

Examining relationship quality across three types of relationship agreements

Sexualities

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Abstract

While past studies have measured several indicators of relationship quality in relation to types of relationship agreement, most have not included polyamorous relationships, and have almost exclusively included samples of gay men. The purpose of this study was to address this gap by examining five dimensions of relationship quality and eight dimensions of relationship equity in a sexually diverse Canadian sample ($N = 3463$) across three types of relationship agreements (monogamous, open, and polyamorous). The data were collected online as part of a larger study. In order to compare relationship types on relationship dimensions, MANCOVAs were computed using age, relationship

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duration, cohabitation status, sex, sexual orientation, and an interaction term of sex and sexual orientation as control variables. High scores of relationship quality and equity were reported by the overall sample, and scores on all scales did not significantly differ by types of relationship agreements. Overall, these results strongly suggest that these types of relationship agreements are equally healthy viable options.

Keywords

Monogamy, non-monogamy, open relationships, polyamory, relationship quality

Monogamy is perceived to have several benefits, including an improved or enhanced sex life (e.g. increased frequency and quality of sex), a lower or non-existent risk of contracting a sexually transmitted infection (STI), and an increase in relationship quality (e.g. reduced jealousy and increased trust and satisfaction; Conley, Moors, et al., 2013; Conley, Ziegler, et al., 2012). These benefits are perceived to be threatened or abolished when non-monogamy is practiced. However, while a number of studies have confirmed some of these assumptions (e.g. Hoff et al., 2010; Hosking, 2013), the results of many others suggest that there are no significant differences between monogamous and non-monogamous relationships regarding sexual communication, and sexual and relationship satisfaction (e.g. Bricker and Horne, 2007; Parsons, Starks, Gamarel, et al., 2012; Wagner et al., 2000). While these inconsistencies may be due to between-study differences in chosen control measures, as well as discrepancies in the ways consensual non-monogamy was defined and operationalized (e.g. open and threesome-only relationships were often not distinguished, or collapsed in a single category), results produced by these studies are chiefly generalizable to populations of gay men, given that, to our knowledge, all but one study (Morrison et al., 2013) have exclusively included gay men in analyses. The current study investigated relationship quality and equity in a sexually diverse sample across three distinct types of relationship agreements: monogamous, open, and polyamorous.

Non-monogamies and sexual orientation

Most of the research on non-monogamy has been conducted on gay male samples, most likely because they have been found to be more likely to choose this type of relationship compared to lesbian women and heterosexual individuals (Blumstein and Schwartz, 1983; Hoff and Beougher, 2010; Solomon et al., 2005). Some evidence suggests that relationship quality differs among non-monogamous lesbian women and gay men. For instance, Blumstein and Schwartz (1983) found that non-monogamy among lesbian couples was associated with less sexual satisfaction and less commitment to the main relationship, whereas among gay men, no relation was found between these variables. This may be due to the finding that sexual

agreements about extra-dyadic sex are more socially acceptable in the gay male community (e.g. Blasband and Peplau, 1985; Blumstein and Schwartz, 1983; Hickson et al., 1992; Kurdek and Schmitt, 1985; Parsons, Starks, Dubois, et al., 2013). Indeed, past research has shown that gay men engage in several types of sexual agreements (Adam, 2010; Hoff et al., 2010; Parsons, Starks, Gamarel, et al., 2012). However, non-monogamous gay men tend to form relationships in which there is either an implicit or explicit agreement to sexual non-exclusivity, but emotional (i.e. romantic) monogamy (Adam, 2010; Coleman and Rosser, 1996). That sexual non-monogamy is more prevalent among gay men compared to lesbian and heterosexual couples may be due to differences in gender role socialization in relation to sexual relationships. More specifically, the socialization of boys and men as independent and self-reliant individuals, in combination with relatively liberal messages surrounding male sexual pleasure, would prime them for a sexuality that is bodily-centred and oriented toward physical pleasure (e.g. Regan and Berscheid, 1996). In other words, male gender socialization, in contrast to female gender socialization, would lead men to separate emotionality from sexual pleasure, even in the context of partnered sexual activity.

