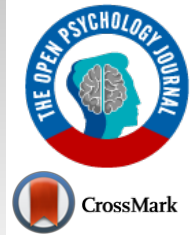




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RESEARCH ARTICLE

Beliefs about Romantic Relationships and Sexual Attitudes Predicting Romantic Relationship Experiences, Intentions, and Dating App Use

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Abstract:

Background and Objectives:

Recent studies have found changes in romantic relationship (RR) dynamics among emerging adults, such as greater postponement of committed RRs and greater search for new RRs online. In this study, we examined whether one's beliefs about RRs and sexual attitudes are significant predictors of current RR status (in a relationship or single), RR intention (low vs. high), dating app use, dating *via* a dating app, and number of RRs in one's lifetime.

Methods:

440 Slovenian emerging adults participated in the study (319 female, *Mage* = 22.78). They answered The Brief Measure of Relationship Importance (BMRI), The Brief Sexual Attitudes Scale (BSAS), and some short questions about their RR status, RR intention, use of dating apps, and lifetime number of RRs. The study was conducted online.

Results:

Using logistic and linear regression analyses, we found that RR dismissal was a significant negative predictor of RR status, RR intention, and dating *via* a dating app, whereas RR desire did not significantly predict RR outcomes. Sexual permissiveness significantly predicted dating app use, dating *via* dating apps, and the number of romantic relationships in one's lifetime. Being female, living independently, and having a more instrumental sexual attitude positively predicted "in a relationship" status.

Conclusion:

Results suggest that certain beliefs about RR and sexual attitudes are related to intentions and decisions to engage in actual RR behaviour.

Keywords: Romantic relationship, Beliefs about romantic relationships, Sexual attitudes, Dating app use, Emerging adults, Relationship intention.

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1. INTRODUCTION

Emerging adulthood is a stage of life in which young people can choose a variety of possible life paths and in which opportunities for personal exploration are greater than in any other stage of life [1]. Personal exploration and the formation of one's identity also occur in the realm of partnership and intimacy. Developing and maintaining a healthy romantic relationship (RR) is one of the most important developmental tasks from late adolescence through the twenties [2]. Emerging adults who establish and maintain a positive intimate relationship that is exclusive/non-casual report healthy indicators of psychological adjustment, such as higher life

satisfaction and positive self-esteem [3 - 5], fewer feelings of loneliness [3], more positive sexual well-being [6], and fewer mental health problems [7]. Young people typically progress from no or limited RR experiences to sustained and committed 'adult-like' RRs [8], the latter being normative and one of the essential prerequisites for achieving adult status [9]. Over the past decade, research has shown that social and technological changes have most likely influenced young people's beliefs about intimate relationships [*i.e.*, perceived importance of RR and sexual attitudes) and their intimate experiences [2, 10]. Giddens [11] has written about the changing nature of intimacy in modern societies. He argues that traditional social structures and norms have been replaced by a more individualised and reflexive approach to relationships. For dyadic love, this means that individuals have more agency and autonomy in choosing

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their partner and defining the terms of their relationship. Therefore, the main aim of this study is to find out how specific beliefs about RR and sexual attitudes are related to RR intentions and decisions about actual RR behaviour among emerging adults.

2. LITERATURE REVIEW

2.1. Romantic Involvement in Emerging Adults

Emerging adulthood is a time of exploration of love and partnership, and many emerging adults enter into one or more committed RRs during their twenties [12]. Despite the normative expectation to enter into a stable and enduring RR, the patterns, goals, and expectations of partnership among emerging adults have changed significantly compared to previous generations [2, 10]. Important changes include the more frequent occurrence of extramarital relationships [13], the deliberate postponement of marriage until individuals have achieved their personal life goals [14], and the emergence of casual forms of sex, such as ‘hookups’ and ‘friends with benefits’ [15]. Emerging adults may also feel caught between a stable and exclusive RR and other life goals, such as pursuing educational and career goals or devoting their leisure time to friends and family [16]. In this context, emerging adults appear to be more likely to have short-term relationships with multiple partners rather than a stable long-term relationship [17].

Despite the greater freedom in intimate behaviours, some North American authors report that a large proportion of young people do not engage in RRs. For example, Wood, Gillett, Linley, and Joseph [18] reported that one-third of young adults in their sample aged 20 to 25 were in committed RRs, 27% reported dating, and 40% were not in RRs. A similar percentage of young people in their twenties who were not in an RR was found in a Hendrick *et al.* study [19]. In addition, Wagner, Becker, Lüdtke and Trautwein [20] found that approximately 20% of emerging adults were not in an RR before age 25. The wide variability in how emerging adults experience romance may reinforce the modern perception of being single as something normative at this age. It is worth noting that being single is not necessarily associated with poorer well-being, as singles' well-being may differ depending on their RR interest. For example, Beckmeyer and Cromwell [3] found that single emerging adults who had little or no RR interest felt less lonely and had fewer depressive symptoms than singles who were very interested in RRs. Thus, single young adults may differ in their beliefs, motivations, and expectations about RR experiences, which should be considered in studies.

