



Social Withdrawal and Social Surrogacy in Emerging Adulthood

Leanna M. Closson¹ · Alicia McVarnock¹ · Kellie Sanford¹

Received: 21 June 2018 / Accepted: 11 September 2018 / Published online: 24 September 2018
© Springer Science+Business Media, LLC, part of Springer Nature 2018

Abstract

Shyness has been well established as a hindrance to social adjustment and may be problematic for emerging adults attending university, given the high social expectations placed upon students. Previous studies suggest emerging adults high in shyness recruit their friends to act as social surrogates in order to help reduce the stress of entering social interactions; yet, whether other less studied forms of social withdrawal (i.e., avoidance, unsociability) are associated with social surrogacy remains uninvestigated. The goal of the present study was to examine differences between subtypes of withdrawal as related to social surrogacy, while considering the roles of social anxiety and social self-efficacy. Participants were 961 emerging adults (76% female; 67% Caucasian) between the ages of 18 and 25 ($M = 20.15$, $SD = 1.71$). The results indicated that patterns of social surrogacy varied between withdrawal subtypes, such that social surrogacy was positively related to shyness, and negatively related to unsociability, whereas avoidance yielded mixed results. The findings highlight the importance of considering withdrawal motivations in understanding social surrogacy.

Keywords Social surrogacy · Social withdrawal · Shyness · Social anxiety · Social self-efficacy · Emerging adulthood

Introduction

Emerging adulthood is a developmental period involving the process of becoming an autonomous adult. As part of this process, emerging adults routinely find themselves navigating unfamiliar social contexts including relationships, work, and education (Arnett 2015). Engaging in these social settings may be daunting for socially withdrawn emerging adults, as their tendency to withdraw from social interaction may impede developmental milestones of emerging adulthood, such as exploring one's identity through romantic relationships and vocational and educational pursuits (Nelson et al. 2008). One major life change often associated with emerging adulthood is the transition from high school to university (Arnett 2016). Socially withdrawn emerging adults may find this change particularly challenging, especially since the development of new friendships is an influential factor in successful adaptation to university life (Nelson 2013; Sevinc and Gizir 2014).

Although most university students experience some degree of anxiety socializing with new peers, shy students have an especially difficult time engaging socially (Denovan and Macaskill 2013).

According to Bradshaw's (1998) social surrogate hypothesis, shy individuals recruit friends, referred to as social surrogates, to help reduce the stress of entering and participating in social interactions. Whether this hypothesis extends to other types of social withdrawal is currently unknown. Subtypes of social withdrawal, including shyness (i.e., conflicting interest and fear regarding social interaction), avoidance (i.e., tendency to avoid others), and unsociability (i.e., social disinterest), are based on internal social approach-avoidance motivations (Nelson 2013). Various factors underlie an individual's motivation in moving toward (and away from) social interaction, including social interest, anxiety, and self-efficacy regarding one's social skills (Barry et al. 2013; Nikitin and Schoch 2014). Moreover, research testing the social surrogate hypothesis is scarce. While some of this limited work examined shyness, and other work focused on social anxiety, no prior study has considered avoidance or unsociability. Thus, the goal of the present study was to seek further support for the social surrogate hypothesis by examining multiple subtypes of social withdrawal and clarifying the roles of social anxiety and social self-efficacy in social surrogacy among emerging adults.

✉ Leanna M. Closson
leanna.closson@smu.ca

¹ Department of Psychology, Saint Mary's University, 923 Robie Street, Halifax, NS, Canada

Shyness and the Social Surrogate Hypothesis

Shyness is a type of social withdrawal characterized by feelings of fear and discomfort in social situations. While shy individuals want to interact with others, fear of judgment and humiliation prevents them from doing so (Nelson 2013). Bradshaw's (1998) social surrogate hypothesis argues that individuals high in shyness actively cope with feelings of social distress through recruitment and utilization of social surrogates. According to Bradshaw, a social surrogate is a person whom a shy individual recruits to accompany them into potentially stressful social situations. This person, often a friend, may offer support and comfort during social interactions by simply being present, facilitating interactions, or engaging in conversation on behalf of the shy individual. Bradshaw suggested that having a social surrogate present allows shy people to enter social situations more frequently, as well as lowers anxiety and increases engagement in such contexts.

In the first empirical test of the social surrogate hypothesis, Bradshaw (1998) presented university students with hypothetical scenarios depicting potentially anxiety-provoking situations where one might wish to recruit a social surrogate. Compared to low-shy individuals, high-shy individuals were more likely to endorse recruiting a social surrogate to go with them to various social events (i.e., recruitment). In addition, high-shy persons were more likely to endorse efforts to get the surrogate to perform social behaviors on their behalf (i.e., utilization). Further, while low-shy persons reported willingness to enter social situations even without a surrogate, high-shy persons were not (i.e., conditional entry). This could be in part because, unlike low-shy individuals who predominantly recruited to increase enjoyment, high-shy individuals more often recruited to make social situations less stressful.

Since Bradshaw's (1998) original investigation, only three studies have explored the link between shyness and social surrogacy. In the first study, Souma et al. (2008) found that over seven months, university students high in shyness expanded their social networks at the same rate as students low in shyness through use of social surrogates, and they did so by befriending others in their surrogate's social network. In a study of early adolescents, Markovic and Bowker (2015) found that low and high levels of social surrogate use were linked with social problems, whereas moderate levels were not. Moreover, high social surrogate use was linked with anxiety at high levels of shyness. In another study, Arbeau et al. (2012) found that social surrogacy was positively correlated with shyness and social anxiety in middle childhood. In addition, children who reported recruiting a social surrogate for emotional support tended to be shy and socially anxious. Taken together, these studies support Bradshaw's (1998) hypothesized positive

relation between social surrogacy and shyness. Although social surrogacy appears to have benefits for university students (Souma et al. 2008), (social) anxiety has been linked with social surrogacy earlier in development (Arbeau et al. 2012; Markovic and Bowker 2015). With the exception of Arbeau et al. (2012), researchers have not examined shyness and social anxiety in relation to social surrogacy in a single study.