Bisexual individuals have also been found to be more likely than their heterosexual counterparts to engage in non-monogamous forms of relationships (e.g. McLean, 2004; Taormino, 2008). In a sample of 60 bisexual men and women living in Australia, McLean (2004) found 60% of men and 52.5% of women were in non-monogamous, rather than monogamous relationships. This finding corroborates past research which found that non-monogamy was a common factor among a sample of bisexual individuals living in San Francisco (Weinberg et al., 1994). However, although LGB individuals are more likely than their heterosexual counterparts to form non-monogamous relationships, the phenomenon is by no means unique to the LGB population (Morrison et al., 2013; Taormino, 2008).

Relationship quality and relationship agreement

Existing research comparing monogamous and non-monogamous relationships on relationship quality dimensions has often not distinguished between different types of non-monogamous agreements (e.g. open, polyamorous, etc.), which could have otherwise produced biased results. When non-monogamies were distinguished, two distinct types of relationship agreements were commonly studied and discussed in previous research: *open*, in which both partners can engage in extra-dyadic sex (LaSala, 2004), and *monogamish* (Parsons and Grov, 2012) or *threesome-only* (Hosking, 2013), in which partners agree to have sex with others only while together (i.e. both partners are present). An additional relationship structure, *polyamory*, has also been examined in comparison to monogamous relationships in terms of relationship well-being dimensions (Morrison et al., 2013). Polyamory has been defined in a number of ways, but it generally refers to a relationship structure in which partners are involved, or open to, multiple and simultaneous romantic and/or sexual partnerships with the knowledge and

consent of all partners (Taormino, 2008). Overall, studies have shown that these different relationship agreements tend to be similar to each other and to monogamy on several relationship quality dimensions. Parsons et al. (2012) found that gay men in monogamous, open, and monogamish relationships reported similar levels of sexual satisfaction and sexual communication after controlling for age, race, HIV status, and relationship duration. In a sample of gay male couples in the USA, LaSala (2004) found no differences in levels of dyadic adjustment between open and monogamous relationships, and Bricker and Horne (2007) and Hoff et al. (2010) found that both of these relationship types were rated as equally satisfying.

However, some studies have found between-group differences on other relationship dimensions. For example, monogamous men were found to report higher levels of sexual jealousy compared to those in monogamish and open relationships (Parsons, Starks, Gamarel, et al., 2012), perhaps because having an explicit agreement regarding sexual non-exclusivity, as opposed to having an implicit, or a lack of agreement, may itself be an indicator of relationship functionality. In terms of dyadic conflict with regards to decision-making about sex with casual partners, Parsons, Starks, DuBois, Grov and Golub (2013) found that gay men in monogamous and open relationships reported significantly less conflict compared to men in monogamish relationships after controlling for age and HIV status. In a sample of gay American couples, Hoff and colleagues (2010) found that men in monogamous partnerships reported higher levels of trust, intimacy, commitment, equality, and attachment than those in open relationships. In a sample of 229 gay Australian men, reported levels of passion were found to be significantly lower among those in open relationships compared to men in monogamous and threesome-only partnerships (Hosking, 2013). Finally, in a sample of heterosexual men and women, Morrison and his colleagues (2013) found that both polyamorous men and women reported greater levels of intimacy compared to their monogamous counterparts.

Rationale

While past studies have measured several indicators of relationship quality across different types of relationship agreements (Kurdek, 1988; Parsons, Starks, Gamarel, et al., 2012), most have not included polyamorous relationships, and almost all have only included samples of gay men (for a review and critique of the literature, see Conley, Ziegler et al., 2012). Moreover, inconsistent findings in the current literature regarding between-group differences on relationship quality dimensions may be attributable to the lack of distinction between different types of non-monogamies. Finally, because past research has only examined this issue among samples of gay men, some potentially moderating factors on relationship quality, such as sex and sexual orientation, have never previously been considered in non-monogamy research. Thus, the purpose of this study was to address these gaps by examining relationship quality and equity in a sexually diverse sample across three distinct types of partnership agreements (i.e. monogamous, open, and polyamorous).

Methods

Participants

Participants were Canadians of 18 years and older, who could understand French or English. In order to ensure a diverse sample in terms of relationship profiles, participants from all Canadian provinces and territories were targeted. Multiple recruitment strategies were employed in both French and English: advertisements were diffused using a variety of media (i.e. specialized ads, emails and listservs, Facebook, Youtube, pamphlets, etc.). The messages targeted a diverse population in terms of sexuality and relationships (e.g. sexually active singles, couples that were married, unmarried, not cohabitating, non-monogamous, same-sex couples, etc.), and additional effort was aimed at recruiting non-traditional couples (i.e. open, polyamorous, etc.) in order to have sufficiently large subsamples.