Compared to previous generations, significant changes in the development of RRs can also be seen in the opportunities that the Internet offers for building RRs. The number of cell phone-based dating applications (*i.e.*, dating apps) has increased in recent years [21], of which Tinder is probably the most well-known [22]. Nearly half of emerging adults who participated in recent research on dating apps reported using them regularly [23, 24]. Previous studies on the psychological aspects of dating app use among emerging adults have mostly focused on the relationship with demographic characteristics, personality traits, mental health, and substance use. Dating

apps, such as Tinder, are more commonly used by single men than women [25].

Further, online dating app use was positively related to sensation seeking, extraversion, and agreeableness [26]; higher rates of trait impulsivity, sexual risk behaviours, and more lifetime sexual partners [23]; higher substance use [25]; and lower sexual self-esteem, higher casual sexual activity, and riskier sexuality-related cognitions [27]. Although research has mostly shown a higher prevalence of risk behaviours and cognitions among dating app users than non-users, we believe that searching online for a potential partner and dating someone met through online dating platforms should be treated as a new normal, as it has become integrated into dating culture for many people, especially young adults [23]. In this study, we offer some additional insights into possible correlates of online search for a potential romantic and/or sexual partner by examining how beliefs about the importance of an RR and attitudes toward sexuality are related to emerging adults' decisions to use a dating app and to date with a dating app match.

2.2. Beliefs About the Importance of RRs in Emerging Adults

Attitudes and beliefs about the experience of RRs as a central part of the current life stage are still developing among emerging adults [28]. Although committed and long-lasting RRs are not the only normative and expected event in the intimate realm, most emerging adults set a stable and long-term intimate partnership as an important goal for their future lives [13, 28]. However, what is critical to the willingness to act is the subjective meaning ascribed to the RR. The degree of subjective importance of the relationship and its benefits in the context of other life priorities are an important source of motivation for individuals to enter into and maintain an intimate relationship, as well as for choosing the type of romantic involvement and behaviour in a relationship [26, 28]. A stronger desire for an RR translates into a stronger belief in the value of a lasting partnership and binding romantic commitments, which in turn leads to a more active approach to RRs [28, 29]. Relationship dismissal, on the other hand, is a belief in the lesser importance of an RR in one's life, often seen as an obstacle to individual's life plans, and the prioritization of personal goals over romantic commitments, which in turn leads to fewer romantic experiences and more relationship cycling [28].

2.3. Sexual Attitudes in Emerging Adults

The rise of cultural individualism in the last half century, which places the needs of the individual above those of the group and places less importance on adherence to social rules, has contributed to significant changes in sexual attitudes and behaviours. These converged toward greater sexual permissiveness in nonmarital sexual experiences and greater acceptance of cohabitation, same-sex sexual activity, and casual sex [30]. Hendrick, Hendrick and Reich [31] have developed a psychological framework to explore and understand individuals' attitudes toward sexuality. In this study, we examined emerging adults' attitudes toward sexuality based on two perspectives proposed by Hendrick *et al.* [31]:

sexual activity as an other-oriented, closest form of communication and merging of two people (*i.e.* communion) and sexuality as a self-oriented (egocentric) intimate experience that supports permissiveness in sexual practices and the instrumentalization of sex [31]. Previous studies found significant differences in sexual attitudes by relationship status and dating app use. Sexual attitudes have been found to be more permissive among emerging adults who use dating apps [24, 32], as well as casual daters [33]. This study aims to complement previous studies by examining the common importance of different sexual attitudes (*i.e.*, perceptions of sexuality as other- or self-oriented intimate experiences) and romantic beliefs in explaining emerging adults' RR experiences, intentions and dating app use.

