primary partners resemble monogamous partners in many ways, though secondary partners seem to diverge with proportion of time spent on sex being one of the unique features that is higher among secondary partners. In contrast to Balzarini, Dharma, Kohut, Campbell, Lehmler, et al. (2018) findings, Mitchell and colleagues (2014) found that polyamorous individuals actually reported more sexual contact with primary partners (which could be because people tend to spend more time with primary compared to secondary partners) but greater fulfillment of sexual needs with their secondary partners compared to primary. While this research did not assess comparisons to monogamous relationships, it still provides

initial evidence in support of the idea that individuals may seek out consensual extradyadic relationships in order to have diverse needs fulfilled.

Although primary-secondary relationships are the most common polyamorous arrangements (Balzarini, Dharma, Kohut, Campbell, Lehmler, et al., 2018), not all people in such relationships identify with this labeling, instead, some consider multiple partners to be primary (co-primary) or no partners to be primary (non-primary; Balzarini, Dharma, Kohut, Campbell, Lehmler, et al., 2018; Labriola, 2003). The only study to date to assess relationship quality among such configurations has found that even in co-primary and non-primary relationships, there is often a partner who can be characterized as more primary, or "pseudo-primary," and another as more secondary, or "pseudo-secondary." Despite the designated primary status, individuals in polyamorous relationships who reject primary-secondary status are often more inclined to live with one partner over another, and this partner is typically the individual with whom they are married and have kids. In such cases, participants report greater acceptance from friends and family, higher commitment, investment and communication for this partner (pseudo-primary), and romantic secrecy and proportion of time spent on sex for the pseudo-secondary partner. Balzarini, Dharma, Kohut, Campbell, Lehmler, et al. (2018) have argued that such differences may reflect the practical allocation of relationship investments imposed by a society that is not particularly tolerant of such relationships that may occur despite motivated striving for equality across partners. As such, in co-primary and non-primary relationships, the pseudo-primary partner resembles primary partners in primary-secondary configurations and we would therefore expect to find similar patterns of eroticism and nurturance across these alternative forms of polyamorous relationships.

Cross Partner Effects

If individuals in consensually non-monogamous relationships are able to experience higher levels of eroticism and nurturance through having their needs met across partners, it is possible that the diversification of needs could influence concurrent relationships. Indeed, recent research by Muise and colleagues (2018) suggests that greater sexual need fulfillment with a primary partner was associated with greater sexual satisfaction with their secondary partner, though greater sexual need fulfillment with a secondary partner was associated with less satisfaction with a primary partner. Furthermore, while research by Mitchell and colleagues (2014) found that greater need fulfillment (in some domains) with one partner was associated with less satisfaction with the other, when need fulfillment was low with one partner, having another partner meet

280 those needs was associated with higher satisfaction with
281 both partners.

282 Though when need fulfillment was lower in one relation-
283 ship, need fulfillment in another relationship detracted
284 from satisfaction, resulting in lower satisfaction with the
285 first partner. This research suggests that diversifying needs
286 across partners can have both detrimental and beneficial
287 effects.

288 **Current Study**

289 Building on previous research (Balzarini et al., 2017;
290 Balzarini, Dharma, Kohut, Campbell, Lehmilller, et al.,
291 2018; Mogilski et al., 2017) assessing differences among
292 polyamorous and monogamous partners, and drawing on
293 Sexual Configuration Theory (van Anders, 2015), we sought
294 to assess the extent to which eroticism and nurturance differ
295 among polyamorous and monogamous partners. Given that
296 primary relationships in polyamory resemble monogamous
297 relationships and both of these relationships are character-
298 ized by greater commitment, investments, and efforts to
299 retain a mate (Balzarini, Dharma, Kohut, Campbell,
300 Holmes, et al., 2018; Mogilski et al., 2017), we would expect
301 these relationships to be characterized by greater nurtur-
302 ance. Conversely, most evidence suggests a greater propor-
303 tion of time is spent on sexual activity with secondary
304 partners (Balzarini et al., 2017; Balzarini, Dharma, Kohut,
305 Campbell, Lehmilller, et al., 2018; Balzarini, Dobson, Kohut,
306 & Lehmilller, 2018; see Mitchell et al., 2014 for an exception,
307 and that secondary partners provide greater sexual need
308 fulfillment than primary partners (Mitchell et al., 2014) –
309 which provides preliminary evidence that these relation-
310 ships may be characterized as more erotically fulfilling.
311 If this is the case, it would suggest that individuals in poly-
312 amorous relationships are experiencing higher levels of eroti-
313 cism and nurturance than individuals in monogamous
314 relationships through diversifying their needs. Additionally,
315 we also sought to explore whether there are unique benefits
316 to doing so, thus we wanted to assess whether experiencing
317 more eroticism or nurturance with one partner in a poly-
318 amorous relationship influenced a concurrent relationship.
319 Lastly, given that previous research has shown that monog-
320 amous and polyamorous participants present important
321 demographics differences (see Balzarini, Dharma, Kohut,
322 Campbell, Holmes, et al., 2018 for a review) and because
323 sociodemographic factors may influence eroticism and
324 nurturance (van Anders, 2015), we further sought to assess
325 how relationship orientation (e.g., monogamous vs.
326 polyamorous), primary status (e.g., identifying partners as
327 primary-secondary, co-primary, and non-primary), relation-
328 ship length, gender, sexual orientation, and age impacted
329 reports of eroticism and nurturance.

Study 1

330
331 In Study 1 we sought to assess whether individuals in
332 polyamorous relationships report different levels of eroti-
333 cism and nurturance for their partners. Building on the pre-
334 vious research assessing differences among primary and
335 secondary partners, we predicted that participants in poly-
336 amorous relationships would report higher nurturance
337 (Hypothesis 1) and lower eroticism (Hypothesis 2) with
338 primary partners compared to secondary partners. We also
339 sought to explore whether comparisons among partners
340 remained when we controlled for gender, sexual orientation,
341 age, relationship length, and primary status (Exploratory 1).
342 Additionally, given that previous research has shown that
343 features related to eroticism tend to decrease over time,
344 while features related to nurturance tend to increase, we
345 sought to explore whether relationship length was related
346 to reports of each (Exploratory 2).

347 We also made a series of predictions to assess whether
348 eroticism and nurturance impacted relationship and sexual
349 outcomes. As eroticism is characterized by feelings of
350 arousal, passion, lust, and sexual pleasure, we expected
351 eroticism to be associated with greater sexual satisfaction
352 with a relationship (Hypothesis 3). However, as nurturance
353 is characterized by intimacy, warmth, and love, we have no
354 reason to suspect nurturance to influence sexual satisfac-
355 tion and thus a null effect was predicted (Hypothesis 4).
356 In contrast, because eroticism and nurturance both involve
357 components of either sexual or emotional intimacy, we pre-
358 dicted that nurturance and eroticism would be positively
359 associated with closeness in relationships (Hypotheses 5
360 and 6).