A total of 11,864 participants accessed the Sexuality and Modern Intimate Ties and Network survey (SMIT'N), while 6,449 completed the entire survey. Of these, only those who indicated being in a monogamous, open, or polyamorous relationship at the time of the study were included in the analyses for the purpose of this article ($N = 3463$).

Measures

Age, relationship duration, cohabitation status, sex, sexual orientation, and an interaction term of sex and sexual orientation. Given that several relationship dimensions, including sexual and relationship satisfaction, have been shown to be influenced by age and relationship duration (e.g. Basson, 2000; Carvalheira et al., 2010; Milhausen and Murray, 2012), these variables, which were measured in years, were included as control variables in this study's analyses. Moreover, given that relationship agreement tends to vary by sexual orientation (Hoff and Beougher, 2010; McLean, 2004; Taormino, 2008) and that men and women tend to respond differently to items assessing relationship dimensions (e.g. Heiman et al., 2011; Pedersen and Blekesaune, 2003), self-reported sexual orientation (i.e. heterosexual, homosexual, bisexual, pansexual/two-spirit/queer, unsure/questioning), sex (i.e. women, men), and an interaction term of the two, were also included as covariates. Finally, cohabitation status as well as the squared variables of age and relationship duration were also included in the model. The inclusion of the squared variables was conducted to assess the quadratic effect of age and relationship duration, which was supported in previous cross-sectional research (e.g. Heiman et al., 2011).

Relationship quality. Relationship quality was assessed using 17 items measuring the quality of five relationship dimensions: sexual satisfaction, relationship satisfaction, closeness, trust, and commitment. Participants were instructed to answer the questions with their romantic partner in mind, and that if they had more than one (i.e. polyamorous participants), to answer the questions with their most salient or most important partner in mind. Sexual satisfaction was measured using the

corresponding subscale of an adapted version of Rosen et al.'s (2000) Female Sexual Function Index (FSFI), composed of three items using a 5-point Likert-type scale with values ranging from 1 (*Very unsatisfied*) to 5 (*Very satisfied*). While the FSFI was developed and validated with a female sample, this sexual satisfaction subscale was judged to be an adequate measure to assess satisfaction among both male and female participants because its items are gender neutral, and because they cover general and relevant dimensions of sexual satisfaction. The subscale's items were, 'Over the past 4 weeks, how satisfied have you been with the amount of emotional closeness during sexual activity between you and your partner?'; 'Over the past 4 weeks, how satisfied have you been with your sexual relationship with your partner?' and 'Over the past 4 weeks, how satisfied have you been with your overall sexual life?'. Relationship satisfaction, closeness, trust, and commitment were measured using the corresponding subscales from Fletcher, Simpson, and Thomas's (2000) Perceived Relationship Quality Components scale (PRQC), which uses 7-point rating scales with values ranging from 1 (*Not at all*) to 7 (*Extremely*). Relationship quality dimension items were averaged to create subscale scores.¹

Relationship equity. Sprecher's (2001) Detailed Measure of Equity (DME) was used to appraise participants' perceptions of their investment, relative to their partner's, of seven resources (love, value, money, material goods, services, sharing of knowledge, and sex), using 7-point Likert-type scales with values ranging from 1 (*Very unfair, I'm getting the worse deal*), to 4 (*Fair*), to 7 (*Very unfair, I'm getting the better deal*). Overall relationship equity was further measured using Hatfield's (Hatfield et al., 1979) Global Measure of Equity (GME) which is composed of two items: The first asked participants 'Considering what you put into your relationship, compared to what you get out of it, how does your relationship "stack up"?' with answer choices ranging from 1 (*I am getting a much better deal than my partner*) to 4 (*We are both getting an equally good – or bad – deal*), to 7 (*My partner is getting a much better deal than I am*), and the second question, 'Sometimes things get out of balance in a relationship and one partner contributes more to the relationship than the other. Consider all the times when the exchange in your relationship has become unbalanced and one partner contributed more than the other for a time. When your relationship becomes unbalanced, which of you is more likely to be the one who contributes more?' with response choices ranging from 1 (*My partner is much more likely to be the one who contributes more*) to 4 (*We are equally likely to be the one to contribute more*), to 7 (*I am much more likely to be the one who contributes more*). Again, participants were instructed to answer these questions with their romantic partner in mind, or in the case of polyamorous individuals, with their most salient or most important partner in mind. The DME and GME items were treated as separate dependent variables, as opposed to a single indicator of relationship equity.