2.4. The Present Study

In this study, we examined whether romantic beliefs and sexual attitudes contribute to emerging adults' RR behaviours and intentions. Behaviours and intentions examined included RR status (in a relationship or single), low or high RR intent (single emerging adults), online dating activity (use of dating apps and offline dating based on online search for a potential partner), and number of RRs in one's lifetime. We controlled for sample demographic characteristics (age, gender, and living situation), as previous studies had indicated an association between these characteristics and romantic involvement. Indeed, research on criteria for attaining adulthood has shown that higher ages of emerging adults are associated with higher levels of attained adulthood markers, of which a committed romantic relationship is one of the most important [9, 34]. Previous research has also documented gender differences in RR status and RR intention. Emerging adult women under the age of 30 are much more likely to be in a relationship [35] and place greater value on lifelong commitment [36] than their male counterparts. Accordingly, women who use dating apps tend to be more likely to search for a potential long-term intimate partner than men, while men, on the other hand, seem to use dating apps more frequently than women [37]. In terms of living situation, leaving the parental home has been shown to promote self-reliance [38], interpersonal forms of independence [39], and emotional autonomy [40]. Because independent living is an important marker of adulthood, individuals who live with their parents may be less motivated to engage in stable romantic relationships.

In summary, we hypothesised that controlling for demographic characteristics, beliefs about the importance of RRs and sexual attitudes would contribute to RR status and RR intent, dating app use and dating *via* dating apps, and the lifetime number of RRs.

3. MATERIALS AND METHODS

3.1. Participants

The sample consisted of 440 emerging adults, of which 73.5% were female. Most participants (79.5%) were in the age range of 19 to 25 years ($M = 22.78$, $SD = 3.00$). The majority were students (81.4%), 15.7% employed and 3% unemployed. There 35.9% participants lived with their parents, 45.5% lived partially with parents and partially alone, and 18.6% lived

independently. More than half of the participants were in a relationship at the time of the study (58%). There were 24.3% of participants who have not been in an RR yet, 26.8% reported one partner, 21.4% two partners, 15.7% three partners, 6.1% four partners, and 5.7% more than four partners in a lifetime ($M = 2.70$, $SD = 1.44$). Among those currently not in a relationship ($n = 185$), 30.8% expressed high RR intent. There were 139 participants (31.6%) who had already used dating apps. Among these, 81 individuals or 58.3%, reported going on a date with a person met through the dating app.

3.2. Measures

3.2.1. The Brief Measure of Relationship Importance

BMRI [28] is a six-item self-report measure of young adults' beliefs about the values and costs of being in RRs. The measure consists of two subscales. *Relationship Desire* measures one's enthusiasm and desire to be in a romantic relationship (two items, an item example: "A romantic relationship is one of the most satisfying things a young adult can have"). *Relationship Dismissal* measures devaluation of the importance of RRs in one's life (four items, an item example: "I prefer not being involved in a committed romantic relationship"). Participants rate each item on a four-point scale (1 = *strongly disagree* to 4 = *strongly agree*). In the original validation study [28], Cronbach alphas for Relationship Desire and Relationship Dismissal were .73 and .77, respectively. Cronbach alphas for the Relationship Desire and Relationship Dismissal in our study were .80 and .79, respectively.

3.2.2. The Brief Sexual Attitudes Scale

BSAS [31] was developed as a shorter version of the Sexual Attitudes Scale [19]. The BSAS is a self-report measure comprised of 23 items. Participants rate each item on a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). The BSAS consists of four subscales. *Communion* is a measure of idealistic beliefs about sexuality, emphasizing the relational aspects of sex (five items, an item example: "Sex is the closest form of communication between two people"), *Permissiveness* measures an 'open' attitude toward sex and inclination towards casual sexuality (ten items, an item example: "I do not need to be committed to a person to have sex with him/her"), and *Instrumentality* measures attitude towards enjoying the physical sex; utilitarian sexuality (five items, an item example: "The main purpose of sex is to enjoy oneself"). The fourth subscale *Birth Control*, which measures beliefs regarding responsible sexual practices (three items, an item example: "Birth control is part of responsible sexuality"), was excluded from further analyses due to it not being of major interest to the current study. The BSAS showed good internal reliability (alpha values higher than .70) and test-retest reliability higher than .75 [31, 41]. Cronbach alphas in the present study were .89 for Permissiveness, .82 for Communion, and .67 for Instrumentality.

3.2.3. RR Status and RR Intent

RR status was measured by asking participants: "Are you currently in a relationship with a romantic partner?". Below the question, there was a description of the word romantic partner:

“Romantic partner is someone you are physically attracted to, and you have an intimate relationship with (hand holding, kissing *etc.*)” Participants answered yes or no and then reported the duration of the RR in months. Those who were not currently in a relationship were asked about their relationship intent: “Do you want to be in a romantic relationship?” They chose one of the three response options that were used by Watkins and Beckmeyer [27]: “No, I don’t care much about being in a romantic relationship” (27.6%), “I would like to be in a romantic relationship, but it’s not that important to me right now” (41.6%), and “Yes, I would really like to be in a romantic relationship right now” (30.8%). Participants were then categorized into two groups: *high intent* (“Yes, I would really like ...”) and *low intent* (“I would like to, but ...” and “No, I don’t care much...”) as suggested by Watkins and Beckmeyer [27].