Subtypes of Social Withdrawal

While research points to a link between social surrogacy and shyness, researchers have yet to investigate whether this association extends to other forms of social withdrawal. Social withdrawal is a multidimensional construct, encompassing different underlying motivations for approaching versus avoiding social interaction (Nelson 2013). Researchers have identified subtypes of social withdrawal, including shyness, avoidance, and unsociability. Shyness involves both high approach and high avoidance motivations to interact (Poole et al. 2017). This means that individuals high in shyness want to engage; yet, they are temperamentally anxious and fearful around others and, as a result, avoid social interactions (Nelson 2013). Avoidance involves low approach and high avoidance motivations to interact and a strong desire for solitude (Nelson 2013). As such, persons high in avoidance may be less likely to make efforts to recruit a social surrogate; still, if they find themselves in a social situation, they may rely on a surrogate to facilitate the interaction. This is because the presence of a surrogate may allow highly avoidant individuals to avoid the stress of having to actively participate in social interactions themselves. Lastly, unsociability involves both low approach and low avoidance motivations to interact (Nelson 2013). While those high in unsociability prefer to spend time alone, they do not actively avoid social contexts (Rubin and Barstead 2014). Further, when placed in social situations, highly unsociable individuals typically interact effectively (Barry et al. 2013). In theory, unsociability would not involve motivation to recruit by feelings of anxiety, nor the desire to increase social fun. When required, individuals high in unsociability could be expected to enter and navigate social situations comfortably on their own, and thus may lack motivation to recruit and use social surrogates.

Considering the motivation underlying social withdrawal may be important, especially in relation to social surrogacy. Although Bradshaw (1998) did not study types of social withdrawal beyond shyness, his research suggests that the degree to which an individual is interested in social interaction (i.e., sociability) plays a role in understanding social surrogacy. Specifically, sociability was a significant covariate in many of the associations Bradshaw observed

between shyness and social surrogacy. Thus, it may be important to consider the extent to which an individual is motivated to socially interact with others by examining avoidance and unsociability, in addition to shyness, in order to provide a more complete understanding of social surrogacy.

Social Anxiety

Among the few studies on the social surrogate hypothesis, two examined social anxiety, (Boucher and Cummings 2014, 2017), rather than shyness—the construct upon which Bradshaw (1998) based his hypothesis. This is not unusual, as shyness and social anxiety share common features, such as somatic symptoms, as well as fear and avoidance of social situations in which one could be evaluated negatively (Peschard and Philippot 2017; Poole et al. 2017). Among university students, Boucher and Cummings (2014) found that social anxiety was positively linked with greater endorsements of recruiting and using surrogates, and reports that they would be less likely to enter social situations without a surrogate present (i.e., conditional entry). More recently, Boucher and Cummings (2017) investigated social anxiety and social surrogacy among college roommates. Although findings revealed a positive association between social anxiety and conditional entry, social anxiety was only linked to recruitment in hypothetical scenarios. In sum, Boucher and Cummings (2014, 2017) showed that social anxiety is a key factor to consider in studies on social surrogacy. Nevertheless, while shyness and social anxiety overlap, they are not identical (Poole et al. 2017; Tsui et al. 2017) and can operate differently (Scott et al. 2018; Tsui et al. 2017). As recommended previously (Poole et al. 2017; Tsui et al. 2017), it is important to conceptualize and study shyness and social anxiety as separate constructs in order to evaluate their potential differences.

A theoretically important difference between shyness and social anxiety focuses on the desire to interact with others. For example, research on shyness indicates that shy children show social interest by watching and hovering over peers (Coplan and Ooi 2014). These findings support the theoretical assumption that shyness is accompanied by a high approach motivation, which is inhibited by social fear (Nelson 2013). Although some researchers have proposed a similar “approach-avoidance conflict” in relation to social anxiety (Brown et al. 2007; Taylor and Amir 2012), there is a lack of evidence to support this claim. In fact, social anxiety has been linked to low approach motivations and behaviors using both explicit and implicit measures such as observation, self-report, and cognitive tasks (Taylor and Amir 2012). Considering both avoidance and approach motivations, Brown and colleagues (2007) found that social anxiety was positively associated with a preference to be

alone when with others, whereas social anxiety was not significantly related to spending time alone despite a preference to be with others. Overall, empirical evidence shows that, like shyness, social anxiety is positively linked with a high avoidance motivation, yet unlike shyness, social anxiety is not positively related to a high approach motivation.

The desire to engage with others is an important distinction between shyness and social anxiety within the context of the present study, as Bradshaw’s (1998) research suggests social interest plays a role in understanding social surrogacy. Moreover, the social surrogate hypothesis suggests that shy persons use surrogates to reduce social anxiety in stressful interactions. Seeking out such support can be thought of as a safety behavior, which is most often utilized when attempting to “reduce the experience of unpleasant feelings or the risk of feared outcomes” (Helbig-Lang and Petermann 2010, p. 218). Indeed, Bradshaw originally conceived of social anxiety as an experience that motivates individuals high in shyness to seek out the support of a social surrogate to reduce unpleasant feelings during social interactions.

Despite the extant research, it remains unknown whether shyness contributes to social surrogacy beyond social anxiety. By describing the constructs of shyness and social anxiety interchangeably in social surrogacy research, scholars not only fail to acknowledge that shyness and social anxiety represent overlapping, yet theoretically somewhat distinct constructs (Poole et al. 2017; Tsui et al. 2017), but also stray from directly testing the social surrogate hypothesis, which focused on shyness. Thus, of interest in the present study was to determine whether further support for Bradshaw’s (1998) original hypothesis could be obtained by distinguishing the roles of shyness and social anxiety in understanding social surrogacy. Given the high approach motivation characteristic of shyness (but not social anxiety), we expected that shyness would contribute to explaining variance in social surrogacy beyond social anxiety.

It should also be noted that potential associations between other forms of social withdrawal and social anxiety remain unexplored. Given that a high social avoidance motivation is related to both social anxiety and avoidance (Nikitin and Schoch 2014), some overlap between these two constructs is likely. In contrast, as unsociability is related to a low motivation to approach and avoid (Nelson 2013), social anxiety should have little, if any, association with unsociability.

Social Self-Efficacy

The social surrogate hypothesis (Bradshaw 1998) suggests that shy persons recruit social surrogates to reduce anxiety;

however, social self-efficacy may also play a role. Self-efficacy beliefs refer to perceptions of one's abilities to meet a goal (Di Giunta et al. 2010). While self-efficacy beliefs do not refer to one's actual abilities, these self-perceptions predict the decision to engage in a behavior, as well as effort and perseverance during times of difficulty. Extending this definition to the social realm, social self-efficacy is described as the belief one has in their ability to navigate social interactions through successful performance of certain behaviors (Di Giunta et al. 2010). According to Di Giunta et al. (2010), examples of these behaviors include voicing one's opinions, working well with others, sharing personal experiences, and being able to effectively handle interpersonal issues. Strong social self-efficacy is linked to positive outcomes, such as higher social adjustment, positive affect, and life-satisfaction, as well as lower depression (Meng et al. 2015).

