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Alana A. Graham

Western University, [agraha89@uwo.ca](mailto:agraha89@uwo.ca)

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# Types of Social Relationships and Their Effects on Psychological Well-being

Alana A. Graham

Honours Psychology Thesis  
School of Behavioural and Social Sciences  
Brescia University College  
London, Ontario, Canada  
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Thesis Advisor: Dr. Anne Barnfield

### **Abstract**

Research has already established the importance of social networks in developing and maintaining well-being. Furthermore, different types of social relationships have been found to influence individuals' lives in unique ways. There is little understanding, however, of the manner in which relationship types compare in their effects on individuals' psychological well-being. Using a correlational design, this study investigated the associations between relationship intimacy and psychological well-being. Relationship intimacy was measured for respondents' parents, significant others, close friends, and pets. The surveys were distributed to 91 undergraduate students and combined the Miller Social Intimacy Scale (MSIS) and Ryff's Scales of Psychological Well-being (SPWB) to assess respondents' relationships and psychological well-being, respectively. The results of two regression analyses revealed that intimacy in relationships with one's significant other and close friends were significant predictors of wellbeing, though specific mechanisms of influence could not be established. Further research opportunities include diversifying the study sample and investigating the creation of a standardized scale to more accurately measure intimacy across different relationship types.

*Keywords:* psychological well-being, relationship types, intimacy, undergraduate students, regression, parents, significant other, close friends, pets, COVID-19

## Types of Social Relationships and Their Effects on Psychological Well-being

Well-being of any kind is considered one of the most important values in life (Kahn & Juster, 2002) because it can predict and moderate many positive life outcomes (Kobau et al., 2010). Measures of well-being have also been directly associated with decreased risk of disease, injury, and mental illness, and with success in one's career, relationships, and community (Kobau et al., 2010). While there is no simple definition, the majority of researchers agree that *well-being* – or wellness – is encompassed by life satisfaction, feelings of fulfillment, emotional balance, and stable happiness (Kim-Prieto et al., 2005). As Kim-Prieto et al. (2005) noted, there are many different types of well-being, such as physical, economic, emotional, psychological, and life satisfaction. Most kinds of well-being, however, are perceptual and, as such, can only be measured subjectively (Kahn & Juster, 2002). The measurement of psychological well-being is a major area of research in the field of psychology.

Psychological well-being, in simple terms, is the perception of self-realization or fulfillment in which the degree of self-realization or fulfillment perceived can range from low to high (Weiss et al., 2016). Generally, psychological well-being is discussed in terms of the level of happiness that remains relatively stable throughout life (Kahn & Juster, 2002). Though there is some debate regarding the content validity, researchers typically describe psychological well-being using six dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance (Ryff & Keyes, 1995).

One of the greatest covariates of psychological well-being is *social relationships* (Bzdok & Dunbar, 2020). These relationships can contribute positively to one's life and are also capable of mitigating the effects of negative circumstances (Bzdok & Dunbar, 2020). More specifically, social relationships are a major source of continuous, meaningful emotional support and

connection between people (Bzdok & Dunbar, 2020). The existence of a social support network may also reduce an individual's perception that a situation is stressful and, in some circumstances, may even alter the neurochemistry and hormone outputs that cause the stress response (Bzdok & Dunbar, 2020). These neurochemical and hormonal responses can then influence individuals' perceptions of their own psychological well-being. The broader study of social capital – the values derived from one's relationship network – can be used to detail such effects of relationships on well-being (Poortinga, 2006). Researchers acknowledge, however, that individuals' thoughts and interactions can vary significantly across different relationships and in different social contexts. It is important to note that while social relationships are key influences of psychological well-being, they can also be the cause of psychological strain (Wallace, 2013).

Given the significant influences of socialization– and lack thereof – on well-being, it is important to consider the effects of social distancing resulting from the COVID-19 pandemic, as well as the potential for negative social interactions within one's social bubble. In the current social landscape, many people have limited contact with their loved ones and are only able to participate in “social snacking” (Krämer et al., 2018, p. 1). Being able to personally see, speak to, and touch others plays a large role in the satisfaction derived from socialization (Lee Masson et al., 2020). Lacking these typical relationship qualities, in addition to the other effects of life in partial lockdown, makes it difficult to generalize the results of a study to any normal period in time. That said, this situation can provide researchers with the opportunity to study the effects of living in a socially-restricted environment long-term. This novel environment makes assessing individuals' states of well-being and social relationships even more important, as social distancing may continue into next year. In addition, society may experience these challenges again if another pandemic emerges in the future.