361 While we did not advance predictions for cross-partner
362 effects, we further sought to explore how experiencing eroti-
363 cism or nurturance in one romantic relationship may be
364 related to relationship outcomes in a concurrent relation-
365 ship. Given previous research assessing need fulfillment
366 across partner in consensually non-monogamous relation-
367 ships, it is also possible that experiences of eroticism in
368 one relationship could influence the other, and similarly
369 for nurturance. For example, if eroticism is low in primary
370 relationships, experiencing eroticism in a secondary could
371 result in greater sexual satisfaction for both partners, and
372 if nurturance is low in a secondary relationship, nurturance
373 in a primary relationship could result in greater connection
374 for both partners. Contrarily, if primary relationships are
375 characterized by nurturance or sought after to meet nurtur-
376 ing needs, high nurturance with a secondary partner may
377 detract from connection with a primary, and if secondary
378 relationships are sought out to meet erotic needs, high eroti-
379 cism with a primary may detract from sexual satisfaction
380 with the secondary. As such, in addition to the pre-registered

hypotheses, we sought to assess whether eroticism and nurturance with one partner influenced reports of closeness and sexual satisfaction with a concurrent partner (Exploratory 3). All of the predictions were pre-registered on the Open Science Framework prior to analyses (see <https://osf.io/s2p6f/>).

Method

Participants

Participants were recruited online from Facebook and Reddit to take part in the study. Many of the places in which we posted advertisements were specifically geared toward people in polyamorous relationships (e.g., Facebook groups for polyamory discussions and reddit subgroups for polyamory), and the advertisements for recruitment solicited volunteers to participate in a study about polyamorous relationships. We recruited a convenience sample of 1,168 individuals who were currently in at least two concurrent relationships and identified as polyamorous, which we defined as dating multiple people with my partner(s) acknowledgment. Participants were primarily white (86.2%), bisexual (43.3%), females (61.0%), who were married (34.7%) or seriously dating (33.5%) their partners and were in their early to mid-30's ($M = 33.5$, $SD = 9.2$). On average, participants were in relationships with their primary partners for 7 years ($M = 7.2$, $SD = 6.9$) and secondary partners for 2 years ($M = 2.2$, $SD = 3.6$). Demographic information for the participants is presented in Table 1.

Procedure and Measures

Participants were informed that in order to participate in the study, they must identify as polyamorous (e.g., dating multiple people with my partner(s) acknowledgment), be at least 18 years of age, and currently be in a relationship with at least two people. Prospective participants were provided a link that re-directed them to a survey hosted on Qualtrics, an online survey program. Participants first saw a letter of information and were asked to give digital consent at the end of the letter. Study materials can be found on the Open Science Framework (see <https://osf.io/fymsb/>) and the measure used in the current study are explained below.

Primary Status

Primary-secondary, co-primary, and non-primary polyamorous configurations were identified by asking participants, "Do you consider your relationship with (X)¹ to be

primary?" with response options including, "Yes, (X) is my primary relationship", "Yes, (X) is my primary relationship, but I also have others that are considered primary", "No, (X) is not a primary relationship", "No, I do not believe in considering one relationship to be primary", and "None of the above (please explain)." To identify primary-secondary polyamorous configurations, those who stated that the first listed partner was primary and the second person listed was not were considered primary-secondary relationships. To be identified as being in a co-primary polyamorous configuration, participants had to indicate that both the first person listed and the second person listed were primary partners, and for no-primary polyamorous configurations, they had to indicate that they did not identify either of their partners as primary partners. Those whose responses could not be classified under one of the three relationship categories were excluded from analyses involving primary status classifications ($n = 147$).

Within primary-secondary configurations, primary relationships were easily distinguished from secondary relationships as we could rely on participants' self-reported primary status.

When participants did not identify their partners as primary-secondary (co-primaries and non-primaries), we defined pseudo-primary and pseudo-secondary relationships using a bivariate index of relationship duration and cohabitation. Specifically, participants reported relationship duration and cohabitation status for each partner separately, we then created a standardized score for both duration and cohabitation, then mean averaged them for each participant to create a single score. We then assigned the relationship with the person with the highest score the status of primary relationship and the other partner was designated as secondary for comparison purposes.²

Eroticism Scale

The Eroticism Scale consisted of four items assessing how characteristic eroticism (e.g., my relationship with (X) is characterized by: "eroticism", "desire and lust", "sexual excitement", and "bodily pleasure"; primary $\alpha = .97$; secondary $\alpha = .96$) was of one's relationship. The items for eroticism were premised on van Anders' (2015) conceptualization of eroticism which incorporated elements of eroticism, desire and lust, sexual excitement, and bodily pleasure (see S2 for more information). Participants rated each item on a 7-point scale (1 = *Not true at all*, 7 = *Definitely true*), and items were mean aggregated to create a composite score, with greater ratings indicating more eroticism.

¹ Items like this were presented to participants with their partners initials in place of the (X).

² It is our sincere hope that our attempt to re-classify co-primary and non-primary relationships, and our imposition of the terms "pseudo-primary" and "pseudo-secondary" partners does not upset participants who contributed to this work or the wider polyamorous and CNM communities from which they were drawn. We use this language as a means to systematically differentiate among groups in our sample and for sake of simplicity in interpreting the results.

Table 1. Demographic information for Study 1 (polyamorous) and Study 2 (monogamous) participants

	Study 1 – n (%)	Study 2 – n (%)
Gender Identity		
Woman/females	781 (60.6%)	1,496 (68.5)
Man/males	330 (25.6%)	680 (31.2)
Gender-queer/Non-binary	134 (10.4%)	2 (0.1)
Agender	27 (2.1%)	–
Transgender	–	5 (0.2)
Other	16 (1.2%)	–
Race*		
White	1,097 (85.2%)	1,643 (75.6%)
Multi-Racial	66 (5.1%)	80 (3.7%)
African American	38 (3.0%)	121 (5.6%)
Asian (includes South, East, or Southeast Asian)	25 (1.9%)	80 (3.7%)
Hispanic (includes Caribbean/South American)	23 (1.8%)	134 (6.2%)
Native American/Pacific Islander/First Nations	13 (1.1%)	70 (3.2%)
Other	25 (1.9%)	46 (2.1%)
Sexual orientation		
Heterosexual	399 (31.0%)	2,011 (92.2)
Lesbian/Gay	37 (2.9%)	40 (1.8)
Bisexual	556 (43.2%)	89 (4.1)
Asexual	15 (1.2%)	–
Other	281 (21.8%)	41 (1.9)
Relationship status		
Single	30 (2.3%)	–
Casually dating	78 (6.1%)	13 (0.6)
Seriously dating	443 (34.4%)	234 (10.7)
Engaged	79 (6.1%)	131 (6.0)
Married	432 (33.5%)	1,801 (82.5)
Divorced	10 (0.8%)	4 (0.2)
Widowed	3 (0.2%)	–
Other	213 (16.5%)	–
Primary Partner		
Primary Relationship	521 (44.6%)	–
Primary relationship but have others	224 (19.2%)	–
Not a primary	56 (4.8%)	–
Do not believe in one as primary	328 (28.1%)	–
Other	39 (3.3%)	–
Secondary Partner		
Primary Relationship	17 (1.6%)	–
Primary relationship but have others	224 (21.7%)	–
Not a primary	456 (44.1%)	–
Do not believe in one as primary	310 (30.0%)	–
Other	27 (2.6%)	–

Notes. * indicates the column may add up to more than the total, since participants can select more than one option. Others may not add up to totals due to missing data.