3.2.4. Dating App use and Dating via Dating App

The use of dating apps was measured by asking participants, “Have you ever used dating apps?” (Yes or No). The participants who answered ‘yes’ were directed to the question: “Have you ever been on a date with someone you have met *via* a dating app?” (Yes or No).

3.2.5. Lifetime number of RRs

The participants answered the question: “How many romantic partners have you had in your lifetime?”. The answering options were 0, 1, 2, 3, 4, and more than 4.

3.2.6. Demographics

Participants were asked about their age, gender (‘Male,’ ‘Female,’ ‘Other’), employment status (‘Student,’ ‘Employed,’ ‘Unemployed’), and living situation (‘With Parents,’ ‘Semi-Independent (partially with parents partially alone),’ ‘Independent’).

3.3. Procedure

After receiving approval from the Ethics Committee of the Faculty of Arts, University of Ljubljana, we conducted the survey in the period of October to December 2022. A link to an online survey in the *Ika* application was sent to students – preservice teachers – who attended an educational psychology course led by the first author and to university professors of various study programs at the University of Ljubljana, University of Maribor, and University of Primorska, who shared the link with their students and invited them to participate in the study. We also posted the invitation to participate in the study on various social networks (mainly Facebook groups) by personally addressing individuals aged between 19 and 29 years to participate in the study. The online survey held a statement of informed consent to participate in

the study. Participants were informed that their cooperation was voluntary anonymous, and that data would be used only for the purpose of this research. All participants took part in the study voluntarily and were not financially reimbursed for their participation. On average, participants completed the survey in 10 minutes. The measures were presented in repeated order and were not randomized. Data were analysed using the SPSS 25 statistical package.

4. RESULTS

Prior to the regression analyses, we performed data screening for the measures used. Table 1 shows descriptive statistics for the BMRI and BSAS subscales. All subscales exhibited moderate levels of skewness and kurtosis and were in the range of normal distribution, mostly within the bounds of +/-1 (except for the BMRI Dismissal). Our results show below-average levels (*i.e.*, below the scale midpoint) on the Relationship Dismissal scale, above average levels on Relationship Desire scale, somewhat below the average level on Permissiveness, above the average level on Communion, and average level on Instrumentality. As shown in Table 1, the Relationship Dismissal and Relationship Desire subscales were negatively and moderately correlated, while there were significant but weak correlations among the BSAS subscales. Relationship Desire was positively related to BSAS Communion and negatively to BSAS Permissiveness, while Relationship Dismissal related negatively to BSAS Communion and positively to BSAS Permissiveness. Relationship Desire and Dismissal showed no relationship with BSAS Instrumentality.

4.1. Predicting Aspects of Romantic Involvement by Romantic Beliefs and Sexual Attitudes

Hierarchical regression models were used to find out if romantic beliefs and sexual attitudes were associated with five aspects of romantic experiences and behaviors while controlling for participant demographics. We used hierarchical logistic regression for predicting categorical variables (RR status, RR intent, dating app use and dating *via* dating app) and hierarchical linear regression for predicting continuous variables (lifetime number of RRs). Each regression model consisted of two steps. Controls (*i.e.*, demographics) were entered in step one, and BMRI and BSAS were entered in step two.

First, the assumptions for four hierarchical logistic regressions were examined. Cook’s distances were all below 1 and there were no signs of multicollinearity (any correlation was above .70). Collinearity tolerances were consistently above 0.1 in all the iterations of the hierarchical logistic regressions. Scatterplots revealed a linear relationship between every single predictor and the outcome.

Table 1. BMRI and BSAS descriptive statistics.

-	<i>M</i>	<i>SD</i>	Skewness	Kurtosis	2	3	4	5
BMRI	-	-	-	-	-	-	-	-
1 Dismissal	1.62	.66	1.18	0.92	-.591**	.242**	-.259**	-.057
2 Desire	2.72	.92	-0.28	-0.95	-	-.214**	.363**	.085

(Table 1) contd.....

	<i>M</i>	<i>SD</i>	Skewness	Kurtosis	2	3	4	5
BSAS	-	-	-	-	-	-	-	-
3 Permissiveness	2.55	.93	0.12	-0.81	-	-	-.186**	.337**
4 Communion	3.68	.91	-0.65	0.15	-	-	-	.273**
5 Instrumentality	3.10	.77	-0.24	-0.08	-	-	-	-

Note: BMRI = Brief Measure of Relationship Importance, BSAS = Brief Sexual Attitudes Scale. The scores on subscales were calculated as the average score per item. The range of the response scales was 1 to 4 and 1 to 5 for the BMRI and BSAS, respectively. ***p* < .01.