Relationship agreement. For the purpose of this study, participants who were classified as being in a monogamous relationship were the ones who indicated having only one romantic or loving partner and a monogamous sexual agreement.

Those who were classified as being in an open dyadic relationship were those who reported having only one romantic or loving partner, and an open sexual agreement (i.e. there was an explicit agreement that sex with outside partners was permitted). Lastly, those who were classified as being in a polyamorous partnership were those who indicated having more than one romantic or loving partner and explicitly labelled their relationship as 'polyamorous'. While polyamorous individuals may have either an open or a monogamous sexual agreement along with an open romantic agreement, this detail was not included in the operational definition used in this study.

Procedure

The study was reviewed and approved by the University of Quebec in Montreal's (UQAM), the University of Laval's, and the University of Windsor's research ethics boards. The SMIT'N survey took approximately 20 to 45 minutes to complete, and participation was entirely voluntary. Before accessing the survey, participants were presented with a consent page detailing the nature of the study, and informing them of their right to exit the survey at any time and that their data would be transferred to a database anonymously. Only participants who consented to participate were able to complete the survey. The data were collected between March 2013 and January 2014.

Data analysis

Analyses were conducted with the Statistical Package for the Social Sciences (SPSS) version 20.0. Correlations were conducted using Pearson Product Moment Correlations. Group differences on age and relationship duration were analysed using analyses of variance (ANOVA), and group differences on sexual orientation and the interaction of sex and sexual orientation, with Chi-square tests. Finally, group differences on relationship quality and equity dimensions were analysed with multivariate analyses of covariance (MANCOVAs), and main effects of relationship type were evaluated using the Sidak test after significant omnibus analyses.²

Results

Sample characteristics

Of the 3463 participants included in the analyses, 2758 (79.6%) were in a monogamous partnership, while 468 (13.5%) were in an open relationship, and 237 (6.8%), in a polyamorous relationship. The mean age of this sample was 28.28 years ($SD = 9.0$), and on average, participants had been in a relationship with their current partner for 3.79 years ($SD = 4.76$). Table 1 describes the overall sample's demographics, whereas the sample's sexual orientation, age, and relationship duration across relationship types are detailed in Table 2.

Table 1. Sample demographics (N = 3463).

Characteristic	%
Sex	
Men	26.2
Women	73.8
Ethnicity*	
French/English/European	92.5
Latin-American/Hispanic/Spanish	2.8
African	2.5
Other	5.9
Highest level of education completed	
High school	5.5
College/Trade/Technical	35.1
Undergraduate	38.7
Graduate	20.7
Employment Status*	
Student	62.3
Working full time	27.4
Working part time	27.2
Unemployed	4.4
Other	17.4
Religious Affiliation	
None	59.8
Catholic	34.2
Other	6.0
Cohabiting with partner	
Yes	42.2
No	57.8
	<i>M (SD)</i>
Age	28.3 (9.0)
Relationship duration	3.8 (4.8)

Note. The values in this table are valid, rather than observed percentages.

*Participants could select more than one option.

Relationship quality

Because multiple analyses of variance assess the relationships between dependent variables and whether groups differ on a combination of dimensions, dependent variables need to be empirically or theoretically related (Field, 2009). Therefore, Pearson's product-moment correlation coefficients between dependent

Table 2. Sexual orientation, age, and relationship duration by relationship type.