One of the greatest effects of social relationships on well-being during this pandemic is the reciprocal relationship between social isolation (expressed as loneliness) and frailty (i.e., susceptibility to physical or mental illness) (Maltby et al., 2020). For instance, a lack of social support and social events may lead to decreases in physical activity, promoting a cycle that can create further physical and mental health challenges. (Stănescu & Vasile, 2014). Furthermore, depression, a potential consequence of frailty, is often associated with lesser interest in and satisfaction with social interaction (Steger & Kashdan, 2009). In turn, social isolation can create or exacerbate depressive symptoms. Critically, gender roles and being raised to be feminine can predispose individuals to depression (Simonson et al., 2011). Specifically, the perceived importance of emotional expression and interpersonal orientation in females are two leading precursors to chronic rumination, particularly in youth (Simonson et al., 2011).

Social isolation may influence an individual to develop closer relationships with certain persons and more distant connections with others, depending on the living arrangement. Additionally, researchers have suggested that different types of social support may vary in their influence of buffering the effects of stress (Allen et al., 1991). With the knowledge that different relationship types are characterized by different types of interactions and different effects on individuals, it is important to understand how they might differently influence individuals' well-being.

### **Relationships with Parents**

Several theories exist to describe and explain the lasting effects of parental relationships on an individual's psyche, including Mary Ainsworth's theory of attachment styles (Ainsworth et al., 1978) and Diana Baumrind's theories of parenting styles (Baumrind, 1967). Ainsworth et al.'s (1978) theory of attachment styles proposed three (although a fourth was later added)

different attachment styles that aid in characterizing the various bonding styles that an individual may develop, and subsequently apply, in the relationships they hold. These attachment styles can persist through childhood to adulthood, subsequently influencing one's psychological well-being (Moreira et al., 2020). In terms of parenting styles, the firm yet caring authoritative style – rather than the permissive, neglectful, or authoritarian styles – contributes most positively to the children's well-being and adjustment in early adulthood (Baumrind, 1967).

Adult children may experience more turbulent relationships with their parents, perhaps related to the degree of intimacy and established history typical in this relationship, in addition to potentially conflicting personalities (Yu, 2019). There is generally thought to be greater commitment toward close family members, however, than to friends who may be more replaceable (Dowsett et al., 2020). Young adults' relationships with their parents could be strongly affected by this year's social distancing measures. For instance, while being unable to visit with parents can prove detrimental to one's mental health, there are also negative effects noted in parent-child relationships when adult children live at home (Burn & Szoek, 2016). Understanding such circumstances may be essential in determining both the state of individuals' relationships and their psychological well-being.

### **Relationships with Significant Others**

Living with another individual, even if it is in the context of a healthy relationship, does not necessarily indicate that prolonged exposure between individuals will increase intimacy and affection (Li et al., 2020). In fact, Li et al. (2020) found that relationships may deteriorate and become toxic over time in such situations. Just as in attachment styles with parents, Hazan and Shaver (1994) found that individuals can also develop attachment styles towards their partners. In particular, these researchers found that attachment styles from childhood are often mirrored in

intimate relationships, with possible typologies consisting of secure, preoccupied, dismissive-avoidant, and fearful-avoidant. Just as in childhood attachment, individuals described by any of the latter three typologies may be more prone to personal and relationship-related issues that consequently affect their state of psychological well-being (Hazan & Shaver, 1994).

One of the defining attributes of intimate relationships is the development of sexuality. Sexual behaviour and sex-positive attitudes in intimate relationships are thought to be important contributors to psychological well-being (Davison et al., 2009). The impact of partner communication and support with regards to an individual's sense of sexuality and body image is also thought to be a key determinant of one's life satisfaction (Goldsmith & Byers, 2016). Long-distance relationships are a possible circumstance for some couples in the current pandemic situation. Though long-distance relationships may still contribute to positive psychological well-being, individuals in distanced relationships do require more interactions to maintain the relationship (Goldsmith & Byers, 2018). The frequency of sexual activity is also an important factor in maintaining an intimate relationship that cannot easily be replaced through virtual means. Thus, one's level of psychological well-being is highly dependent on the ways in which the romantic relationship functions.