As social anxiety may motivate individuals high in shyness to recruit a social surrogate (i.e., recruitment; Bradshaw 1998), both social anxiety and lower social self-efficacy may predict reluctance to socialize without a surrogate present (i.e., conditional entry) and reliance on a surrogate to facilitate social interaction (i.e., utilization). Indeed, Bradshaw (1998) found that among high shy individuals, a greater proportion reported that the reason they recruited surrogates was to reduce stress, rather than because the surrogate performed social tasks better (i.e., low social self-efficacy), or because social situations were more fun with a friend. Although low social self-efficacy may not necessarily motivate an individual to recruit a surrogate, it may underlie an individual's conditional use of a surrogate to perform social tasks on their behalf.

Social support can serve as an important resource for those who are anxious and lack social confidence (Meng et al. 2015). Shy people expect to commit social errors during interactions and fear that, upon doing so, they will be judged negatively and humiliated (Nelson 2013). Embedded in these social expectations is the unfortunate belief that they are incapable of interacting effectively with others. Particularly with respect to university students, shy students often experience difficulty in creating or joining social circles (Denovan and Macaskill 2013); thus, shyness is likely to be inversely related to social self-efficacy. As such, shy individuals may be motivated to use social surrogates in part because they are not confident in their social capabilities. Similar to shyness, avoidance is related to relationship problems (Nelson 2013), and thus avoidance should also be inversely related to social self-efficacy. Contrary to shyness, low social self-efficacy in those high in avoidance is not likely to motivate the use of social surrogates given the low approach motivation involved in avoidance. Finally, unsociability is largely unrelated to relationship problems (Nelson 2013), and thus is also likely

to be unrelated to social self-efficacy. Emerging adults higher in unsociability may not use social surrogates in part because social inability is not an issue for them (Barry et al. 2013).

Evidence that shyness and social anxiety are related to the use of a surrogate to perform tasks on one's behalf in social interactions and refusal to enter social settings without a surrogate present (Boucher and Cummings 2014; Bradshaw 1998) suggests that low social self-efficacy may be related to conditional entry and utilization. Further evidence based on reasons for recruitment (Bradshaw 1998) suggests that low social self-efficacy may be unrelated to recruitment. These assumptions were tested more directly in the present study by examining the role of social anxiety and social self-efficacy in understanding social surrogacy. Specifically, the present study examined whether various forms of social withdrawal predict social surrogacy, beyond theoretically motivating factors of social anxiety and social self-efficacy.

Current Study

Prior research suggests that motivation for social interaction is critical in predicting outcomes among withdrawn emerging adults (Nelson 2013). Yet, social surrogacy has been investigated only in accordance to shyness and social anxiety. With the exception of Arbeau and colleagues (2012), researchers have not examined shyness and social anxiety in relation to social surrogacy in a single study. Moreover, whether shyness and other withdrawal subtypes contribute to social surrogacy, beyond social anxiety, has yet to be explored. Although the social surrogate hypothesis (Bradshaw 1998) specifies anxiety as an underlying motivator for social surrogacy, Bradshaw's work indirectly suggests that a lack of social self-efficacy may also be an important motivator in utilizing a surrogate. The present study extends the literature, not only by examining associations between social surrogacy and multiple types of social withdrawal, but also by considering the potential roles of social anxiety and social self-efficacy. Specifically, the current study examined whether various forms of social withdrawal (i.e., shyness, avoidance, and unsociability) predict recruitment (including reasons for recruitment), conditional entry, and utilization, beyond theoretically motivating factors of social anxiety and social self-efficacy.

As social anxiety and social self-efficacy theoretically undergird social surrogacy (Bradshaw 1998), we aimed to examine whether these variables were significantly related to social surrogacy. Consistent with previous findings (Arbeau et al. 2012; Boucher and Cummings 2014), we hypothesized that social anxiety would be positively associated with social surrogacy, and that social anxiety would

predict recruitment of a surrogate to relieve stress. Based on Bradshaw's (1998) findings regarding reasons for recruitment, we expected that social self-efficacy would be unrelated to recruitment, yet negatively associated with conditional entry and utilization, and that emerging adults with higher social self-efficacy would recruit for fun.

Regarding social withdrawal, we aimed to examine whether shyness, avoidance, and unsociability predict social surrogacy, after accounting for theoretically motivating factors of social anxiety and social self-efficacy. We hypothesized that social withdrawal would be significantly associated with social surrogacy, beyond social anxiety and social self-efficacy. More specifically, to test the robustness of the social surrogate hypothesis (Bradshaw 1998), we expected that beyond social anxiety and social self-efficacy, shyness would be positively related to recruitment, conditional entry, and utilization. Further, we expected shyness to be associated with the motivation to recruit to relieve stress. Given the lack of previous research from which to generate hypotheses, expectations regarding avoidance and unsociability were based solely on underlying motivations for withdrawal. Accordingly, we expected that avoidance and unsociability would be negatively associated with social surrogacy, and would be unrelated to specific reasons for recruiting a surrogate, in light of avoidant and unsociable emerging adults' shared low approach motivation (Nelson 2013).

Method

Participants and Procedure

Participants were 961 undergraduate students (76% female) between the ages of 18 and 25 ($M_{\text{age}} = 20.15$, $SD = 1.71$). Participants identified as Caucasian (67.1%), Black (7.7%), Asian (6.5%), Middle Eastern (3.2%), South Asian (2.5%), Latin American (1.8%), Aboriginal (.7%), or multiethnic (10.5%). Participants' current year of study varied across first (31.1%), second (23.7%), third (21.8%), fourth (18.6%), and fifth year or higher (4.8%). The majority of participants (87%) were enrolled at a university or college in Canada, with the remaining 13% of participants attending a university or college outside of Canada. Participants were recruited through advertisements posted on the host institution's online research subject pool and two participant recruitment websites, including www.socialpsychology.org/expts and psych.hanover.edu/research/exponent. The advertisement provided a link that directed participants to the online consent form, survey, and feedback letter. All procedures for the study were approved by the institutional Research Ethics Board and complied with APA ethical standards. Informed consent was obtained for all

participants prior to completing a series of online questionnaires as described below.