Table 2. Results of hierarchical logistic regressions for RR status and RR intent.

	<i>b</i>	<i>SE</i>	RR status <i>OR</i>	95% CI	<i>B</i>	<i>SE</i>	RR intent <i>OR</i>	95% CI
Step 1	-	-	-	-	-	-	-	-
Age	0.046	0.041	1.047	[0.967, 1.134]	0.046	0.067	1.047	[0.919, 1.1935]
Gender	0.941	0.237	2.564**	[0.245, 0.621]	-0.366	0.360	0.694	[0.712, 2.920]
Living situation	-	-	-	-	-	-	-	-
Semi-independent	-1.625	0.370	0.197**	[0.095, 0.407]	0.607	0.679	1.835	[0.485, 6.948]
With parents	-0.963	0.358	0.382**	[0.190, 0.770]	0.301	0.660	1.351	[0.370, 4.933]
Step 2	-	-	-	-	-	-	-	-
Age	0.031	0.048	1.032	[0.940, 1.134]	0.047	0.078	1.048	[0.900, 1.220]
Gender	1.109	0.289	3.030**	[1.134, 0.582]	-0.236	0.455	0.790	[0.519, 3.090]
Living situation	-	-	-	-	-	-	-	-
Semi-independent	-1.900	0.449	0.150**	[0.062, 0.362]	0.323	0.850	1.381	[0.261, 7.309]
With parents	-0.922	0.426	0.400*	[0.173, 0.917]	0.113	0.816	1.119	[0.226, 5.545]
BMRI Dismissal	-1.689	0.271	0.185**	[0.109, 0.314]	-1.688	0.396	0.185**	[0.085, 0.401]
BMRI Desire	0.256	0.175	1.292	[0.917, 1.818]	0.550	0.296	1.730	[0.966, 3.090]
BSAS Permissiveness	-0.153	0.158	0.860	[0.630, 1.169]	0.072	0.235	1.075	[0.680, 1.706]
BSAS Communion	0.181	0.161	1.200	[0.875, 1.642]	-0.037	0.249	0.963	[0.591, 1.570]
BSAS Instrumentality	0.552	0.190	1.740*	[1.196, 2.523]	0.115	0.283	1.122	[0.644, 1.955]
-	-	-	-	-	-	-	-	-
X ² Step 1	53.640**		-	-	-	2.703		-
X ² Step 2	124.940**		-	-	-	52.683**		-

Note: BMRI = Brief Measure of Relationship Importance, BSAS = Brief Sexual Attitudes Scale. SE = standard error; OR = odds ratio; CI = confidence interval. Gender (reference - Male), Living situation (reference - Independent). **p* < .05, ***p* < .01.

Table 3. Results of hierarchical logistic regressions for dating app use and dating via dating app.

	Dating app use				Dating via dating app			
Predictor	<i>b</i>	<i>SE</i>	<i>OR</i>	95% CI for <i>B</i>	<i>b</i>	<i>SE</i>	<i>OR</i>	95% CI for <i>B</i>
Step 1	-	-	-	-	-	-	-	-
Age	0.113	0.041	1.120**	[1.034, 1.214]	0.212	0.072	1.236**	[1.073, 1.425]
Gender	-0.560	0.232	0.571*	[1.110, 2.760]	0.729	0.401	2.072	[0.220, 1.059]
Living situation	-	-	-	-	-	-	-	-
Semi-independent	0.542	0.348	1.720	[0.870, 3.340]	0.069	0.617	1.072	[0.320, 3.593]
With parents	0.569	0.329	1.766	[0.930, 3.370]	0.100	0.575	1.106	[0.358, 3.420]
Step 2	-	-	-	-	-	-	-	-
Age	0.120	0.042	1.125*	[1.040, 1.223]	0.223	0.076	1.245**	[1.076, 1.450]
Gender	-0.460	0.247	0.633	[0.931, 2.500]	0.860	0.437	2.357*	[0.180, 1.013]
Living situation	-	-	-	-	-	-	-	-
Semi-independent	0.650	0.366	1.907	[0.932, 3.908]	0.663	0.688	1.940	[0.505, 7.505]
With parents	0.611	0.342	1.842	[0.942, 3.612]	0.360	0.618	1.423	[0.417, 4.812]
BMRI Dismissal	-0.027	0.214	0.973	[0.633, 1.467]	-1.000	0.414	0.369*	[0.164, 0.834]

(Table 3) contd.....