### **Relationships with Close Friends**

Ojanen et al. (2010) explained how connection through virtual means is generally thought to be a poor alternative to in-person contact and communication; virtual connections are more challenging to form and maintain than in-person contact. This is important because the time that individuals spend with close friends in adolescence and early adulthood is critical to the development of positive adjustment and well-being in adulthood (Ojanen et al., 2010). A fundamental benefit of close friendships is the ability to co-ruminate: the frequent



communication of problems through “reflecting, dwelling on and rehashing negative emotional experiences” (Miller-Slough & Dunsmore, 2020, p. 2). Miller-Slough & Dunsmore (2020) outlined how co-rumination can strengthen self-disclosure, intimacy, and validation of emotional experiences, while also preventing internalization. Peers and colleagues are also important influencers of one’s thoughts, behaviours, and need for affiliation, yet lack of intimacy and lesser emotional connection can weaken their effects on one’s psychological well-being (Berlin et al., 2015). Friends, however, are somewhat more likely to be dismissive than parents and somewhat less likely to coach individuals through challenging times (Miller-Slough & Dunsmore, 2020).

Interaction styles in friendships are evolving, as social media have given a new generation of adolescents and young adults the ability to communicate over long distances and gain access to vast amounts of information about each other and the world in which they live. Individuals are easily able to grow their social network but, due to the restricted nature of virtual communication, it can be difficult to establish and maintain meaningful social connections (Lomanowska & Guitton, 2016). This difficulty makes virtual relationships a poor alternative to real-life connections. In addition, social media can negatively affect the psychological well-being of individuals predisposed to stress, solitary behaviour, and mood disorders (Young et al., 2020). While social media provide the opportunity for close friends to remain in contact throughout the course of the COVID-19 pandemic, there may also be complications that arise from the form of interaction used. Thus, some researchers encourage seeking social support and connection from those with whom individuals live (Bachi & Parish-Plass, 2017).

### **Relationships with Pets**

Companion animals are integral, valued members of many households; so much so that in the United States, approximately 68% of households have at least one pet (Jacobson & Chang,

2018). Dogs are the prototypal example given when discussing the benefits of animal companionship, largely due to their overwhelmingly significant and strong effects on human health and well-being (Allen et al., 1991). These distinct effects are generally thought to be related to dogs' evolved ability to express readable emotion, as well as their responsiveness to human behaviour (Hare & Tomasello, 2005). Canines' ability to improve the physical and mental health of humans has translated to the establishment of animal-assisted therapy and the employment of emotional support animals (Hoy-Gerlach et al., 2019). Cats are also popular companion animals and though their traits and behaviours may differ from dogs', cat ownership is significantly related to lower reporting of "bad moods and seclusion" (Turner et al., 2003, p. 219). As expected, those living without any companionship experienced the worst moods. Interestingly, those living with a cat and a partner experienced slightly better moods and less seclusion than those with only a cat, followed by those with only a partner.

In comparing individuals' relationships with pets versus close friends, Allen et al. (1991) found that negative (increased) physiological stress reactions tended to occur when an individual was in the presence of an evaluative companion (i.e., a female friend), compared with a non-evaluative companion (i.e., a pet dog). A series of other studies found that the existence of non-evaluative social support contributes to lower physiological reaction to stress, called the buffering effect (Wheeler & Faulkner, 2015). Such research suggests that human-animal relationships are non-evaluative and therefore less stress-inducing compared to human-human relationships.

### **The Present Study**

Numerous studies have established meaningful associations between specific relationship types and well-being. Little is known, however, about the comparative effects of major

relationship types on psychological well-being within the context of a single study. Additionally, while one's social network is an important predictor of well-being, past research does not distinguish whether the number of relationship types – rather than the total number of relationships held across relationship types – is a relevant factor in the connection between relationship types and psychological well-being.

Four types of social relationships were examined in the current study: with parents or guardians, with significant others, with close friends, and with pets (the latter of which has limited research history). These relationships were analyzed based on their individual and combined effects on self-assessed psychological well-being. A sample of first-year, female undergraduate students completed a questionnaire that incorporated a 14-question version of the *Miller Social Intimacy Scale* (MSIS, Miller & Lefcourt, 1982) to assess the degree of intimacy in each relationship type each participant held and the 18-question version of the *Scales of Psychological Well-being* (SPWB-18, Ryff & Keyes, 1995) to determine each participant's level of psychological well-being. The questionnaire asked participants to base their MSIS responses on the relationships they had held in the six-month period up to the time of the study, so as to appropriately represent the period of social distancing.

The present study investigated whether specific types and a greater number of social relationships predict greater psychological well-being during a period of social distancing. It was anticipated that certain relationships would more strongly predict psychological well-being due to the socially isolating circumstances and that all relationship types would be significant predictors of psychological well-being. More specifically, the strongest predictors of psychological well-being were expected to be, in order: significant others, pets, close friends, and parents or guardians. Relationship types from most to least positively correlated with

psychological well-being were expected to follow the same order. It was also expected that all relationship types would be significantly, moderately, and positively correlated with psychological well-being. Finally, it was anticipated that the largest number of social relationship types held (four types) would more significantly predict psychological well-being.