Measures

Social withdrawal

Shyness, avoidance, and unsociability were measured using the 20-item Emerging Adult Social Preference Scale-Revised (Nelson 2013). Participants responded to items on a five-point Likert scale from "strongly disagree" to "strongly agree." Examples of questionnaire items include "I'd like to hang out with other people, but I'm sometimes nervous to" (shyness; 6 items; $\alpha = .92$), "I don't really like other people and prefer being alone" (avoidance; 4 items; $\alpha = .79$) and "I'm just as happy to be by myself as with other people" (unsociability; 4 items; $\alpha = .80$). The six-item social isolation subscale is an indicator of exclusion rather than social withdrawal, and thus was not of interest in the present study. Nelson's (2013) exploratory factor analysis with a university sample of emerging adults supported a four-factor solution with each factor demonstrating adequate internal consistency (shyness: $\alpha = .91$; avoidance: $\alpha = .82$; unsociability: $\alpha = .62$; isolation: $\alpha = .89$).

Social surrogacy

Social surrogacy was measured using a slightly modified version of Bradshaw's (1998) Social Surrogacy Questionnaire. Participants were first presented with the following instructions: "Networks of friends are people whom we share information with, support in times of need, and celebrate with when good things happen. Some people often use their networks of friends to help them interact with others. In this part of the study, we are interested in how often you try to get friends to go with you to social events and situations." Participants were asked whether they try to get a friend to go with them to social events or situations and, if so, to indicate the main reason for recruiting a friend from the following choices: (1) these situations are more fun when a friend is with me, (2) having a friend with me makes these situations less stressful, (3) my friend performs the needed behaviors/tasks better than I do, and (4) my friend might get mad at me if I don't invite them. Although not originally part of Bradshaw's (1998) measure, the fourth option was added based on the importance of maintaining friendships in emerging adulthood (Buote et al. 2007). Next, participants were presented with 14 scenarios commonly encountered in emerging adulthood (e.g., "Going to a party where almost all the people there are strangers;" "Attending a small group review session offered by a professor where the professor would be both asking and answering questions"; "Approaching a romantically attractive stranger"). Both recruitment and conditional entry were

assessed using these 14 scenarios. To measure recruitment, participants indicated the extent to which they agree with the statement “I would try to get my friend to go with me” for each scenario, using a seven-point Likert scale from “strongly disagree” to “strongly agree”. To measure conditional entry, participants used the same seven-point Likert scale to indicate the extent to which they agree with the statement “I would not go unless I got my friend to go along with me” for each scenario. A participant’s mean score across each scenario was used as an overall assessment of recruitment ($\alpha = .85$) and conditional entry ($\alpha = .85$). Next, to assess utilization, participants were presented with 10 behaviors commonly used by emerging adults in social settings (e.g., “Attract a waitress’ attention in a restaurant to get a drink refill;” “Walk up to an unfamiliar person at a party and say hello”). For each behavior, participants indicated the extent to which they agree with the statement “I would try to get my friend to do this for me”, using a seven-point Likert scale from “strongly disagree” to “strongly agree.” A participant’s mean score across each behavior was used as an overall assessment of utilization ($\alpha = .87$). Using a university sample, Boucher and Cummings (2017) demonstrated good reliability for recruitment ($\alpha = .86$), conditional entry ($\alpha = .84$), and utilization ($\alpha = .87$). These researchers also demonstrated adequate validity based on inter-rater agreement between participants and their roommate for recruitment ($r = .72, p < .01$), conditional entry ($r = .55, p < .01$), and utilization ($r = .62, p < .01$).

Social anxiety

Social anxiety was measured using the Mini-Social Phobia Inventory (Mini-SPIN; Connor et al. 2001). Participants reported how true each statement was for them using a four-point scale from “not at all” to “extremely.” The three items of this measure (e.g., “Fear of embarrassment causes me to avoid doing things or speaking to people”) demonstrated good internal consistency ($\alpha = .82$). The Mini-SPIN has demonstrated good efficiency in distinguishing individuals with elevated symptoms of social anxiety disorder relative to non-socially anxious individuals in an adult clinical sample (Connor et al. 2001), adolescent community sample (Garcia-Lopez and Moore 2015), and university student sample (Osorio et al. 2007). The measure has also demonstrated good construct validity based on comparisons with other social anxiety measures (Garcia-Lopez and Moore 2015) and interviews by independent raters (Osorio et al. 2007).

Social self-efficacy

Social self-efficacy was measured using the Perceived Social Self-Efficacy scale (PSSE; Di Giunta et al. 2010). Each of the five items on the PSSE ($\alpha = .80$; e.g., “How well can you actively participate in group activities?”) were

rated using a five-point scale from “not well” to “very well.” Di Giunta et al. (2010) found internal consistency of the PSSE to be adequate for Italian ($\alpha = .69$), American ($\alpha = .76$), and Bolivian ($\alpha = .66$) samples of emerging adult university students. These researchers also demonstrated good construct validity and incremental validity in an emerging adult Italian sample comprised of 82% university students.

Results

Preliminary Analyses

Descriptive statistics and correlations among the study variables are presented in Table 1. Of particular interest, shyness and social anxiety were highly correlated. In addition, shyness and social anxiety were positively correlated with recruitment, whereas unsociability and avoidance were negatively correlated with recruitment. Shyness, social anxiety, and avoidance were positively correlated with conditional entry and utilization, whereas social self-efficacy was negatively correlated with conditional entry and utilization.

The proportion of participants reporting the main reason for trying to get a friend to go with them to social events or situations was examined. The majority of participants ($n = 628$; Group 1) reported recruiting because “these situations are more fun when a friend is with me,” followed by “having a friend with me makes these situations less stressful” ($n = 297$; Group 2). Few participants reported recruitment because “my friend performs the needed behaviors/tasks better than I do” ($n = 18$; Group 3) or “my friend might get mad at me if I don’t invite them” ($n = 3$; Group 4). Only 15 participants (Group 5) reported that they never engage in recruitment behavior. Chi-square analyses indicated significant differences in the proportion across reason groups, $\chi^2(4) = 1552.79, p < .001$. Follow up binomial tests indicated the proportion of participants in Group 1 (for fun) was significantly greater than all other groups, and the proportion of participants in Group 2 (stress relief) was significantly greater than Groups 3, 4, and 5 (all p 's $< .001$).