Characteristic	Monogamous	Open	Poly	Total	χ^2 (df)	<i>p</i>
	(n = 2758)	(n = 468)	(n = 237)	(n = 3463)		
	%					
Sexual Orientation					820.93 (8)	<.001
Heterosexual	82.7	39.2	35.2	73.6		
Homosexual	8.1	16.0	3.4	8.8		
Bisexual	5.2	21.4	27.5	8.9		
Pansexual/Two-spirit/Queer	2.2	15.4	30.1	5.9		
Unsure/Questioning/Other	1.8	7.5	3.8	2.7		
Sexual Orientation*Sex					716.37 (14, 3449)	<.001
Male					139.66 (8)	<.001
Heterosexual	76.1	41.6	55.0	67.2		
Homosexual	17.6	33.0	7.5	19.8		
Bisexual	3.4	14.6	16.3	7.0		
Pansexual/Two-spirit/Queer	1.6	7.6	16.3	4.1		
Unsure/Questioning/Other	1.1	3.2	5.0	1.9		
Female					746.10 (8)	<.001
Heterosexual	84.7	38.5	25.2	75.9		
Homosexual	5.2	4.9	1.3	4.9		
Bisexual	5.7	25.8	33.5	9.7		
Pansexual/Two-spirit/Queer	2.4	20.5	36.8	6.5		
Unsure/Questioning/Other	2.0	10.2	3.2	3.0		
	<i>M</i> (<i>SD</i>)				<i>F</i> (<i>df</i>)	<i>p</i>
Age	27.1 (8.1)	31.5 (9.5)	36.0 (11.4)	28.3 (9.0)	156.43 (2, 2618)	<.001
Relationship duration	3.3 (4.0)	4.6 (5.6)	7.0 (7.2)	3.8 (4.8)	74.21 (2, 3428)	<.001

variables were first computed in order to statistically assess their relatedness (see Table 3). Overall, participants in all three types of partnerships reported relatively high levels of relationship quality (refer to Table 4).³

Using Wilks's statistic, a significant main effect of relationship duration, relationship duration squared, age, age squared, and cohabitation status, were found.⁴ There was also a significant main effect of relationship type on relationship quality after controlling for relationship duration, age, sex, sexual orientation, and an interaction of sex and sexual orientation.⁵ Analyses using the original (non-transformed) dependent variables revealed identical trends. Follow-up univariate analyses revealed no significant main effect of relationship type on any of the five relationship dimensions.⁶

Relationship equity

First, Pearson's product-moment correlation coefficients between dependent variables were computed (see Table 5). Although between-variable correlations were all

Table 3. Correlation Coefficients among Relationship Quality Dimensions.

Variable	1	2	3	4	5	6
1. Sexual Satisfaction	—					
2. Relationship Satisfaction	.621	—				
3. Closeness	.551	.731	—			
4. Trust	.298	.569	.626	—		
5. Commitment	.341	.572	.588	.379	—	

Note. All correlations are significant at $p < .001$.

Table 4. Mean scores on relationship quality dimensions by groups.*

Dimension	Monogamous		Open		Polyamorous		Total	
	<i>M with 95% CI</i>		<i>M with 95% CI</i>		<i>M with 95% CI</i>		<i>M with 95% CI</i>	
Sexual Satisfaction	4.16	4.32 4.47	4.22	4.39 4.56	4.19	4.34 4.50	4.21	4.35 4.49
Relationship Satisfaction	6.03	6.23 6.43	6.03	6.25 6.47	5.87	6.07 6.27	6.00	6.18 6.36
Closeness	6.19	6.36 6.52	6.25	6.43 6.61	6.11	6.27 6.43	6.20	6.35 6.50
Trust	6.31	6.48 6.65	6.19	6.38 6.56	6.14	6.31 6.47	6.24	6.39 6.54
Commitment	6.12	6.29 6.47	5.97	6.16 6.35	6.03	6.20 6.37	6.06	6.22 6.38

Note. Sexual satisfaction scores ranged from 1 = Very unsatisfied, to 5 = Very satisfied. Scores on all other relationship dimensions ranged from 1 = Not at all, to 7 = Extremely.

*All mean scores have been adjusted with covariates.

Table 5. Correlation coefficients among relationship equity dimensions.

Variable	1	2	3	4	5	6	7	8
1. Love	—							
2. Value	.343	—						
3. Money	.079	.168	—					
4. Material Goods	.141	.148	.517	—				
5. Services	.234	.184	.112	.195	—			
6. Sharing of Knowledge	.082	.098	.044	.081	.097	—		
7. Sex	.276	.132	.042	.083	.186	.110	—	
8. Overall Equity	.380	.222	.167	.260	.344	.029	.220	—

Note. All correlations are significant. Those of .079 and above are significant at $p < .001$, and those of .044 and below are significant at $p < .05$.