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Nurturance Scale

The Nurturance Scale consisted of five items assessing how characteristic nurturance (e.g., my relationship with (X) is characterized by: “a strong sense of security”, “emotional attachment”, “deep commitment”, “nurturance”, and

“warmth and comfort”; primary $\alpha = .86$; secondary $\alpha = .91$) was of one’s relationship. The items for nurturance were premised on van Anders’ (2015) conceptualization of nurturance which tapped into security, emotional attachment, commitment, and warmth (see S2 for more 477
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information about the scale). Participants rated each item on a 7-point scale (1 = *Not true at all*, 7 = *Definitely true*), and the five nurturance items were mean aggregated to create a composite score, with greater ratings indicating more nurturance.

Closeness

Closeness to one's partner was assessed with the one-item Inclusion of Other in the Self (IOS) Venn diagram (Aron, Aron, & Smollan, 1992). This is a simple, validated, and commonly used scale to measure closeness (e.g., see Aron et al., 1992; Fraley & Aron, 2004).

Sexual Satisfaction

Sexual satisfaction was assessed with one item with which participants reported their satisfaction with their sexual quality (1 = *Very unhappy*, 7 = *Very happy*).

Data Analytic Strategy

We conducted a power analysis to ensure we had sufficient power to estimate the main effects of interest. The power analysis indicated a sample size of 175 would be needed to find a statistically significant difference assuming a medium effect size ($f = .25$) with a power level of .95 (power estimated using G-Power 3.1; Faul, Erdfelder, Buchner, & Lang, 2009). As our sample consisted of well over 350 polyamorous individuals, we decided to proceed with the analyses.

To assess whether eroticism and nurturance differed among primary and secondary partners, we performed paired sample *t*-tests comparing polyamorous participants report of eroticism and nurturance between primary and secondary partners. The effect size, or Cohen's *d*, is presented with the results for each comparison. The effect sizes can be interpreted based on Cohen's (1988) guidelines, which suggests a value of 0.2 is a small effect, 0.5 is a medium effect, while 0.8 or above is a large effect. Using multivariable regressions, we also assessed comparisons between primary and secondary partners controlling for sexual orientation, gender, and relationship length.

We further sought to examine predictions regarding the association between eroticism and nurturance and reports of closeness and sexual satisfaction (e.g., whether eroticism with a primary was associated with closeness or sexual satisfaction with this partner), and the exploratory questions on cross-partner interactions (e.g., whether eroticism with a primary partner was associated with reports of closeness or sexual satisfaction with a secondary). We analyzed the data using multilevel modeling based on a modified actor partner interdependence model (see Muise et al., 2018 for a similar approach). Participants' reports about both their primary and secondary partners were entered simultaneously into the model. In the first model, we entered primary partner eroticism and nurturance and secondary partner

eroticism and nurturance as predictors of closeness. In the second model, we entered primary partner eroticism and nurturance and secondary partner eroticism and nurturance as predictors of sexual satisfaction. Because eroticism and nurturance are not mutually exclusive, we tested the effects of eroticism and nurturance simultaneously, and we included reports for primary and secondary partners to examine cross-relationship effects of eroticism and nurturance simultaneously while accounting for the same relationship effects. In subsequent analyses, we tested whether primary status (e.g., whether partners were identified as primary-secondary, co-primary, or non-primary) influenced the results.

Results

Tests of Key Predictions

As predicted, participants rated their relationship with primary partners as characterized by greater nurturance than their relationship with secondary partners (P1: $M = 6.23$, $SD = 1.05$; P2: $M = 5.05$, $SD = 1.51$, $t(679) = 17.76$, $p < .001$, $d = 0.68$), while relationships with secondary partners were characterized by greater eroticism (P2: $M = 5.67$, $SD = 1.64$) than their primary relationships (P1: $M = 4.84$, $SD = 1.91$; $t(679) = -8.64$, $p < .001$, $d = 0.26$; see Figure 1). When we adjusted for demographic factors of relationship length, sexual orientation, and gender identity, this difference remained significant, such that secondary partners were more likely to be rated higher in eroticism ($b = 0.84$, 95% CI [.67, 1.03], $t(1,428) = 9.16$, $p < .001$), but lower in nurturance compared to primary partners ($b = -1.13$, 95% CI [-1.26, -0.99], $t(1,428) = 16.45$, $p < .001$).

Tests of Exploratory Analyses Assessing Eroticism and Nurturance by Relationship Length

We further sought to assess whether eroticism and nurturance were associated with relationship length. Results suggest that eroticism was negatively associated with relationship length, such that it decreased with increases in relationship length among both primary ($b = -0.05$, 95% CI [-0.09, -0.04], $p < .001$) and secondary partners ($b = -0.06$, 95% CI [-0.09, -0.03], $p < .001$), while levels of nurturance were positively associated with longer relationship lengths for both primary ($b = 0.03$, 95% CI [0.02, 0.04], $p < .001$) and secondary partners ($b = 0.07$, 95% CI [0.04, 0.09], $p < .001$). Though, we will note that as evident in the reported magnitude of these associations, these increases/decreases for every 1-year increase in relationship length were quite small. When we assessed these associations while controlling for relationships length, age, sexual orientation, and gender, similar results were found (data not shown, available on the OSF: <https://osf.io/z6bvs/>).