Next, preliminary analyses were conducted to identify potential covariates. Exploratory t tests were run for each of the study variables to explore possible differences based on sex and ethnicity (Table 2). With the exception of social self-efficacy, females scored significantly higher than males on all study variables. Compared to Caucasian participants (the majority ethnicity in our sample), non-Caucasian participants scored significantly higher on recruitment, conditional entry, utilization, shyness, and unsociability. Additional preliminary analyses showed no significant differences on study variables based on year in university or

Table 1 Descriptive statistics and intercorrelations between study variables

	1.	2.	3.	4.	5.	6.	7.	8.
1. Recruitment	–							
2. Conditional entry	.65***	–						
3. Utilization	.53***	.59***	–					
4. Shyness	.24***	.33***	.40***	–				
5. Unsociability	-.11**	-.05	-.01	.21***	–			
6. Avoidance	-.07*	.08*	.14***	.32***	.48***	–		
7. Social anxiety	.25***	.34***	.41***	.68***	.13***	.25***	–	
8. Social self-efficacy	-.06	-.25***	-.27***	-.36***	-.05	-.40***	-.31***	–
<i>M</i>	4.08	2.85	2.91	3.10	3.48	2.48	3.12	3.87
<i>SD</i>	1.07	.98	1.36	1.12	.89	.71	1.09	.74
Range	1.00–7.00	1.00–7.00	1.00–7.00	1.00–5.00	1.00–5.00	1.00–5.00	1.00–5.00	1.00–5.00

N = 961

p* < .05; *p* < .01; ****p* < .001

Table 2 Sex and ethnic differences in study variables

	Males (<i>n</i> = 234)		Females (<i>n</i> = 727)		Caucasian (<i>n</i> = 645)		Non-Caucasian (<i>n</i> = 361)	
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>t</i>	<i>d</i>	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>t</i>	<i>d</i>
Recruitment	3.86(.96)	4.15(1.09)	3.57***	.28	4.03(1.08)	4.19(1.04)	2.15*	.15
Conditional entry	2.71(.87)	2.90(1.01)	2.55*	.20	2.77(.96)	3.01(1.00)	3.48**	.24
Utilization	2.53(1.13)	3.03(1.41)	4.81***	.39	2.84(1.38)	3.05(1.33)	2.16*	.15
Shyness	2.83(1.10)	3.18(1.11)	4.16***	.32	3.05(1.11)	3.20(1.12)	2.02*	.13
Unsociability	3.36(.80)	3.51(.91)	2.33*	.18	3.43(.90)	3.58(.86)	2.49*	.17
Avoidance	2.38(.65)	2.51(.73)	2.50*	.19	2.47(.72)	2.50(.71)	.62	.04
Social anxiety	2.80(1.02)	3.22(1.09)	5.12***	.40	3.09(1.10)	3.17(1.06)	1.14	.07
Social self-efficacy	3.82(.77)	3.88(.73)	1.01	.08	3.86(.72)	3.87(.77)	.23	.01

p* < .05; *p* < .01; ****p* < .001

location of university. Given our primary interest in the role of social withdrawal in understanding social surrogacy, sex and ethnicity were entered as covariates in subsequent analyses.

Hierarchical Logistic Regression Analysis Predicting Recruitment Reason

A hierarchical logistic regression analysis was conducted predicting recruitment reason from control variables (sex and ethnicity; Block 1), social anxiety and social self-efficacy (Block 2), and social withdrawal (shyness, avoidance, unsociability; Block 3). As preliminary analyses indicated that participants were significantly more likely to recruit for fun or to relieve stress compared to other possible reasons, recruiting for fun (coded as 0) versus recruiting to relieve stress (coded as 1) was entered as the dichotomous

outcome variable. Necessarily, only those 925 participants (96.3% of the sample) who indicated that they either recruit for fun or to relieve stress were included in the hierarchical logistic regression analyses described below.

The entry of control variables in Block 1 increased the variance accounted for beyond the null model, Nagelkerke $R^2 = .04$, $\chi^2 (2) = 22.70$, $p < .001$. Females were significantly more likely to recruit to relieve stress than males, $B = .82$, $\text{Exp}(B) = 2.27$, $\text{Wald} = 18.92$, $p < .001$. Ethnicity was not a significant predictor of recruitment reason, $B = -.26$, $\text{Exp}(B) = .77$, $\text{Wald} = 2.79$, $p = .10$. The entry of social anxiety and social self-efficacy in Block 2 significantly increased the variance accounted for beyond the control variables, Nagelkerke $\Delta R^2 = .17$, $\chi^2 (2) = 119.14$, $p < .001$. Inspection of the coefficients revealed that social anxiety positively predicted recruiting to relieve stress, $B = .66$, $\text{Exp}(B) = 1.93$, $\text{Wald} = 67.65$, $p < .001$, whereas

Table 3 Summary of hierarchical regression analyses predicting social surrogacy from social anxiety, and social self-efficacy, and social withdrawal

	Recruitment			Conditional entry			Utilization		
	β	s^2	ΔR^2	β	s^2	ΔR^2	β	s^2	ΔR^2
Step 1			.02***			.02***			.03***
Sex	.12***	.02		.09**	.01		.16***	.03	
Ethnicity	-.08*	.01		-.12***	.02		-.08*	.01	
Step 2			.06***			.13***			.17***
Social anxiety	.24***	.05		.28***	.07		.33***	.10	
Social self-efficacy	.02	.00		-.17***	.03		-.17***	.03	
Step 3			.04***			.03***			.04***
Shyness	.18***	.02		.17***	.02		.21***	.03	
Unsociability	-.11**	.01		-.11**	.01		-.10**	.01	
Avoidance	-.11**	.01		-.04	.00		.01	.00	
Total R^2			.12***			.18***			.24***

$N = 961$. Sex is coded 0 = males, 1 = females. Ethnicity is coded 0 = Non-Caucasian, 1 = Caucasian

* $p < .05$, ** $p < .01$, *** $p < .001$

social self-efficacy predicted recruiting for fun, $B = -.43$, $\text{Exp}(B) = .65$, $\text{Wald} = 14.90$, $p < .001$. The entry of social withdrawal variables in Block 3 significantly increased the variance accounted for beyond all variables already in the model, Nagelkerke $\Delta R^2 = .06$, $\chi^2(3) = 43.27$, $p < .001$. Examination of the coefficients showed that shyness and avoidance both positively predicted recruiting to relieve stress, $B = .63$, $\text{Exp}(B) = 1.87$, $\text{Wald} = 34.37$, $p < .001$ and $B = .33$, $\text{Exp}(B) = 1.39$, $\text{Wald} = 5.30$, $p = .02$, respectively. Unsociability did not significantly predict recruitment reason, $B = -.17$, $\text{Exp}(B) = .85$, $\text{Wald} = 2.47$, $p = .12$. The final model accounted for 26% of the variance in recruitment reason, $\chi^2(7) = 185.11$, $p < .001$.