## **Methods**

### **Participants**

Ninety-one introductory psychology students from Brescia University College participated in the present study. Participants were recruited using Brescia's SONA system and were asked to take part in a Qualtrics survey online. Among the participants were ninety females and one male. Sixty-five were in their first year of study, fourteen in their second, and twelve in their third year or higher. Participants were able to report on a variety of relationship types, including relationships with: parents/guardians (n=90), significant others (n=38), close friends (n=85), and pets (n=55). Participants' data were only used if they reported on at least one of the listed relationships and also completed the assessment of their psychological well-being. Participants were not compensated for their time but did receive a participation credit towards their Psychology 1010A course. This was a voluntary study and participants were able to leave or end the study at any time and still receive their class credit for Psychology 1010A or 1015B.

### **Materials**

Before participants continued to the body of the survey, they were asked to complete a two-question demographic survey (see Appendix A) that qualified their gender identity and year of study at university. This demographic section was created to better understand the characteristics of the sample when analyzing the results. Afterwards, participants were asked to identify whether or not they held any of four major close relationship types (Appendix B). For each

relationship type they identified as holding, participants would rate their level of agreement to statements about social intimacy in their relationships.

The Miller Social Intimacy Scale (MSIS) used in this study contains 14 questions that assessed participants' degrees of intimacy with individuals in each relationship type they held. Specifically, the questions of this scale measure the frequency, intensity, and importance of interactions in a relationship. To be able to measure the levels of intimacy participants experienced with their pets, however, three questions (#2, #10, #14) from the 17-question MSIS were removed as they could not represent human-animal relationships. This questionnaire was completed by participants for each of the relationship types they identified using a 10-point Likert scale, scored up to a total of 140 points.

The Scales of Psychological Well-being (SPWB-18) was used to measure psychological well-being. The original SPWB questionnaire is either 54 or 84 questions, comprised of six sections which, when integrated, reflect overall psychological well-being. The six sections measure: positive functioning, autonomy, environmental mastery, personal growth, purpose in life, positive relations with others, and self-acceptance. The shortened version of this scale used in the current study, the SPWB-18 is considered equally as reliable and valid (Salama-Younes et al., 2011). It contains 18 questions rated on a 7-point Likert scale, scored up to a total of 126 points. This shortened version was chosen for use in this study to reduce survey fatigue while maintaining content validity.

## **Procedures**

Once participants were recruited for the study using the SONA system, they were able to access the Qualtrics survey immediately. Before beginning the questionnaire, participants were asked to carefully read the letter of information, which outlined their rights and what would be

required of them in the study. They then could give consent by selecting “YES” at the bottom of the page and continuing to the next section of the survey. Participants were first given a brief demographic questionnaire in which they recorded their year of study and gender identity. Afterwards, the second section of the survey asked participants to identify whether they held any of four types of social relationships (with parents/guardians, significant others, close friends, and pets) in the six months prior to taking the survey. After each applicable identification, participants would be asked to complete the MSIS as it applied to the respective relationship. The third section of the survey asked participants to complete the SPWB-18 in which they answered questions about their personal perspectives in different areas of their lives. The entire survey took approximately 10 to 15 minutes to complete. Upon completion of the listed questionnaires, participants were given a debriefing form indicating the purpose of the, as well as contact information and resources for further reading if interested. The predictor variables for this project were: mean MSIS scores for each type of relationship, as well as the number of relationship types held (0-4). The outcome variable was the participants’ mean scores on the SPWB-18.

## **Results**

### **1. Relationship Types as Predictors of Psychological Well-being**

Two multiple regression analyses were performed: one for comparing the different relationship types’ strength in predicting psychological well-being, and another to assess if the number of relationship types maintained predict psychological well-being. Two out of an initial 93 responses were discarded due to ineligibility; these participants did not complete the necessary components needed for data analysis. Due to unforeseen issues with list-wise deletion

in the multiple regression model, this sample size provides a power of only 0.2436 with a moderate effect size for the regression model.

The first multiple linear regression analysis was conducted in order to understand which types of social relationships are the predictors of psychological well-being ( $M = 91.30$ ,  $SD = 12.40$ ). The predictors of this analysis included intimacy: in relationships with parents ( $M = 107.00$ ,  $SD = 17.90$ ), in relationships with significant others ( $M = 125.00$ ,  $SD = 13.40$ ), in relationships with close friends ( $M = 107.00$ ,  $SD = 14.30$ ), and in relationships with pets ( $M = 99.40$ ,  $SD = 25.20$ ).