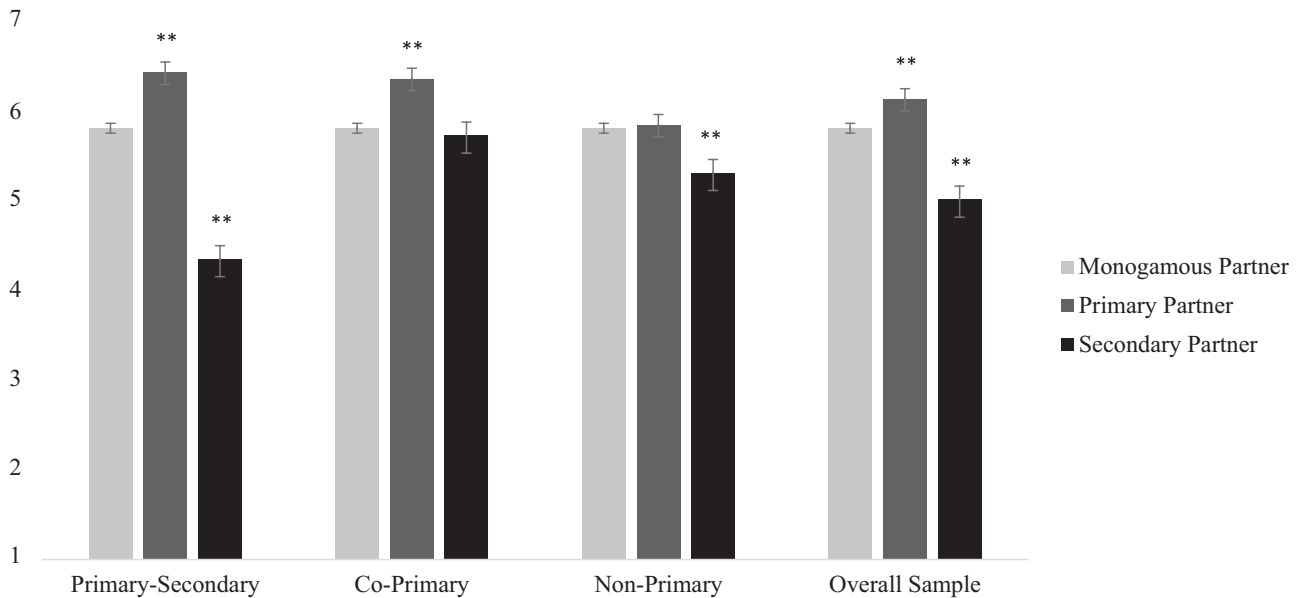


Figure 1. Mean ratings for nurturance. Presented are ratings for polyamorous partners across the varying configurations and in comparison to monogamous partners. All mean ratings were unadjusted for other demographic factors. ** $p < .01$; * $p < .05$. [Author: Please approve the edit of figure]

Tests of Predicted Partner Effects and Exploratory Analyses for Closeness and Sexual Satisfaction Across Relationships

People who reported more nurturance in their primary relationship reported greater closeness in their relationship with their primary partner ($b = 0.58$, 95% CI [.48, .68], $t(675) = 11.73$, $p < .001$) and those who reported greater nurturance with their secondary partner reported greater closeness in their relationship with their secondary partner ($b = 0.55$, 95% CI [.48, .63], $t(675) = 15.19$, $p < .001$). However, participants who reported more nurturance in their primary relationship did not report feeling closer to their secondary partner ($p = .769$), but the reverse cross-relationship association - between secondary partner nurturance and primary partner relationship closeness - was marginally significant and suggested a trend where higher nurturance from a secondary partner was associated with *less* closeness in a primary relationship ($b = -0.06$, 95% CI [-.13, .01], $t(675) = -1.81$, $p = .070$). When we assessed these effects controlling for primary status (e.g., whether participants considered their partner to be primary-secondary, co-primary, or non-primary), this cross-partner effect became non-significant ($p = .523$), all other effects for nurturance remained.

Unlike the effects for nurturance, reports of eroticism with primary partners were not associated with ratings of closeness with their primary partner ($p = .136$), though people who reported more eroticism with their secondary partner reported greater closeness in their relationship with their secondary partner ($b = 0.11$, 95% CI [.41, .68],

$t(675) = 3.11$, $p = .002$). In addition, participants who reported more eroticism in their primary relationship reported feeling *less* close to their partner in their secondary relationship ($b = -0.08$, 95% CI [-.14, -.02], $t(675) = -2.71$, $p = .007$), but participants who reported more eroticism in their secondary relationship reported feeling *closer* to their partner in their primary relationship ($b = 0.07$, 95% CI [.00, .14], $t(675) = 2.04$, $p = .042$). When we assessed these effects controlling for primary status, this cross-partner effect for eroticism with a secondary partner and closeness with a primary became marginally significant ($p = .066$), though all other effects for eroticism remained.

Nurturance was not related to reports of sexual satisfaction with primary ($p = .208$) or secondary partners ($p = .615$). Furthermore, reports of secondary partner nurturance was not associated with sexual satisfaction with primary partners ($p = .406$), and reports of nurturance with primary partners was not associated with reports of sexual satisfaction with secondary partners ($p = .910$). When we assessed these effects controlling for primary status, the effect of nurturance with primary partners with satisfaction of sex with a primary partner became significant ($b = 0.12$, 95% CI [.00, .24], $t(608.15) = 1.98$, $p = .048$), though all other effects remained non-significant.

People who reported more eroticism in their primary relationship reported greater sexual satisfaction in their relationship with their primary partner ($b = 0.58$, 95% CI [.52, .64], $t(630.42) = 18.89$, $p < .001$). Similarly those who reported greater eroticism with their secondary partner reported greater sexual satisfaction with their secondary

partner ($b = 0.56$, 95% CI [.48, .64], $t(457.36) = 14.34$, $p < .001$). Next, we assessed cross partner effects, and people who reported greater eroticism with their secondary partner reported less sexual satisfaction in their relationship with their primary partner ($b = -0.12$, 95% CI [-.19, -.05], $t(626.91) = -3.41$, $p = .001$). Likewise, participants who reported more eroticism in their primary relationship reported (marginally) less sexual satisfaction with their secondary partner ($b = -0.06$, 95% CI [-.12, .00], $t(456.23) = -1.93$, $p = .054$). When we assessed these effects controlling for primary status, this cross-partner effect became non-significant ($p = .091$), though all other effects for eroticism remained.