Hierarchical Multiple Linear Regression Analyses Predicting Social Surrogacy

A series of hierarchical multiple linear regression analyses were conducted to examine the associations between social withdrawal and social surrogacy. Separate analyses were conducted for recruitment, conditional entry, and utilization. In each regression, sex and ethnicity were entered as control variables at Step 1. Social anxiety and social self-efficacy were entered at Step 2, followed by shyness, avoidance, and unsociability at Step 3. The results from these analyses are presented in Table 3. All findings reported below yielded small effect sizes.

Recruitment

Sex and ethnicity accounted for 2% of the variance in recruitment. Females and non-Caucasian participants reported greater levels of recruitment than males and Caucasian participants, respectively. Social anxiety and social self-efficacy accounted for an additional 6% of the variance

in recruitment beyond the control variables. Social anxiety was positively associated with recruitment, whereas social self-efficacy was not significantly associated with recruitment. Social anxiety uniquely accounted for 5.5% of the variance in recruitment. Social withdrawal variables accounted for an additional 4% of the variance in recruitment beyond all other variables in the model. Shyness was positively associated with recruitment, whereas unsociability and avoidance were negatively associated with recruitment. Shyness uniquely accounted for 1.7% of the variance in recruitment, whereas unsociability and avoidance uniquely accounted for 1 and 0.9%, respectively.

Conditional entry

Sex and ethnicity accounted for 2% of the variance in conditional entry. Females and non-Caucasian participants reported greater levels of conditional entry than males and Caucasian participants, respectively. Social anxiety and social self-efficacy accounted for an additional 13% of the variance in conditional entry beyond the control variables. Social anxiety was positively associated with conditional entry, whereas social self-efficacy was negatively associated with conditional entry. Social anxiety uniquely accounted for 7.4% of the variance in conditional entry, whereas social self-efficacy uniquely accounted for 2.8%. Social withdrawal variables accounted for an additional 3% of the variance in conditional entry beyond all other variables in the model. Shyness was positively associated with conditional entry, whereas unsociability was negatively associated with recruitment. Avoidance was not significantly associated with conditional entry. Shyness uniquely accounted for 1.7% of the variance in conditional entry, whereas unsociability uniquely accounted for 1%.

Utilization

Sex and ethnicity accounted for 3% of the variance in utilization. Females and non-Caucasian participants reported greater levels of utilization than males and Caucasian participants, respectively. Social anxiety and social self-efficacy accounted for an additional 17% of the variance in utilization beyond the control variables. Social anxiety was positively associated with utilization, whereas social self-efficacy was negatively associated with utilization. Social anxiety uniquely accounted for 11.4% of the variance in utilization, whereas social self-efficacy uniquely accounted for 3.3%. Social withdrawal variables accounted for an additional 4% of the variance in utilization beyond all other variables in the model. Shyness was positively associated with utilization, whereas unsociability was negatively associated with utilization. Avoidance was not significantly associated with utilization. Shyness uniquely accounted for 3% of the variance in utilization, whereas unsociability uniquely accounted for 0.9%.

Alternate Model Analyses

To explore whether the association between social anxiety and social surrogacy was strongest at low levels of social self-efficacy, we ran regression models described above with the inclusion of the interaction term for social anxiety and social self-efficacy. These analyses yielded non-significant interactions for recruitment ($\Delta R^2 = .002$, $p = .17$), conditional entry ($\Delta R^2 = .000$, $p = .57$), and utilization ($\Delta R^2 = .000$, $p = .93$).

Discussion

Emerging adults face challenges associated with performing developmental tasks of emerging adulthood, such as successfully navigating unfamiliar social environments (Arnett 2015). Meeting the social demands of emerging adulthood may be especially difficult for socially withdrawn individuals, particularly those high in shyness (Nelson et al. 2008). Bradshaw (1998) proposed that one way shy persons might cope with social challenges is to recruit a friend to accompany them in social interactions. Recruiting a social surrogate, Bradshaw believed, would reduce stress associated with potentially anxiety provoking social situations, given that the surrogate can provide support and perform social tasks on behalf of the shy person. Although previous research demonstrates a positive link between social surrogacy and shyness, associations between social surrogacy and other forms of social withdrawal have not been investigated in past research. Comparing multiple forms of withdrawal in relation to social surrogacy may be important,

as outcomes associated with shyness, avoidance, and unsociability can differ for emerging adults (Nelson 2013). Accordingly, the present study tested Bradshaw's (1998) social surrogate hypothesis by investigating the extent to which social withdrawal subtypes predict social surrogacy, beyond theoretically motivating factors of social anxiety and social self-efficacy. As described below, the results provided additional support for the social surrogate hypothesis and highlight the importance of examining multiple types of withdrawal in understanding social surrogacy during emerging adulthood.

Social Anxiety and Social Self-Efficacy

One aim of the current study was to clarify the roles of social anxiety and social self-efficacy in social surrogacy. In support of expectations, social anxiety was positively related to recruitment, conditional entry, and utilization. Results also revealed that high social anxiety was linked to recruiting to reduce stress. These findings replicate previous research (Arbeau et al. 2012; Boucher and Cummings 2014, 2017) and emphasize the function of social surrogates as a source of social support to manage stress experienced by those who are socially anxious.

Although the pattern of findings for social anxiety was similar to that of shyness, a small distinction between social anxiety and shyness was observed. Similar to previous research in middle childhood (Arbeau et al. 2012), results for emerging adults in the present study revealed shyness and social anxiety were highly, but by no means perfectly, positively correlated. Importantly, however, regression results demonstrated that positive associations between shyness and social surrogacy remained significant, even after controlling for social anxiety. Thus, perhaps Bradshaw's (1998) original conception of social anxiety as an experience that motivates a shy person to seek out the support of a social surrogate is rather fitting. These findings are especially critical, as shyness and social anxiety have been treated as interchangeable constructs in some previous research on social surrogacy (Boucher and Cummings 2014, 2017). The results contribute to recent literature suggesting that shyness and social anxiety are related, yet somewhat distinct constructs (Poole et al. 2017; Scott et al. 2018; Tsui et al. 2017). Additional research should further explore the unique contributions of shyness and social anxiety to social surrogacy across the lifespan.