Predictor	Dating app use				Dating via dating app			
	<i>b</i>	SE	OR	95% CI for <i>B</i>	<i>b</i>	SE	OR	95% CI for <i>B</i>
BMRI Desire	-0.050	0.159	0.951	[0.693, 1.291]	-0.172	0.273	0.842	[0.492, 1.440]
BSAS Permissiveness	0.462	0.138	1.588**	[1.232, 2.143]	0.513	0.255	1.670*	[1.010, 2.760]
BSAS Communion	-0.062	0.142	0.940	[0.718, 1.258]	-0.083	0.250	0.920	[0.559, 1.506]
BSAS Instrumentality	0.258	0.165	1.300	[0.938, 1.792]	-0.501	0.324	0.606	[0.321, 1.148]
X ² Step 1	-	-	15.747**	-	-	13.430**	-	-
X ² Step 2	-	-	23.385**	-	-	10.632**	-	-

Note: BMRI = Brief Measure of Relationship Importance, BSAS = Brief Sexual Attitudes Scale. Gender (reference – Male) Living situation (reference – Independent). **p* < .05, ***p* < .01.

Table 2 shows the results of the hierarchical logistic regression, predicting RR status (single, in a relationship) and RR intent (low vs. high; only singles). In the first step, females were 2.5 times more likely to be in a relationship than males. Those living semi-independently or with parents were less likely to be in a relationship than participants who lived independently. When adding beliefs about RR importance and sexual attitudes in the second step, gender (*p* = .001) and living semi-independently (*p* = .031) remained significant independent predictors. Relationship dismissal (*p* = .001) and instrumental sexual attitude (*p* = .004) added significantly to the prediction of RR status over and above the demographics. Higher relationship dismissal decreased the odds of being in a relationship by almost five times, while those emerging adults with higher BSAS Instrumentality scores were more likely to be in a relationship. The model was significantly different from the null model in both steps, and the total variance explained was *R*² = .16 and *R*² = .45 in the first and the second step, respectively. The results of the hierarchical logistic regression in predicting low or high RR intent among those participants who were single showed that demographics were not significant predictors in the first step. In the second step, relationship dismissal was a significant negative predictor (*p* = .001), which implies that those with higher relationship dismissal scores were less likely (about five times) to have high RR intent. The model was not statistically significant in the first step; however, it was significant in step 2 (*p* = .001), explaining 38% of the total variance (*R*² = .38).

Results of the hierarchical logistic regression for predicting

the use of dating apps and having gone on a date with a person met through the dating app are shown in Table 3. In predicting dating app use, both age (*p* = .005) and gender (*p* = .016) were found to be statistically significant predictors in the first step. Females were 43% less likely to use dating apps than males. Older participants were slightly more likely to have used dating apps than younger ones. In the second step, age (*p* = 0.005) remained a significant predictor, while sexual permissiveness (*p* = 0.001) added a significant contribution in the prediction of the use of dating apps over and above participants' demographics. Those with a more positive attitude towards sexual permissiveness were about 1.5 times more likely to have used dating apps. The predicting model explained 5% of the variance (*R*² = .05) in the first step and 12% of the variance in the second one (*R*² = .12). In predicting dating via a dating app, age was a significant predictor (*p* = .003) in the first step. Older participants were more likely to go on a date with a person they met via the dating app. In the second step of regression, age (*p* = 0.003) and gender (*p* = .05) were significant control predictors, while relationship dismissal (*p* = .016) and sexual permissiveness (*p* = .044) added a significant contribution over and above age and gender. Females were 2.4 times more likely to have gone on a date with a person met through the app than males. Those with higher Relationship Dismissal scores were less likely to have gone on a date with a person met through dating apps, while those with more permissive sexual attitudes were more likely to have gone on such a date. The model explained 13% of the total variance in the first step (*R*² = .13) and 22% of the total variance in the second (*R*² = .22).

Table 4. Results of hierarchical linear regression for the lifetime number of RRs.

Predictor	<i>B</i>	β	95% CI <i>B</i>
Step 1			
Age	0.099	0.208**	[0.050, 0.149]
Female	0.389	0.119*	[0.094, 0.683]
Living situation	-	-	-
Semi-independent	-0.609	-0.211**	[-1.003, -0.214]
With parents	-0.635	-0.212**	[-1.056, -0.215]
Step 2			
Age	0.095	0.198**	[0.045, 0.144]
Female	0.430	0.132**	[0.072, 0.182]
Living situation	-	-	-
Semi-independent	-0.549	-0.190*	[0.129, 0.730]
With parents	-0.560	-0.187	[-0.943, -0.154]

(Table 4) contd.....