Study 2

In Study 2, we aimed to test whether eroticism and nurturance differed between partners in polyamorous and monogamous relationships. While Study 1 suggests that individuals in polyamorous relationships experience greater eroticism in their relationship with their secondary partner, and yet greater nurturance in their relationship with their primary partner, we further sought to assess whether polyamorous relationships may afford individuals the opportunity to experience higher levels of eroticism and nurturance simultaneously compared to relationships with a monogamous partner. To assess this claim, we acquired a monogamous sample in Study 2 and used the polyamorous sample from Study 1 to test a series of hypotheses. More specifically, previous research has shown that monogamous partners resemble reports for polyamorous primary partners for commitment, satisfaction, mate-retention, and other relationship relevant outcomes (Balzarini, Dharma, Kohut, Campbell, Lehmilller, et al., 2018; Mogilski et al., 2017), while polyamorous secondary partners tend to be rated lower on these traits but have higher sexual frequency compared to monogamous and primary partners (e.g., Balzarini, Dharma, Kohut, Campbell, Lehmilller, et al., 2018; Balzarini, Dobson, et al., 2018; Mogilski et al., 2017). Given this previous research and the findings from Study 1, we predicted that monogamous participants would report higher nurturance (Hypothesis 7) and lower eroticism (Hypothesis 8) compared to polyamorous participants reports of their secondary partners, though no differences in nurturance (Hypothesis 9) and eroticism (Hypothesis 10) were expected for monogamous partners compared to primary partners. We further expected relationship length to be associated with eroticism and nurturance, such that relationship length would be negatively associated with eroticism and yet positively associated with nurturance (Hypothesis 11), consistent with Study 1's findings. We also sought to explore whether experiences of

eroticism and nurturance differ with regard to gender, sexual orientation, age, relationship length, and primary status (Exploratory 4). Finally, consistent with the rationale outlined in Study 1, we expected eroticism to be associated with greater sexual satisfaction with a relationship among monogamous participants (Hypothesis 12), though a null effect was predicted for nurturance (Hypothesis 13). In contrast, we predicted that nurturance and eroticism would be positively associated with closeness in relationships with monogamous partners (Hypotheses 14 and 15). All of the predictions for Study 2 were pre-registered on the OSF prior to analyses (see <https://osf.io/twy6x/>).

Method

Participants

Participants were recruited from Qualtrics panel, an online crowdsourcing platform. A convenience sample of 2,183 individuals who were currently in an exclusive monogamous relationship were recruited. Participants were primarily white (defined as Western/Eastern European; 66.5%), heterosexual (92.2%), females (68.5%), who were married (82.5%) to their partners and were 45 years old on average ($M = 45.39$, $SD = 15.16$). On average, participants were in relationships with their partner for 17 years ($M = 17.34$, $SD = 14.32$). For more information about the demographics of the participants, see Table 1.

Procedure and Measures

Participants were told that the purpose of this study was to better understand experiences in romantic relationships. Participants were first asked to fill out a questionnaire that assessed demographic information. Participants were then asked to complete a series of questionnaires that included the nurturance and eroticism scale as well as the passionate and companionate love scale. Participants then took part in an informational intervention that was conducted for the purposes of another study (see <https://osf.io/9thb4/>). One week later, participants were invited to take a follow-up survey. The scale of interest was not included in the Part 2 portion of the survey, and as such, we will be focusing on Part 1 data in the current paper.

Study 2 included the same measures for eroticism ($\alpha = .96$), nurturance ($\alpha = .90$), and closeness (Aron et al., 1992) that were used in Study 1, though sexual satisfaction was measured with the Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1998 [add to the reference]).

Participants were asked to indicate on 7-point bipolar scales which best describes their current sexual relationship: unsatisfying-satisfying, unpleasant-pleasant, and good-bad. Items were mean aggregated with higher scores indicating higher sexual satisfaction ($\alpha = .97$).

Table 2. Summary of the correlations, means, and standard deviations of the focal variables for polyamorous participants [Author: add in-text citation]

	1	2	3	4	5	6	7	M	SD
Nurturance Primary (1) ¹								6.18 ²	1.07
Nurturance Secondary (2)	.17***							5.05	1.51
Eroticism Primary (3)	.20***	.48***						4.83 ²	1.89
Eroticism Secondary (4)	.13**	.47***	.10**					5.67	1.64
Closeness Primary (5)	.46***	.06	.06	12**.				5.55 ²	1.48
Closeness Secondary (6)	.07	.53***	.26***	.18***	.39***			4.24	1.64
Sexual Satisfaction Primary (7)	.18***	-.05	.45***	-.06	.08*	-.04		5.67 ²	1.58
Sexual Satisfaction Secondary (8)	.09	.38***	.04	.53***	.05	.20***	.06	5.94	1.35

Notes. ¹The results presented are for the overall sample (e.g., collapses across primary status). ²Participants report significantly higher nurturance ($p < .001$) and closeness ($p < .001$) for primary compared to secondary partners, though reports for eroticism ($p < .001$) and sexual satisfaction ($p = .002$) were higher among secondary partners compared to primary partners. *** $p < .001$; ** $p < .01$; * $p < .05$.

Data Analytic Strategy

We conducted a power analysis to ensure we had sufficient power to estimate the main effects of interest. The power analysis indicated a sample size of 1,736 would be needed to find a statistically significant difference assuming a small effect size ($d = .20$), with unequal allocation (N3/N1 = 3; to resemble the ratio of eligible participants in the dataset) with a power level of .95 (power estimated using G*Power 3.1; Faul, Erdfelder, Buchner, & Lang, 2009). As our sample consisted of well over 1,736 monogamous and polyamorous individuals, we decided to proceed with the analyses.

To test our hypotheses comparing polyamorous and monogamous relationships, a series of two sample independent t -tests were performed to compare the mean scores of eroticism and nurturance for reports of partners in monogamous relationships with the reports for polyamorous individuals' primary and secondary partners. To assess the effects of relationship length and address our exploratory questions regarding sociodemographic variables, we used a series of univariate regressions to examine the association between age, sexual orientation, relationship length, and gender with comparisons of eroticism and nurturance. As an exploratory analysis, we also conducted a one-way ANOVA to explore the differences in eroticism and nurturance between monogamous partners and partners in the various polyamorous configurations (e.g., partners in primary-secondary, non-primary, co-primary relationships). We then used Tukey's test to compare the different pairwise comparisons of monogamous partners to primary/pseudo-primary partners and secondary/pseudo-secondary partners in the varying configurations. Lastly, to assess whether eroticism and nurturance was associated with sexual satisfaction or closeness in monogamous relationships, we conducted a series of regression analyses with eroticism and nurturance predicting sexual satisfaction, and then predicting closeness.

Table 3. Summary of the correlations, means, and standard deviations of the focal variables for monogamous participants [Author: add in-text citation]

	1	2	3	M	SD
Nurturance Mono (1)				5.85	1.32
Eroticism Mono (2)	.83***			5.16	1.60
Closeness Mono (3)	.59***	.59***		5.26	1.78
Sexual Satisfaction Mono (4)	.79***	.63***	.53***	5.42	1.68

Notes. *** $p < .001$; ** $p < .01$; * $p < .05$ [Author: cite "***" and "*" in table or delete].