Social anxiety is considered a motivating factor for seeking out a social surrogate (Bradshaw 1998); however, we also expected that low social self-efficacy may be an important motivator underlying the conditional use, but not necessarily the recruitment, of a social surrogate. Findings regarding social self-efficacy supported this hypothesis. While social self-efficacy was negatively associated with

conditional entry and utilization, it was unrelated to recruitment. Moreover, similar to Bradshaw (1998), less than 2% of the sample reported that the main reason they recruit a surrogate is so that the surrogate can perform social behaviors on their behalf. Further, social self-efficacy predicted efforts to recruit a friend to attend social events, specifically for the purpose of having fun, rather than to reduce stress. Taken together, the findings suggest that emerging adults with higher social self-efficacy feel comfortable entering and navigating social situations on their own, although such interactions are viewed as more fun in the company of a friend. Conversely, emerging adults lacking in social confidence may be reluctant to recruit a surrogate, unless they can rely on that person's skills to help reduce the stress of socially engaging with others.

Ideally, a social surrogate provides emotional support and relief from the stress of entering a potentially threatening social situation (Arbeau et al. 2012), which should lead to increased social participation (Bradshaw 1998; Souma et al. 2008). Repeated social success may subsequently result in higher social self-efficacy for those who rely on social surrogates to engage in social settings. However, if the social surrogate continually performs social behaviors on behalf of an individual (i.e., *over* utilization) (Arbeau et al. 2012), social self-efficacy is likely to remain low. In such surrogacy relationships, social skills and personal mastery experiences necessary to strengthen social self-perceptions and lead to effective independent social interaction may not be acquired (Markovic and Bowker 2015). Nevertheless, social surrogacy can successfully expand friendship networks for university students (Souma et al. 2008). The current study results, considered in connection with this literature, point to the importance of future study into whether the association between social self-efficacy and social participation varies as a function of the degree to which a social surrogate is utilized.

A comparison of the proportion of unique variance in social surrogacy accounted for by social anxiety relative to social self-efficacy suggests that, although social self-efficacy uniquely contributes to social surrogacy (with the exception of recruitment), social anxiety accounted for a larger proportion of unique variance in recruitment, conditional entry, and utilization. These findings suggest that both social self-efficacy and social anxiety play a role in social surrogacy, yet social anxiety may be comparably more important. However, even after accounting for social anxiety and social self-efficacy, social withdrawal subtypes were significantly, albeit modestly, associated with social surrogacy. Importantly, as social withdrawal subtypes were entered simultaneously in the final step of the models, effects for each withdrawal subtype were found while statistically accounting for the other subtypes. This finding demonstrates the importance of considering the unique

effects of social withdrawal in understanding social surrogacy, as the pattern of findings varied for each subtype of withdrawal. Thus, the motivation underlying withdrawn behavior may be important in predicting patterns of social surrogacy. Associations between subtypes of withdrawal and social surrogacy are described in greater detail below.

Shyness

In line with expectations, beyond social anxiety and social self-efficacy, shyness was positively related to recruitment, conditional entry, and utilization. These findings support the social surrogate hypothesis (Bradshaw 1998), demonstrating that shy emerging adults report interest in recruiting friends to help them enter and navigate potentially daunting social contexts.

Considering the conflicting approach-avoidance motivations toward social interaction characteristic of shyness (Poole et al. 2017), it is not surprising that shy students would recruit and use social surrogates. Shy emerging adults want to interact, yet simultaneously fear social interaction (Nelson 2013). As social relationships are an important component of university adaptation (Sevinc and Gizir 2014), social surrogacy can help shy students satisfy their desire to engage with others while keeping anxiety at bay. Indeed, results suggested that stress-relief might play a role in shy emerging adults' motivations to recruit surrogates. These findings are consistent with prior research showing that shy individuals endorse social surrogacy as a means for actively coping with the stress of anxiety-inducing social situations (Arbeau et al. 2012; Bradshaw 1998).

According to Nelson et al. (2008), emerging adults who do not feel confident in their social skills may struggle in or avoid interaction, which can inadvertently reinforce their negative self-perceptions. Perhaps the stressful feelings that shy emerging adults aim to reduce by recruiting social surrogates, as well as their proclivity toward social avoidance, stem in part from doubts regarding their social abilities. The current study's findings regarding social self-efficacy provide some support for this contention. Indeed, shyness was negatively correlated with social self-efficacy, indicating a lack of social confidence among emerging adults high in shyness. During childhood, shy children can become caught in a cycle wherein feelings of social incompetence lead them to avoid interactions and thereby forgo chances to learn important social skills, which may, in turn, reinforce negative social self-beliefs (Rubin et al. 2018). Without practice socializing with peers, these negative social self-perceptions likely remain into emerging adulthood (Grose and Coplan 2015). Although shy university students struggle with developing new social relationships (Denovan and Macaskill 2013), their high

approach motivation may push them to find ways to overcome their social fears and enjoy the benefits of university life that come with socializing (Sevinc and Gizir 2014). Thus, recruiting a social surrogate may be a way for shy students to cope with low social self-efficacy and reduce the stress of social interactions.

Results regarding shyness represent an important contribution to the literature by providing further support for the social surrogate hypothesis (Bradshaw 1998). As the first study to investigate associations between social surrogacy and multiple types of social withdrawal, novel contributions were made from findings on avoidance and unsociability. These findings were particularly interesting for avoidance.

Avoidance

Hypotheses regarding avoidance were partially supported. Following expectations, avoidance was negatively associated with recruitment in the hypothetical scenarios. These findings make sense, given that avoidant individuals actively avoid socializing in response to an intense desire for solitude (Nelson 2013). Contrary to the expectation that avoidance would be unrelated to reason for recruitment, avoidance predicted reports of recruiting to reduce stress. Findings here are seemingly contradictory to the above results for recruitment in the hypothetical scenarios. Specifically, emerging adults high in avoidance reported that they would recruit a friend to accompany them to a generic social event to reduce stress, yet they endorsed avoiding the recruitment of a friend for specific hypothetical social scenarios.

It is not entirely clear how emerging adults develop a propensity toward avoidance, although some speculate that avoidance results from intense anxiety experienced during social interactions in childhood (Nelson 2013). Indeed, the present study showed a positive correlation between avoidance and social anxiety, indicating that avoidant emerging adults report at least some degree of social anxiety. Therefore, social surrogacy in relation to shyness and avoidance is not likely distinguished by social anxiety, but rather by the presence (or absence) of a high approach motivation. Although both shyness and avoidance predicted reports of recruiting surrogates to reduce stress, only individuals high in shyness endorsed making active efforts to recruit for specific hypothetical social scenarios. Social anxiety may motivate, to some extent, both shy and avoidant individuals to recruit a surrogate; however, shy individuals may actively use a social surrogate because they *want* to engage, whereas avoidant individuals may recruit a social surrogate only in circumstances when they *have* to engage. It is entirely possible that emerging adults high in avoidance did not feel they would be obligated to engage in any of the specific hypothetical scenarios described, and would therefore avoid recruitment.