Two-tailed correlation analyses were conducted as precursors to the multiple linear regression analysis. These analyses revealed that the correlation between intimacy in relationships with parents and psychological well-being was significant, moderate, and positive,  $r(88) = .38$ ,  $p < .001$ , indicating that a closer relationship with one's parents was moderately associated with greater psychological well-being. The correlation between intimacy in relationships with significant others and psychological well-being was significant, strong, and positive,  $r(36) = .58$ ,  $p < .001$ , indicating that a closer relationship with one's significant other was strongly associated with greater psychological well-being. The correlation between intimacy in relationships with close friends and psychological well-being was not significant,  $r(83) = .09$ ,  $p = .399$ , indicating that there is no meaningful relationship between the two variables. Lastly, the correlation between intimacy in relationships with pets and psychological well-being was also not significant,  $r(53) = .04$ ,  $p = .758$ , indicating that there is no meaningful relationship between the two variables.

The regression model significantly predicted psychological well-being scores,  $R^2 = .60$ ,  $F(4, 17) = 6.40$ ,  $p = .002$ , with the four predictors accounting for 60% of the variance in

psychological well-being. Furthermore, the analysis revealed that intimacy in relationships with significant others,  $\beta = .72$ ,  $p < .001$ , and with close friends,  $\beta = -.37$ ,  $p = .046$ , were significant, strong predictors of psychological well-being. Intimacy in relationships with parents,  $\beta = .32$ ,  $p = .068$ , and with pets,  $\beta = -.00$ ,  $p = .99$ , were nonsignificant predictors, though the low  $p$ -value for intimacy in relationships with parents suggests the potential for significance and strength in future studies. The regression equation for the analysis was Psychological Well-being' =  $31.08 + 0.23(\text{parents}) + 0.59(\text{significant other}) - 0.34(\text{close friends}) - 0.01(\text{pets})$ . Only two of the four predictors were significant and the order of predictor strength was: relationships with significant others ( $\beta = .72$ ), close friends ( $\beta = -.37$ ), parents ( $\beta = .32$ ), and pets ( $\beta = -.00$ ) (see Table 1).

Due to the weak power of the multiple regression model, it may be helpful to briefly assess the similarity of the results between the multiple regression analysis and the predictors in their own simple linear regressions (see Table 2). The first simple linear regression revealed that intimacy with one's parents predicted psychological well-being,  $R^2 = .14$ ,  $\beta = .37$ ,  $F(1, 88) = 14.36$ ,  $p < .001$ . As in the multiple regression, the second simple linear regression found that intimacy with one's significant other predicted psychological well-being,  $R^2 = .33$ ,  $\beta = .58$ ,  $F(1, 36) = 17.94$ ,  $p < .001$ . Unlike the findings of the multiple regression analyses, the third simple linear regression found that intimacy with one's close friends did not predict psychological well-being,  $R^2 = .01$ ,  $\beta = .09$ ,  $F(1, 83) = 0.72$ ,  $p = 0.399$ . Finally, just as in the multiple regression analysis, the fourth simple linear regression found that intimacy with pets did not predict psychological well-being,  $R^2 = .00$ ,  $\beta = .04$ ,  $F(1, 53) = 0.1$ ,  $p = 0.758$ .



**Table 1***Results of the Multiple Regression Analysis*

Predictor	Estimate	SE	<i>t</i>	<i>p</i>	$\beta$
Intercept	31.079	20.2651	1.53363	0.144	
Intimacy with Parents	0.234	0.1201	1.94632	0.068	0.31523
Intimacy with Significant Other	0.594	0.1385	4.28671	<.001**	0.71952
Intimacy with Close Friends	-0.340	0.1578	-2.15452	0.046*	-0.37279
Intimacy with Pets	-6.69e-4	0.0898	-0.00745	0.994	-0.00124

*Note.* The dependent variable was psychological well-being. \*  $p < .05$ , \*\*  $p < .001$

**Table 2***Simple Linear Regression Analyses for Each Individual Predictor*

Model	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>df</i> 1	<i>df</i> 2	<i>p</i>	<i>β</i>
Intimacy with Parents	0.37	0.14	14.36	1	88	<.001	0.37
Intimacy with Significant Other	0.58	0.33	17.94	1	36	<.001	0.58
Intimacy with Close Friends	0.09	0.01	0.72	1	83	0.399	0.09
Intimacy with Pets	0.04	0	0.1	1	53	0.758	0.04