Results

Primary Analyses

Compared to monogamous partners, individuals in polyamorous relationships rated their primary partners higher in nurturance (P1: $M = 6.18$, $SD = 1.07$; PM: $M = 5.85$, $SD = 1.32$; $t(2,924) = 6.18$, $p < .001$, $d = 0.26$), but lower in eroticism (P1: $M = 4.83$, $SD = 1.89$; PM: $M = 5.16$, $SD = 1.60$; $t(2,924) = -4.63$, $p < .001$, $d = 0.19$). On the other hand, secondary partners were rated lower in nurturance than monogamous partners (P2: $M = 5.05$, $SD = 1.51$; PM: $M = 5.85$, $SD = 1.32$; $t(2,846) = -13.25$, $p < .001$, $d = 0.58$), but higher in eroticism (P2: $M = 5.67$, $SD = 1.64$; PM: $M = 5.17$, $SD = 1.60$; $t(2,846) = 7.27$, $p < .001$, $d = 0.32$). As an exploratory analysis, we sought to assess whether the results remained when we controlled for sociodemographic factors. Comparisons for eroticism and nurturance among monogamous partners and polyamorous primary and secondary partners held when we controlled for gender, sexual orientation, relationship length, and age (see Table 5). However, while nurturance among primary partners was higher than reports for monogamous partners, this was only true among polyamorists who identify their partners as primary-secondary and co-primary, whereas polyamorists who did not identify either partner as primary (non-primary) reported similar rating of

Table 4. Comparisons of mean differences between monogamous and polyamorous ratings for eroticism and nurturance

	Nurturance				Eroticism			
	Difference	df	t	Cohen's d	Difference	df	t	Cohen's d
Overall Sample								
Mono – Primary	0.33**	2,924	6.18	0.26	-0.33**	2,924	-4.63	0.20
Mono – Secondary	-0.80**	2,846	-13.25	0.58	0.51**	2,846	7.27	0.32
Primary – Secondary	1.18**	679	17.76	0.68	-0.82**	679	-8.64	0.33
Primary-Secondary								
Mono – Primary	0.63**	2,426	7.49	0.49	-0.24*	2,426	-2.28	0.15
Mono – Secondary	-1.47**	2,425	-16.66	1.10	0.52**	2,425	4.89	0.32
Primary – Secondary	2.10**	258	20.79	1.29	-0.76**	258	-4.97	0.31
Co-Primary								
Mono-Pseudo – Primary	0.56**	2,302	4.89	0.43	-0.60**	2,302	-4.17	0.37
Mono-Pseudo – Secondary	-0.08	2,302	-0.72	0.06	0.67**	2,302	4.77	0.42
Pseudo-Primary– Secondary	0.64**	135	6.45	0.55	-1.27**	135	-6.17	0.53
Non-Primary								
Mono-Pseudo – Primary	0.04	2,355	0.41	0.03	-0.30*	2,355	-2.41	0.18
Mono-Pseudo – Secondary	-0.50**	2,355	-4.96	0.37	0.41**	2,355	3.37	0.26
Pseudo-Primary– Secondary	0.54**	188	4.56	0.33	-0.71**	188	-3.83	0.28

Note. Difference represents the mean difference of comparisons and the effect sizes presented are based on independent *t*-tests for monogamous and polyamorous comparisons, and dependent *t*-tests for polyamorous comparisons. The degrees of freedom vary in each analysis due to missing data points. **p* < .05; ***p* < .001.

nurturance for their pseudo-primary partner compared to monogamous partners (see Tables 4 and 5 and Figure 1 for mean ratings). On the other hand, while on average, polyamorous secondary partners were characterized by less nurturance compared to monogamous partners, this was true only for secondary/pseudo-secondary partners in primary-secondary and non-primary configurations, whereas individuals who considered both of their partners to be primary (i.e., co-primary) reported similar levels of nurturance for their pseudo-secondary partner compared to monogamous partners. When we assessed comparisons for eroticism, we found across all polyamorous configurations, reports for eroticism were lower for polyamorous primary/pseudo- primary partners than monogamists, while reports for eroticism were higher among secondary and pseudo-secondary partners than monogamous partners (see Table 4 and Figure 2). Most of these effects held when we controlled for gender identity, sexual orientation, and relationship length (see Table 5).

Assessing Eroticism and Nurturance by Relationship Length

Relationship length (expressed as increments of 10 years) was negatively associated with eroticism (*b* = -0.23, 95% CI [-0.28, -0.19], *p* < .001), and nurturance (*b* = -0.08, 95% CI [-0.12, -0.04], *p* < .001) for partner in monogamous relationships, though the magnitude of this effect was small. When we controlled for participant’s age, relationship length was no longer associated with nurturance among the monogamous sample (*p* = .68).

Tests of Predicted Associations with Relationship Quality

Individuals in monogamous relationships who reported more nurturance in their relationship with their partner reported greater closeness with their partner (*b* = 0.45, *t*(2,164) = 34.89, *p* < .001), and greater sexual satisfaction (*b* = 0.50, *t*(2,166) = 38.13, *p* < .001). Similarly, people who reported more eroticism in their relationship reported greater closeness in their relationship (*b* = 0.52, *t*(2,164) = 33.60, *p* < .001), and greater sexual satisfaction (*b* = 0.76, *t*(2,166) = 60.61, *p* < .001). These results remained significant when we controlled for gender, sexual orientation, and relationship length (see OSF <https://osf.io/c7yfw/>).

Discussion

According to Sexual Configuration Theory (van Anders, 2015), two central components of relationships are their ability to provide people with eroticism and nurturance. While previous research has assessed similar themes, such as passionate and companionate love, there has yet to be research examining eroticism and nurturance empirically. The current research sought to investigate the relationship between eroticism and nurturance among people in polyamorous and monogamous relationships and whether engaging in multiple relationships simultaneously can afford individuals higher levels of both. Results suggest that people in polyamorous relationships experience greater nurturance with primary partners (compared to secondary

Table 5. Regression estimates of differences between monogamous and polyamorous ratings for partners adjusted for gender identity, sexual orientation, and relationship length

	Nurturance			Eroticism		
	<i>B</i>	<i>SE</i>	<i>T</i>	<i>B</i>	<i>SE</i>	<i>t</i>
Overall sample						
Mono – Primary	0.27**	0.07	3.72	–0.65**	0.09	–6.88
Mono – Secondary	–0.86	0.08	–10.10	0.28**	0.10	2.83
Primary – Secondary	–1.13**	0.07	–16.45	0.85**	0.09	9.16
Primary – Secondary						
Mono – Primary	0.57**	0.10	5.91	–0.54**	0.13	–4.32
Mono – Secondary	–1.52**	0.11	–14.30	0.23	0.13	1.82
Primary – Secondary	–2.10**	0.11	–19.62	0.76**	0.15	5.02
Co-Primary						
Mono – Pseudo-Primary	0.50**	0.12	4.06	–0.90**	0.16	–5.63
Mono – Pseudo-Secondary	–0.14	0.13	–1.08	0.43**	0.16	2.76
Pseudo-Primary-Secondary	–0.64**	0.11	–5.62	1.27**	0.20	6.28
Non-Primary						
Mono-Pseudo – Primary	–0.05	0.11	–0.42	–0.66**	0.15	–4.49
Mono-Pseudo – Secondary	–0.58**	0.12	–4.67	0.22	0.15	1.48
Pseudo-Primary – Secondary	–0.54**	0.14	–4.00	0.71**	0.19	3.78