Table 6. Mean scores on relationship equity dimensions by groups.*

Dimension	Monogamous			Open			Polyamorous			Total		
	<i>M</i>	with 95% <i>CI</i>		<i>M</i>	with 95% <i>CI</i>		<i>M</i>	with 95% <i>CI</i>		<i>M</i>	with 95% <i>CI</i>	
Love	4.05	4.23	4.41	4.01	4.21	4.41	4.15	4.32	4.50	4.09	4.26	4.42
Value	4.03	4.20	4.38	4.04	4.24	4.43	4.11	4.29	4.46	4.08	4.24	4.40
Money	3.53	3.81	4.08	3.60	3.90	4.20	3.67	3.93	4.21	3.63	3.88	4.13
Material Goods	3.77	3.98	4.18	3.78	4.00	4.23	3.70	3.91	4.11	3.78	3.96	4.15
Services	3.88	4.07	4.26	3.85	4.06	4.26	3.92	4.10	4.28	3.91	4.07	4.24
Sharing of Knowledge	3.78	3.94	4.10	3.85	4.02	4.20	3.88	4.04	4.20	3.85	4.00	4.15
Sex	3.72	3.94	4.15	3.64	3.89	4.12	3.84	4.06	4.27	3.76	3.96	4.16
Overall Equity	3.93	4.13	4.34	3.87	4.09	4.31	3.99	4.19	4.39	3.96	4.14	4.32

Note. Scores on the seven resources ranged from 1 (Very unfair, I'm getting the worse deal), 4 (Fair), to 7 (Very unfair, I'm getting the better deal). After reverse coding, overall equity scores ranged from 1 (I am much more likely to be the one who contributes more) to 4 (We are equally likely to be the one to contribute more), to 7 (My partner is much more likely to be the one who contributes more).

*All mean scores have been adjusted with covariates.

statistically significant, most coefficients ranged from low to modest. Nonetheless, MANCOVA was judged as adequate owing to the strong theoretical relationships between equity items (Field, 2009). Moreover, using MANCOVA, as opposed to multiple ANCOVAs, prevents the inflation of the familywise error rate (i.e. Type I error). Overall, participants in all three types of partnerships reported relatively high levels of relationship equity (see Table 6).⁷ Using Wilks's statistic, the main effect of relationship duration, relationship duration squared, age, age squared, sex, sexual orientation, and an interaction of sex and sexual orientation were not significant. The squared variables were therefore removed from the model. After their removal, however, there was a significant main effect for cohabitation.⁸ The effect of relationship type on relationship equity dimensions remained non-significant.

Discussion

The present study examined relationship quality and equity in a sexually diverse Canadian sample across three distinct types of relationship agreements: monogamous, open, and polyamorous. Overall, participants reported high levels of relationship quality and equity, regardless of sex, sexual orientation, and partnership agreement. That individuals in open and polyamorous relationships reported high levels of relationship quality, reflects past study findings. For example, in a large online polyamory community sample of men and women, Mitchell, Bartholomew, and Cobb (2014) found that participants reported high levels of closeness, relationship satisfaction and commitment with both their primary and secondary partners. Among a sample of Australian gay men, Hosking (2013) found

that individuals in open and threesome-only relationships reported high levels of intimacy, satisfaction, and commitment.

The finding that monogamous, open, and polyamorous individuals reported similar levels of relationship quality and equity also echoes the findings of much non-monogamy research on gay male samples (Blasband and Peplau, 1985; Parsons, Starks, Gamarel, et al., 2012; Wagner et al., 2000). For instance, gay men in monogamous, open, and threesome-only relationships were indistinguishable in terms of reported levels of commitment, satisfaction, and intimacy (Hosking, 2013). Similarly, gay men in monogamous relationships did not differ from those in non-monogamous relationships on measures of sexual (Bricker and Horne, 2007; Hoff et al., 2010) and relationship satisfaction (Bricker and Horne, 2007). Thus, this study further discredits the common belief that sexual and romantic exclusivity invariably leads to greater relationship quality than consensual non-monogamy (Conley, Moors, et al., 2012).

The present investigation also found that sexual orientation tended to vary between relationship agreements, with higher percentages of monogamous participants identifying as heterosexual, higher percentages of 'open' participants identifying as homosexual, and higher percentages of polyamorous participants identifying as bisexual, relative to each other. This reflects past research findings on the prevalence of consensual non-monogamy practices (Blumstein and Schwartz, 1983; Hoff and Beougher, 2010; Solomon et al., 2005). One plausible explanation for this tendency is that LGB individuals have formed lives and identities that are on the margins of heteronormative society. Thus, it is possible that by adopting identities and living lives that challenge heteronormativity, they are more inclined to forge their own values and to create new scripts to live by. However, it is important to note the significant proportions of self-identified heterosexual individuals engaging in open (39.2%) and polyamorous relationships (35.2%) in this sample. While the prevalence of consensual non-monogamy may be relatively higher within LGB populations compared to heterosexual populations, our findings clearly suggest that there are nonetheless a significant number of heterosexual individuals within consensual non-monogamy communities. Given that such relationship agreements are not unique to LGB individuals, it would be beneficial to recruit and include heterosexual individuals in future non-monogamy research.