*Note.* \*  $p < .05$ , \*\*  $p < .001$

## 2. Number of Relationship Types as a Predictor of Psychological Well-being

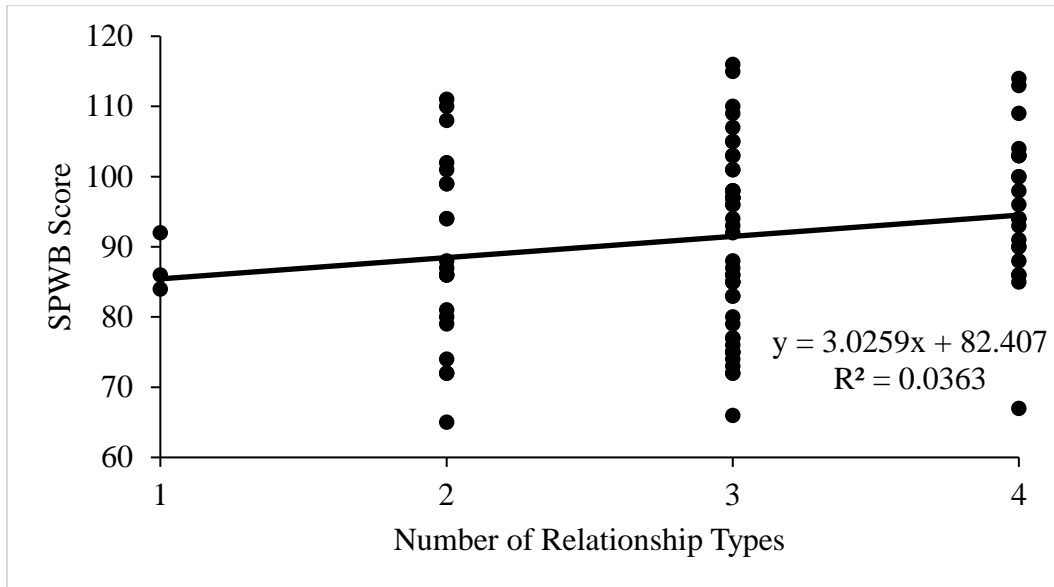
A linear regression analysis was conducted in order to understand the extent to which the number of relationship types a person holds ( $M = 2.95$ ,  $SD = 0.78$ ) predicts their psychological well-being. This model has a power of 0.9549 with a moderate effect size.

A two-tailed correlation analysis was conducted as a precursor to the linear regression analysis (see Figure 1). This analysis revealed that the correlation between the number of relationship types held and their psychological well-being is nonsignificant, weak, and positive,  $r(89) = .19$ ,  $p = .070$ , indicating that there is no statistically significant relationship between the two variables. Given the low  $p$ -value, further study may demonstrate significance.

The linear regression revealed that the number of relationship types one held did not significantly predict psychological well-being,  $R^2 = .04$ ,  $\beta = .19$ ,  $F(1, 89) = 3.35$ ,  $p = .070$ , with the predictor accounting for only 3.6% of the variance in psychological well-being. The regression equation for this analysis was Psychological Well-being' =  $82.41 + 3.03(\text{number of relationship types})$ .

**Figure 1**

*Association Between Number of Relationship Types Individuals Held and SPWB Score*



*Note.* The correlation was not quite significant  $r(89) = .19, p = .070$ , but there is a small association between the number of relationship types and psychological well-being (SPWB). The same applies to the linear regression.

## Discussion

This study analyzed the ways that different relationship types can have stronger influences on psychological well-being. The results demonstrated that only two of the four predictors were significant (relationships with significant others, with close friends) and the order of predictor strength (significant others, close friends, parents, pets) was similar to, but not the same as what was predicted (significant others, pets, close friends, parents). Thus, the primary hypothesis was only partially correct: different types of relationships differently contribute to psychological well-being, with all relationships except those with pets being strong predictors of psychological well-being (though ‘close friends’ was weak and nonsignificant in its simple regression analysis). While the validity of the multiple regression model is weak due to low statistical power, simple linear regression analyses of each predictor support the conclusion that intimacy in relationships with one’s significant other has predictive value while the same measure in relationships with pets has little predictive value. Secondary to the main hypothesis, this study also examined the possibility that a greater variety of relationship types may have a stronger influence on well-being. Although there was a low *p*-value and weak association, the number of relationship types held was not a statistically significant predictor of psychological well-being; thus, the null hypothesis was correct.