-	-	Lifetime number of RRs	-
Predictor	B	β	95% CI B
BMRI Dismissal	-0.260	-0.118*	[-0.983, -0.136]
BMRI Desire	0.030	0.019	[-0.500, -0.012]
BSAS Permissiveness	0.205	0.132*	[0.045, 0.365]
BSAS Communion	0.044	0.027	[-0.120, 0.207]
BSAS Instrumentality	-0.093	-0.049	[-0.283, 0.0973]
F (df)—Step 1	14.11 (4, 429)		
ΔR^2 Step 1	.116**	-	-
F (df)—Step 2	2.27(5,424)		
ΔR^2 Step 2	.023*	-	-

Note: BMRI = Brief Measure of Relationship Importance, BSAS = Brief Sexual Attitudes Scale. Living situation (reference – Independent).

* $p < .05$, ** $p < .01$.

When predicting the lifetime number of RRs, the demographics entered in Step 1 were all statistically significant and explained 11.6% of the criterion variance (Table 4). Adding the BMRI and BSAS dimensions improved the model fit; the criterion variance explained by the predictor model in Step 2 was 13.9%. Older participants, females, and those who lived independently (*vs.* those who lived semi-independently) had a higher lifetime number of RRs. Furthermore, lower relationship dismissal and higher sexual permissiveness were significant independent predictors of the lifetime number of RRs.

5. DISCUSSION

The RR behavior of today's youth has changed compared to previous generations. These changes have been attributed to the greater opportunities, freedom, and extended identity exploration of recent generations of emerging adults [14], as well as greater access to modern technologies, such as the Internet, mobile phones, and dating apps [21], which provide easier access to finding potential intimate partners. Our study aimed to gain better insight into these dynamics with a sample of Slovenian emerging adults. More specifically, we were interested in how emerging adults' demographic characteristics and beliefs about the importance of RR and sexual attitudes are related to various aspects of romantic involvement, such as RR status (in a relationship or not), RR intention among single emerging adults, use of dating apps and dating *via* dating apps, and lifetime number of RR.

In the first logistic regression, RR status was predicted by demographic variables in the first step and by the two measures of beliefs about the importance of RR and sexual attitudes added in the second step. Gender was significant in both steps of the regression model; women were significantly more likely to be in a relationship than men. These results are consistent with demographic data from the U.S., where large gender differences in RR status were found, with young men (under age 30) being by far the most likely to be single (51%). On the other hand, about three in ten women aged 18-29 (32%) reported being single [35]. These results may be due to the fact that men prefer to marry later in life than women, which has been shown to be a universal pattern of human behaviour worldwide [42]. In addition, those who lived semi-independently or with parents were significantly less likely to be in a relationship than participants who lived independently. These findings may suggest that independent living is an

important criterion for reaching adulthood, which in turn is associated with other criteria, such as a stable romantic relationship and a job [34]. Beliefs about the importance of RR and sexual attitudes significantly contributed to the prediction of RR status in the second stage of a regression model, in addition to demographic characteristics, and confirming our hypothesis. Relationship dismissal was a significant independent and negative predictor of RR status. The BMRI Relationship Dismissal subscale captures the extent to which romantic relationships are viewed as less valuable and satisfying, and thus was associated with fewer romantic relationships, lower relationship satisfaction, and higher levels of relationship cycling [28]. Of the sexual attitude subscales, only sexual instrumentality was a significant independent (positive) predictor of RR status. Instrumental sexual attitudes are characterized by a focus on sex as a means to one's pleasure, but such attitudes are not necessarily associated with a higher frequency of casual sex, as shown in a study of college freshmen in the United States [43]. It may be that those with higher sexual instrumentality instead perceive sex as an important biological need that is best satisfied within a stable romantic relationship.

In the second logistic regression with RR intent as the criterion variable, the regression model showed statistical significance only in the second step. Relationship dismissal was the only significant and negative independent predictor. Low relationship intent has already been found to be associated with higher RR devaluation, fewer romantic relationships, lower marriage intention, and lower relationship satisfaction [28]. The results also suggest that more complex personality factors than RR beliefs and sexual attitudes may be involved in explaining the relationship intents of single emerging adults, warranting further investigation.

In predicting dating app use, demographics were found to be significant predictors in the first step. The addition of beliefs about the importance of RR and sexual attitudes in the second step of the logistic regression significantly improved the regression model, confirming the hypothesis. Age was a significant and positive predictor in both steps; older individuals were more likely to use dating apps. Sexual permissiveness proved to be an independent predictor of dating app use, whereas beliefs about the importance of RR and other sexual attitudes did not. This means that beliefs about RR being valuable or less desirable in one's life do not appear to be an important source of motivation to use dating apps. The

findings are also consistent with previous research that has found higher sexual permissiveness to be a consistent and strong predictor of dating app use [24, 32]. Peter and Valkenburg [44] suggested that sexual permissiveness signals certain preferences that align dating *via* mobile apps with one's beliefs, attitudes, and behaviours. Such attitudes could also explain higher rates of sexual risk behaviours, higher levels of casual sexual activity, and riskier sexuality-related cognitions found among dating app users in previous studies [23, 27].