Strengths and limitations

To our knowledge, this study is the first in the field of consensual non-monogamy to have examined relationship quality and equity in a sample that included heterosexual, in addition to gay, lesbian, and bisexual individuals. This study also included control variables that have previously been shown to be associated with relationship agreement (i.e. sexual orientation), and relationship quality dimensions (i.e. sex, age, and relationship duration), allowing for a more thorough understanding of the associations between relationship agreement and the outcome variables of interest. While past non-monogamy studies examining relationship

quality have often concurrently examined some of these covariates (e.g. Hoff et al., 2010; Hosking, 2013; Parsons, Starks, Gamarel, et al., 2012), none have included sex and sexual orientation. Therefore, the present investigation also reduces the gender gap within the current literature by having included women in the analyses. Finally, this study is one of very few non-monogamy studies that included polyamory as a distinct form of non-monogamy.

Nonetheless, some limitations are to be considered. When categorizing participants according to relationship agreement, the questionnaire utilized in this study did not allow for the inclusion of individuals who espouse polyamorous values or who self-identify as polyamorous if they did not have, at the time of the study, at least two partners. This means that any individual whose only current partner has multiple partners, was categorized as being in a dyadic rather than a polyamorous partnership. Likewise, individuals who had an open romantic (i.e. affective) relationship agreement in addition to having an open or monogamous sexual agreement, but did not have more than one partner at the time of the study, were not included in the polyamorous category. It is highly probable that such individuals are more similar to those categorized as polyamorous, rather than dyadic, in terms of relationship quality. Finally, this study did not make the distinction between monogamish and open relationships. It is possible that these two types of relationship agreements differ on a number of relationship quality dimensions.

In terms of polyamorous partnerships, this study did not control for participants' total number of partners in the analyses, which could otherwise have impacted the results. For example, it is plausible that polyamorists systematically scored high levels of relationship quality and equity, because they have completed the questionnaire with the partner with whom relationship quality was the highest in mind. Similarly, by asking polyamorous participants to complete the questionnaire with their most salient partner in mind, rather than with all of their partners on average, or with each partner individually, results might have been skewed toward higher functioning relationships, thereby obscuring the potentially different dynamics present in other relationships.

Further, the present study's sample's high reported levels of relationship quality and equity translated to low variability on most measured relationship dimensions. This low variability may be an indication that our sample may not be representative of the overall population. It is possible that those who accessed and completed our survey were individuals who tended to be happier and more satisfied with their relationship compared to those who chose not to participate. Targeting clinical, in addition to general populations for recruitment, may have yielded results that are more representative of the general Canadian population.

Lastly, the MANCOVA computed to evaluate differences in relationship quality was significant, while follow-up univariate analyses were non-significant. This suggests that the groups differed on a combination of the dependent variables, rather than on each variable independently. However, multivariate analyses of covariance unfortunately do not reveal the specific combinations of indicators on which the groups may significantly differ.

Future research

Future research should continue to include separate and clear categories of non-monogamies rather than collapsing them in a single category. While results from the present investigation suggest that they are similar on many relationship quality dimensions, their inherently different structural components may lead to distinctions on dimensions that were not considered in the present study.

In addition, future research should include individuals who report being in a polyamorous relationship even if they, their primary partner, or both of them do not have more than one relationship partner. Including such individuals in future analyses may provide additional information regarding the structure, functionality, and relationship quality dimensions (e.g. openness, communication, closeness, intimacy, passion, equity, etc.) of polyamorous partnerships as a whole. It is possible that the inclusion of such participants in our analyses would have yielded different results. For instance, participants who only have one partner, but whose primary partner has additional partners, might have scored differently on some measures of relationship equity (e.g. personal and partner investments of love, sex, and money in the relationship) or quality (e.g. relationship satisfaction, closeness, and intimacy) relative to those who have more than one partner (i.e. those who were included in the present study's analyses). Also, it would be beneficial to examine and compare relationship quality between primary and secondary relationships, given that each component of relationship quality may vary between partners.