That relationships with significant others most strongly predict psychological well-being was expected; the exploration of romantic relationships is an important developmental stage for many young adults, particularly young women (Bonnie et al., 2015). As the majority of the sample consisted of young females, the results agree with the existing literature. Relationships with close friends and with parents follow in strength and order. While the precise cause(s) of this outcome cannot be determined within the limited context of this study, background literature does suggest

that young adults may choose to distance themselves from their parents – emotionally and physically – and place more focus on the relationships with their significant other first, and subsequently their friendship network (Walen & Lachman, 2000). Though relationship intimacy with one's parents was not a statistically significant predictor of psychological well-being,  $p = .070$ , the near-significant value suggests potential value in further study of this variable. This is not surprising, as quality social support networks that include parents are essential to developing and maintaining well-being (Siedlecki et al., 2014).

The result that relationships with one's pets was a nonsignificant predictor of psychological well-being was unexpected, as research largely supports the notion that companion animals are strongly associated with both physical and psychological well-being (Endo et al., 2020). A meta-analysis by Herzog (2011), however, revealed that studies of “the pet effect” are actually quite inconclusive, largely due to common flaws in research design. Similarly, a systematic review by Brooks et al. (2018) revealed that, of the 17 studies included, 15 reported positive elements and 9 reported negative elements of pet ownership. Additionally, a number of the studies also reported neutral (or non-existent) effects. Herzog (2011) also notes that studies of the psychological effects of pet ownership are relatively few, and meta-analyses even fewer, suggesting that far more research must be performed in order to gain meaningful information about the value of animal companionship.

The nonsignificant results for relationships with one's pets may have in fact been valid. Indeed, Applebaum et al. (2020) found that the hardships of the COVID-19 pandemic may magnify the challenges of pet ownership that are underrepresented in research studies. Another factor that may have influenced the results is that young adults experience more ambivalence towards pets than other age groups and, when living in a family unit, are less likely to care for

and spend time with them (Mathers et al., 2010). The number of hours spent with companion animals – in addition to caretaking responsibilities – is positively associated with the strength of the relationship (Aragunde-Kohl et al., 2020). Indeed, some of the individual survey responses from the current study demonstrate consistently low ratings within the pet MSIS section. This may indicate a distinction between those who live with pets (or technically own pets) and those who have developed a sense of companionship with their pet. Evidently, pet ownership alone is not a distinct predictor of well-being in young adults (Mathers et al., 2010). Another aspect of the study that may have affected the outcome of this variable is the fact that the type of pet(s) participants owned was not reported. This is valuable information because research demonstrates that – just as in different relationship types among humans – different types of pets can influence one’s well-being in different ways (Endo et al, 2020). In fact, a study by Endo et al. (2020) found that between dogs and cats, the two most popular companion animals, dog ownership was a far greater predictor of adolescent well-being than cat ownership, which actually predicted progressive decline of mental health in this cohort. There are likely many such factors that could explain why relationships with pets are not significant predictors of psychological well-being, but it is also important to consider the flaws which may limit the validity of the results.

### **Methodological Limitations**

As with any type of research, this study is not free of limitations. One of the greatest of limitations lies in the fact that the Miller Social Intimacy Scale was not designed to measure intimacy in individuals’ relationships with their pets. Even after the elimination of three questions from the original scale for use in this study, there were three additional questions (#3, #11, #12) that demonstrated consistently lower scores across participants. This may have occurred because the MSIS does not accurately represent the intimacy in people’s relationships

with companion animals, but this also reflects the fact that pets cannot necessarily provide everything humans need socially, at least not in the ways that relationships with other humans can provide. Regarding the selection of the MSIS for use in this study, at the time there was no better existing scale for assessing different types of relationships. Many of the scales and inventories typically used to measure the quality of relationships focus on attachment, relationship activity, or level of intimacy in specific relationship types (Cyranowski et al., 2013). This makes the possibility of comparing different relationships more difficult, as there is currently no single scale or inventory that can assess multiple forms of social relationships, particularly with regards to including individuals' relationships with their pets.

The generalizability of this thesis is significantly limited by the unforeseen low response rates to the sections regarding intimacy in relationships with one's significant other ( $n=38$ ) and pets ( $n=55$ ), which reduced the power of the regression model to only 0.2436 as a result of list-wise deletion. In simple terms, there would be at least a 24% chance of finding a statistically significant difference when there is one. Despite the significance and strength of the results of relationships with significant others (and lack thereof with respect to relationships with pets), this lack of power in the model weakens the validity of the results. The simple linear regressions for the four predictors, however, still contribute meaningful contextual information (as seen in Table 2), as the individual powers range from 0.64 to 0.95.