Notes. ¹[Author: add citation for superscript 1]The comparison for monogamous partners and secondary partners in primary-secondary relationships ($p = .07$) was marginal when gender identity, sexual orientation, and relationship length is controlled for, while the comparison for monogamous partners and pseudo-secondary partners in non-primary relationships is no longer significant ($p = .13$). * $p < .05$; ** $p < .001$.

and monogamous partners) and greater eroticism with secondary partners (compared to primary and monogamous partners). Moreover, consistent with research suggesting that processes related to eroticism and nurturance are impacted by relationship length, we found that among the polyamorous sample, eroticism was negatively associated with relationship length, while levels of nurturance were positively associated with relationship length. Among the monogamous sample, however, both eroticism and nurturance were negatively associated with relationship length, and effects for nurturance and relationship length disappeared when we controlled for age. When decreases in nurturance did occur, the decline was very small, translating to a 0.1 change in the nurturance with a 10-year increase in relationship length—thus, while this finding is contrary to what might be expected for nurturance, the finding should be interpreted with caution given the small effect size.

Differences in eroticism and nurturance between primary and secondary partners in polyamorous relationships are consistent with previous research showing that individuals report greater emotional support, closeness, security, interdependence, and companionate love with primary partners compared to secondary partners (Balzarini et al., 2017; Balzarini, Dharma, Kohut, Campbell, Lehmler, et al., 2018; Jiang, 2017; Mitchell et al., 2014). Given the previous research, it would make sense that primary relationships are characterized by greater intimacy, love, and warmth,

which are components of nurturance. In contrast, eroticism was higher in secondary relationships, which is consistent with previous research suggesting that relationships with secondary partners typically involve a greater proportion of time spent having sex (Balzarini et al., 2017; Balzarini, Dharma, Kohut, Campbell, Lehmler, et al., 2018; Balzarini, Dobson, et al., 2018; for an exception see Mitchell et al., 2014; Mogilski et al., 2017) and greater sexual need fulfillment (Mitchell et al., 2014).

Comparisons between polyamorous and monogamous relationships, however, were less aligned with our predictions. Although secondary relationships were characterized by *greater* eroticism than monogamous relationships, inconsistent with previous research showing that monogamous relationships resemble primary relationships on various relationship outcomes (Balzarini, Dharma, Kohut, Campbell, Lehmler, et al., 2018; Mogilski et al., 2017), this research also indicated that primary relationships were characterized by *greater* nurturance than monogamous relationships. Despite these surprising results, taken together, these findings support the view that individuals in polyamorous relationships maintained higher levels of eroticism and nurturance through their concurrent partners than is typical of individuals in monogamous relationships.

The findings concerning higher than expected experience of nurturance from primary partners compared to monogamous partners deserve further attention. One possibility is that these results may reflect the strong foundation

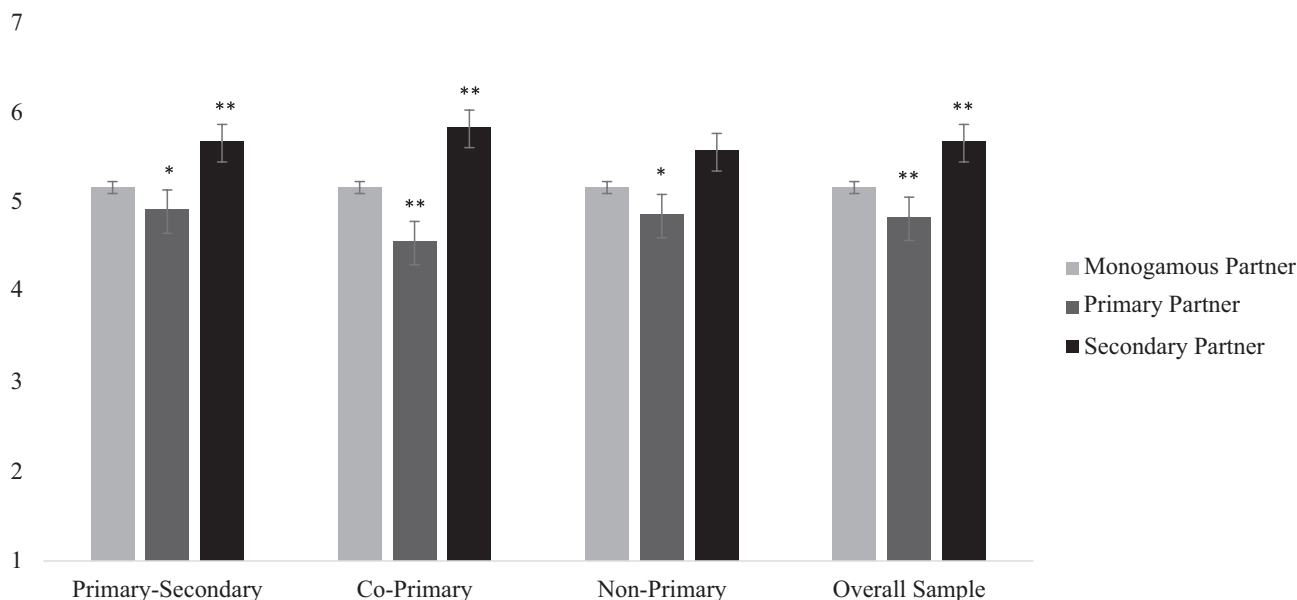


Figure 2. Mean ratings for eroticism. Presented are ratings for polyamorous partners across the varying configurations and in comparison to monogamous partners. All mean ratings were unadjusted for other demographic factors. ** $p < .01$; * $p < .05$. [Author: Please approve the edit of figure]

necessary to maintain a primary relationship in a consensually non-monogamous context. That is, it is likely that experiencing security, a deep emotional attachment, warmth, and comfort – all aspects of nurturance – may contribute to maintaining commitment between primaries in long-term polyamorous relationships and may afford partners the ability to be attuned to each other’s needs and comfortable with having others fulfill some of those needs. Alternatively, it is also possible that these findings reflect differing preferences for need fulfillment, such that polyamorous individuals are more willing to experiment with alternative relationship arrangement to maximize the fulfillment of erotic and nurturing needs than monogamous individuals. Although these ideas are not tested, future research could explore whether nurturance with primary partners serves to promote relationship stability for primary partners within polyamorous relationships affording the safety and security to pursue secondary relationships, and should further explore whether people in polyamorous and monogamous relationships express different preferences for the fulfillment of eroticism and nurturance in relationships.