Likewise, given that consensual non-monogamy is also practiced by heterosexual individuals, future non-monogamy research should continue to include such populations. Because these types of relationship agreements are not as common, nor are they as socially acceptable within heterosexual populations as they are in the gay community (e.g. Hoff and Beougher, 2010; Solomon et al., 2005), it is likely that heterosexual individuals' experiences of non-monogamy differ from those of gay men. For instance, many heterosexual individuals in such relationships might be more likely than gay men in similar partnerships to hide the nature of their romantic and sexual agreements. Past research suggests that romantic secrecy is related to lower relationship quality (e.g. Lehmler, 2009). In addition, factors such as gender roles and norms, and the sexual objectification of women's bodies in patriarchal culture, may impact heterosexual and homosexual relationship dynamics differently. Further research could help shed additional light on these issues.

Finally, while the present study examined whether relationship quality indicators differed between three types of relationship agreements, it did not investigate factors that may contribute to, or impact relationship quality (e.g. one's satisfaction with the relationship agreement). That some research found non-monogamous and monogamous relationships to differ on some relationship dimensions (e.g. Hoff et al., 2010; Hosking, 2013; Parsons, Starks, Gamarel, et al., 2012), but that most studies – including this one – found them to be equally satisfying, suggests that different factors may impact or moderate relationship quality among these three

types of partnerships. Further investigation on these issues would be necessary to clarify these associations.

Implications

This study has implications for individuals practicing non-monogamy and for therapists working with them. Weitzman (2006) found that some polyamorous individuals believe that therapists attribute their problems to their relationship agreement, rather than to dynamics specific to their dyad (or triad, quad, etc.). However, our results suggest that overall, polyamorous and open relationships are similar to monogamous ones on several relationship dimensions. Furthermore, the results may contribute to the destigmatization of non-monogamy as they suggest that individuals can have satisfying, trusting, committed, and intimate relationships with multiple consensual romantic and/or sexual partners. These findings strongly suggest that all three of these relationship agreements are equally satisfying and functional options.

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Notes

1. For the current investigation's sample, Cronbach's alphas were .84, 95% CI [.83, .85] for sexual satisfaction, .96, 95% CI [.96, .96] for relationship satisfaction, .87, 95% CI [.87, .88] for closeness, .85, 95% CI [.84, .86] for trust, and .93, 95% CI [.92, .93] for commitment.
2. All tests' significance was determined at $\alpha < .05$. Missing data were excluded listwise.
3. Prior to carrying out the MANCOVAs, all dependent variables were reverse coded and transformed using log transformation in order to correct a strong negative skew which otherwise violated assumptions of normality.
4. Main effect of relationship duration, $\Lambda = .96$, $F(5, 2328) = 19.528$, $p < 0.001$, partial $\eta^2 = .04$; relationship duration squared, $\Lambda = .98$, $F(5, 2328) = 10.886$, $p < 0.001$, partial $\eta^2 = .023$; age, $\Lambda = .99$, $F(5, 2328) = 7.106$, $p < 0.001$, partial $\eta^2 = .015$; age squared, $\Lambda = .99$, $F(5, 2328) = 4.912$, $p < 0.001$, partial $\eta^2 = .010$; cohabitation status, $\Lambda = .96$, $F(15, 6426.98) = 6.295$, $p < 0.001$, partial $\eta^2 = .013$.
5. Main effect of relationship type after accounting for control variables, $\Lambda = .99$, $F(10, 4656) = 2.913$, $p = 0.001$, partial $\eta^2 = .006$.
6. This indicates that the groups differed along a combination of the dependent variables, but not on any single dependent variable per se.
7. The skewness of outcome variables was normal, but all violated normality in terms of kurtosis due to a substantial number of participants rating their relationship as "fair" regarding their and their partner's investment of all seven resources within the

relationship (refer to Table 6). Given the low variability of ratings across equity dimensions, the outcome variables were not transformed for this set of analyses. Prior to analyses, overall equity scores were reverse-coded so that values matched those of the other seven relationship resource scales (i.e. higher scores reflected investment inequality in favour of the participant, while lower scores reflected inequality in favour of the participant's partner).

8. Main effect of cohabitation, $\Lambda = .98$, $F(24, 6688.70) = 1.628$, $p = 0.027$, partial $\eta^2 = .006$.

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