In the fourth regression model predicting dating *via* dating apps, demographics were significant predictors in both steps, and the addition of beliefs about the importance of RR and sexual attitudes in the second step significantly improved the regression model, confirming our prediction. In the second step, older individuals were more likely to have dated someone they met through a dating app, and women were more than twice as likely to have dated someone they met through the app. At this point, it should be noted that women who use dating apps receive more first messages than men and can expect more reciprocation than men [37], which may be one of the reasons for their higher frequency of 'real' dates. Dating app users who reported a higher relationship dismissal score were less likely to have a date than dating app users with a lower relationship dismissal score. This finding may suggest that an actual offline date with a person met through a dating app is more likely to happen if a person at least does not devalue the importance of RR. In addition, those dating app users who reported higher sexual permissiveness were more likely to date a person they met through a dating app than dating app users who reported lower sexual permissiveness. These findings may suggest that some emerging adults use dating apps for reasons other than getting to know a potential partner [45]. Along these lines, Sumter *et al.* [46] identified young adults' motivations for using Tinder to include Love, casual sex, ease of communication, self-esteem affirmation, thrill, and trendiness. According to our findings, we speculate that dating app users with higher relationship dismissal are likely to use dating apps for self-esteem validation and trending and do not appear to be online daters, whereas dating app users with higher sexually permissive attitudes are more likely to be online daters due to love motivations or casual sex.

Results of the hierarchical linear regression showed demographic characteristics to be important predictors of the lifetime number of RR at step one, whereas the addition of beliefs about the importance of RR and sexual attitudes significantly improved model fit at the second step, confirming our hypothesis. At step two, women, slightly older and more sexually permissive emerging adults, had more romantic partners, whereas those who lived with their parents and more romantically averse emerging adults had less lifetime RRs. One possible explanation for females having more lifetime partners is the earlier onset of puberty in females, leading to earlier psychosexual maturation [47]. Because sexually permissive individuals are more interested in uninhibited sexuality, which involves more frequent changes in sexual and romantic partners [31], they probably have more lifetime partners than individuals who have a more restrictive sociosexual orientation and remain faithful to one partner [48]. As discussed earlier, relationship dismissal, *i.e.*, devaluing a committed relationship,

is likely to lead to a less active approach to building such relationships [28].

LIMITATIONS OF THE STUDY

Finally, we should point out some limitations of the study: Convenience sampling, predominantly women and students in the sample, online data collection that is rather impersonal and less controllable, no control for heterosexual or homosexual preferences in the RRs, and no specific data on types of dating apps participants were using. In addition, the quality of RRs was not considered, which paves the way for further research.

CONCLUSION

Overall, our study contributes to research on the characteristics and determinants of RRs among emerging adults in Slovenia. In many ways, our findings reflect trends observed in other developed countries, such as that young men are more likely to be single compared to young women, that a significant proportion of today's emerging adults have limited or no experience with romantic relationships, and that the use of dating apps is a new normal in the dating environment. Our study shows that dismissive attitudes toward relationships are associated with fewer romantic experiences and fewer relationship intentions and that sexual permissiveness appears to be an important predictor of dating app use and relationship experiences. While this study contributes to the literature by providing insight into the nature of romantic relationships among contemporary young adults in Slovenia, further research could focus more on examining the psychological and sociocultural variables that contribute to these notable changes in the dating environment of emerging adults (*e.g.*, how do emerging adults with limited relationship experience differ on developmental/personality variables from those who are in stable relationships).

LIST OF ABBREVIATIONS

- RR** = romantic relationship
- BMRI** = The Brief Measure of Relationship Importance
- BSAS** = The Brief Sexual Attitudes Scale

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study was approved by the Ethics Committee of the Faculty of Arts at the University of Ljubljana (reference number 249-2021, date of approval 3.12.2021).

HUMAN AND ANIMAL RIGHTS

No animals were used in this research. All procedures performed in studies involving human participants were following the ethical standards of institutional and/or research committees and with the 1975 Declaration of Helsinki, as revised in 2013.

CONSENT FOR PUBLICATION

All research participants signed an informed consent form, thereby agreeing to participate in the research.

STANDARDS OF REPORTING

COREQ guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The data supporting the findings of the article is available at <https://osf.io/yxj9/>.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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