The current research also suggests that for monogamous partners, eroticism and nurturance were positively associated with reports of sexual satisfaction and closeness, while for polyamorous participants, eroticism was positively associated with sexual satisfaction and closeness (though only for secondary partners), while nurturance was positively associated with closeness. These findings help elucidate previously documented differences between monogamous partners and polyamorous primary and secondary partners,

such that differences in commitment processes, mate-retention, sexual need fulfillment, and sexual frequency (e.g., Balzarini et al., 2017; Balzarini, Dharma, Kohut, Campbell, Lehmilller, et al., 2018; Balzarini, Dobson, et al., 2018; Mitchell et al., 2014; Mogilski et al., 2017; Muise et al., 2018) may be an artifact of different partners meeting different roles or being pursued to meet different needs. In exploratory analyses we assessed whether eroticism or nurturance in a polyamorous relationship predicted closeness or sexual satisfaction in a concurrent relationship.

Our exploratory results suggest that reports of nurturance and eroticism with one partner were in some instances associated with sexual satisfaction and closeness with the concurrent partner, though the directions of the effects were largely negative or null. More specifically, the only positive effect to emerge indicated that eroticism with a secondary partner was associated with more closeness with a primary partner. In contrast, various negative cross-partner effects emerged, such that greater eroticism with a primary partner was associated with less closeness and sexual satisfaction with a secondary, while greater eroticism with a secondary partner was associated with less sexual satisfaction with a primary partner. Such results provide little evidence for the claim that diversifying needs across partners may benefit relationships, as has been argued by Finkel and colleagues (2014) and Conley and colleagues (2014, 2017), though they are somewhat consistent with some previous research that documents similarly small trends (Mitchell et al., 2014; Muise et al., 2018). Importantly, these results need to be interpreted with caution

given the exploratory nature of the analyses and magnitude of the effects. Thus, future research is needed to confirm the effects of eroticisism and nurturance on concurrent relationships. Such efforts could further explore with whom the cross-partner effects are strongest, and in what instances cross-partner effects benefit versus detriment relationship quality, and beyond the relationship, whether diversifying need fulfillment of eroticisism and nurturance benefits the individual (e.g., do individuals who have more needs met across partners report higher well-being or life satisfaction?).

Implications

These findings have broad research implications for the study of romantic relationships. The belief that monogamy is superior to other relationship orientations is a fundamental and often unquestioned assumption underlying contemporary theories of the development of romantic relationships and intimacy (Conley et al., 2017; Moors & Schechinger, 2014), and the current findings suggest that it is valuable to consider how consensually non-monogamous relationships can inform existing perspectives of relationship quality. Conley and colleagues (2014, 2017) argue that monogamous relationships can be improved by outsourcing unmet needs to other non-sexual relationships. For many people, it may be unrealistic to expect one's romantic partner to meet their needs for eroticisism and nurturance simultaneously. While consensually non-monogamous relationships, like polyamory, can afford the opportunity to have these needs met simultaneously through different romantic partners, monogamous individuals could also choose to have unmet nurturance needs met by friends, family members, and so forth, reducing their reliance on their partner; and they could also consider, with the knowledge and consent of their partner, outsourcing needs through use of pornography, for example, to fulfill unmet erotic needs.

One key empirical question that the current research cannot address, however, is whether experiencing eroticisism and nurturance from non-romantic partners in the face of low levels of eroticisism and nurturance in a relationship, can compensate for unsatisfactory levels in one's relationship(s). Relevant data are limited but suggest that support and sexual gratification from a romantic partner may be different from that provided by outside sources, and that there may be unique benefits to having erotic and nurturing needs met by a romantic partner. For example, Brown and Harris (1978) found that a confiding relationship with a parent, sister, or friend did not compensate for a lack of a confiding relationship with a partner. Additionally, other research has shown that there are times when a partner's use of sexually explicit materials can negatively impact a

romantic relationship in a variety of domains, including feeling a sense of decreased intimacy and self-esteem (see Bergner & Bridges, 2002 [add to the reference]), and that in general, solitary use of sexually explicit materials among males (i.e., consuming pornography when a partner does not) is associated with negative outcomes in romantic relationships (Wright, Tokunaga, Kraus, & Klann, 2017). Thus, options to outsource unmet erotic needs in a monogamous relationship may come with some complexities, including limited options to outsource erotic needs and potentially negative effects on relationships.

There are reasons, however, to remain critical of this position. With respect to pornography use, for instance, positive effects on relationship functioning have also been identified (Kohut, Fisher, & Campbell, 2017), and the negative associations between pornography use and relationship functioning appear to be limited to instances where partners differ in their interest in such materials (Kohut, Balzarini, Fisher, & Campbell, 2018; Kohut et al., 2019). Although empirical evidence is scant at the moment, the determining factor in such cases may be the extent that individuals approve of and consent to their partners' use of such materials or to outsourcing needs more generally; much like arrangements in consensually non-monogamous relationships.

Limitations and Future Directions

Despite the strengths, there are some features of the sample and methods that may limit the interpretation and impact of our findings. First, the current research used a convenience sample of polyamorous and monogamous participants who self-selected to participate in this study; therefore, the study may be limited in generalizability. Future research should assess eroticisism and nurturance among a representative sample and include other relationship orientations (e.g., swingers, open relationships). Furthermore, the current research was cross-sectional and correlational in nature and thus the nature of this data does not allow us to answer questions about causality or directionality. While we have demonstrated that eroticisism and nurturance differ between monogamous and polyamorous relationships, it is still important to establish how eroticisism and nurturance and eroticisism develop and change over time within these relationships.

Concluding Remarks

The current research provides the first empirical test of differences between eroticisism and nurturance among partners in polyamorous and monogamous relationships. The findings suggest that polyamory may provide a unique

opportunity for individuals to experience both eroticism and nurturance simultaneously, as people in polyamorous relationships experience greater nurturance with primary partners (compared to secondary and monogamous partners) and greater eroticism with secondary partners (compared to primary and monogamous partners).

Furthermore, results suggest experiences of eroticism and nurturance are associated with closeness and sexual satisfaction, and in some instance, experiences of eroticism and nurturance in polyamorous relationships influence reports of closeness and satisfaction with concurrent partners. Future research should assess the downstream consequences of partners meeting different roles and assess whether there are personal benefits (e.g., greater life satisfaction, personal well-being) of diversified fulfillment of erotic and nurturant needs.

Electronic Supplementary Material

The electronic supplementary material is available with the online version of the article at <https://doi.org/10.1027/1864-9335/a000378>

ESM 1. Text and Tables (.docx)

[Author: Please provide a brief text. Also please add an in-text cite for ESM 1]

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1393 analytic strategy and editing the manuscript. 1394
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1396 Framework prior to analyses (<https://osf.io/s2p6f/>). Study mate-
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