### **Extraneous Factors**

In addition to the described methodological limitations, there are also a number of extraneous variables that may have influenced the results of this study. Notably, the largely young, female sample from Brescia University College may not accurately represent males, or individuals younger or older in the broader population. This is particularly important to note because of the



many sex, gender and developmental differences related to social interaction, both biological and social (Simonson et. al, 2011). There is also the potential for many confounding variables when conducting research during the COVID-19 pandemic, as life for many people has changed in numerous, significant ways. This is especially pertinent when attempting to understand the effects of social distancing. As well, it may be that the results of studies conducted in 2020 and 2021 (that are not directly related to the pandemic) cannot be compared to other studies during normal years due to the unique societal circumstances. For this reason, it may also be necessary to conduct this study again once the pandemic is over to verify the results.

As with every study, individual differences may affect the results. With the current study and its small sample size, it is possible that there may be greater variability in how participants rate their relationships. For instance, some individuals may feel that their well-being is improved when they do not hold a relationship with their parents, and some may find no value in a significant other or pet. Similarly, for some individuals, a greater variety of relationship types held does not necessarily directly equate to greater well-being in all circumstances (Cohen & McKay, 2020). Some people thrive in the presence of large groups while others truly value only one or two people close to them (Cohen & McKay, 2020). Additionally, after a certain point, a larger social network may actually lessen the quality of relationships held and maintaining relationships may be a source of psychological strain (Wallace, 2013). Ideally, a more comprehensive study would monitor such extraneous factors and would provide greater insight into the beneficial elements involved in socialization.

### **Future Research**

The identification of limitations provides the opportunity for advancement through future research. Indeed, the limitations of the current study may contribute to the expansion of

knowledge in the subject of social psychology and measurement of relationships with companion animals. Most importantly, future research should guarantee a much larger sample size of participants to ensure a high degree of statistical power, particularly when assessing relationships that not everyone holds (i.e., significant others, pets). Aside from this major consideration, researchers may find value in recording participants level of extraversion and the size of the relationship network when assessing the quality of relationships across different types. For greater detail, future research could also record the types of (e.g., casual vs. structured), the frequency (e.g., number of interactions per month), and regularity (i.e., spacing of interactions) of interactions in which individuals engage.

To build on human-animal relationship research, it would be useful to create and institute a single standardized scale for measuring across all relationship types. In doing this, researchers may choose to evaluate the key features that can be used to encompass relationships with companion animals, and also assess the quality (e.g., intimacy) of any and all relationship types. When discussing the possibilities for future research, Herzog (2011) remarked that current studies are most often quasi-experimental because they study individuals who already own pets, and that the choice to own pets may itself be a major confounding variable. As such, Herzog suggests that, despite the many challenges involved, true experimental studies should be conducted where participants are randomly assigned to long-term pet ownership conditions. Only then can the effects of pet ownership be understood fully. Finally, as an important factor in novel research on the pet effect and research generally, larger sample sizes in future study would provide researchers with the opportunity to more accurately assess and compare the various demographic conditions across participants such as age, culture, education level, and attachment style.

## **Conclusion**

The study of social support as a predictor of well-being is not new, though with changing and challenging social conditions, research on social relationships has found new footing and the potential for new therapies such as interpersonal psychotherapy has grown significantly (Markowitz & Weissman, 2004). There remains more to learn about the differences across relationship types – especially relationships with pets – and how researchers might be able to effectively compare them. The COVID-19 pandemic has negatively impacted the production of research but has given social scientists a natural experiment in which social distancing is a powerful independent variable. This study has described the ways in which social relationships cannot be understood in isolation, demonstrating the influence of differences across groups and the importance of methodology. In turn, it is necessary that future research improves its methodology in order to advance the study of such fundamental issues.

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## Appendix A

**Demographic Information** (*as seen in the Qualtrics online survey*)**Demographic Information**

I would like to ask for some information about yourself. Please remember that all information is confidential and that you may refuse to answer any questions you do not want to answer.

What is your gender identity?

☐ Female

☐ Male

☐ Non-binary

☐ Other

What year of study are you in?

☐ First Year

☐ Second Year

☐ Third Year or Higher

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## Appendix B

**Relationship Type Measures** (*as seen individually in the Qualtrics online survey*)

Do you have a relationship with your parent(s) / guardian(s) ?

☐ Yes

☐ No

Do you have a significant other?

☐ Yes

☐ No

Do you have one or more close friends?

☐ Yes

☐ No

Do you have one or more pets?

☐ Yes

☐ No