Unsociability

Hypotheses regarding unsociability were similar to those for avoidance, given both withdrawal subtypes experience a low approach motivation (Nelson 2013). Nevertheless, differences between avoidance and unsociability were observed. As expected, results revealed negative associations between unsociability and recruitment, conditional entry, and utilization. These findings indicate that unsociable emerging adults do not typically recruit or use social surrogates. In line with these results and hypotheses, unsociability did not predict a particular reason for recruitment. Thus, unsociable emerging adults did not feel motivated to recruit social surrogates to reduce stress, nor did feel the need to recruit for social enjoyment. Given the general social disinterest characteristic of unsociable emerging adults (Bowker et al. 2016), findings here make sense. Although unsociable emerging adults may not actively seek out opportunities for social interaction, they do not exhibit strong social avoidance tendencies (Nelson 2013; Rubin and Barstead 2014). Such individuals simply have a preference for solitude.

Results showed no correlation between unsociability and social self-efficacy. This finding is consistent with previous research suggesting that, despite their disinterest, emerging adults high in unsociability are capable of participating in social interactions (Barry et al. 2013). Thus, compared to shyness and avoidance, unsociability is unrelated to a deficit in social self-efficacy. A certain degree of social competence among unsociable emerging adults could account, at least in part, for why they do not feel strongly about recruiting a surrogate to relieve stress, unlike those high in shyness and avoidance.

A comparison of the proportion of unique variance in social surrogacy accounted for by each social withdrawal subtype suggests that, although unsociability (and avoidance for recruitment only) uniquely contributes to social surrogacy, shyness accounted for a larger proportion of unique variance in recruitment, conditional entry, and utilization. These findings support Bradshaw's (1998) social surrogacy hypothesis, which states that individuals high in shyness are likely to recruit and use social surrogates and also provides further support for the importance of distinguishing between social withdrawal subtypes as pattern of findings tend to differ for shyness, avoidance, and unsociability (Nelson 2013).

Limitations and Future Research

As with all research, the present study is not without limitations. For instance, the correlational nature of the present study prevents conclusions regarding directionality from being made. Although the social surrogate hypothesis

proposes that social surrogacy benefits shy individuals (Bradshaw 1998), this may not always be the case. Perhaps using social surrogates in a maladaptive manner can be linked to negative outcomes (Arbeau et al. 2012; Markovic and Bowker 2015) or reinforces shyness over time. Given the long-term risks associated with shyness (Grose and Coplan 2015), it is important to investigate the direction in which shyness and social surrogacy influence one another. Moreover, whereas shyness and avoidance among emerging adults are concurrently associated with a variety of negative socioemotional outcomes, such as depression, anxiety, and difficulties with peers, unsociability is not (Nelson 2013). Future research should explore the extent to which social surrogacy contributes to promoting, or hindering, these kinds of outcomes. Since a goal of social surrogacy is to facilitate the acquisition of social skills and increase social performance (Arbeau et al. 2012), researchers should investigate whether social self-efficacy and social anxiety change over time with the use of social surrogates.

Next, participants were exclusively university students. According to Nelson and colleagues (2008), findings from the general population may differ from those derived using student populations, as socially withdrawn students have conquered their fears at least enough to attend university. Thus, some of the most severely withdrawn emerging adults may not be included in this study. Future research should investigate whether these findings extend to the general population of withdrawn emerging adults. Nevertheless, Bradshaw's (1998) social surrogacy measure used in the current study includes scenarios that most emerging adults are likely to encounter in key domains of emerging adulthood, including work, relationships, and education (Arnett 2015). As many, but not all, emerging adults pursue higher education (Arnett 2016), it would be useful to examine social surrogacy in greater detail within work and relationship contexts using a more generalizable sample of emerging adults.

Additionally, future research should consider the prevalence and function of social surrogacy across the lifespan, including within the context of traditional milestones of adulthood such as career, marriage, and parenthood and other markers of adulthood such as personal responsibility and financial independence (Sharon 2016). As shy adults tend to struggle with reaching these milestones relative to their non-shy counterparts (see Nelson et al. 2008 for a review), social surrogacy may help facilitate developmental transitions of adulthood. Alternatively, as obtaining a sense of increased self-reliance is a valued developmental task of emerging adulthood (Arnett 2015, 2016), chronic use of a social surrogate may contribute to delays in experiencing traditional adult developmental milestones. It is important to study various developmental periods because use of social surrogates as it occurs during childhood and adolescence

may not mirror that which takes place during emerging adulthood or beyond.

A large proportion of the sample identified as female (76%), which may also impact the generalizability of the findings. Samples in previous studies have been similarly disproportionate in favor of females (Boucher and Cummings 2014; Bradshaw 1998); however, the sex differences observed in the current study are contrary to those of Boucher and Cummings (2014) and Bradshaw (1998), who found no significant differences between males and females. Due to the inconsistent findings across these studies, future replication research should endeavor to recruit a balanced proportion of male and female participants, which could also aid in improving generalizability. Future research would also benefit from a closer examination of the role of ethnicity in social surrogacy using more diverse samples, as ethnic differences were observed in the current study, whereas Bradshaw (1998) reported no significant ethnic differences.

As with much previous research (Arbeau et al. 2012; Boucher and Cummings 2014; Bradshaw 1998), the present study relied on hypothetical scenarios to assess social surrogacy. It is possible that hypothetical scenarios do not measure actual recruitment, rather, the intention to recruit (Boucher and Cummings 2017). Indeed, in prior comparisons of surrogate use across studies measuring intended recruitment and actual recruitment, results have been somewhat discordant (Boucher and Cummings 2017). Additional research is necessary to determine whether emerging adults' intentions to recruit and use social surrogates translate into real-life behavior. Given the small effect sizes observed in the present study, such future studies will help determine the practical significance of the findings. Expanding the kinds of measures used to assess social surrogacy will also provide a more complete understanding of the intricacies of social surrogacy linked with shyness, avoidance, and unsociability. In addition, enjoyment and stress relief were the most common reasons participants endorsed as reasons for recruiting a surrogate, similar to Bradshaw's (1998) findings. However, such reasons might not have accurately depicted the experience of all students. Future research should ask more open-ended questions about reasons for recruitment, as we may have missed other possible reasons that emerging adults recruit.

Although the results fit well within the literature, effect sizes were small, and results should be interpreted with this in mind. Nevertheless, it is interesting to note that the largest of the effects were found for social anxiety, social self-efficacy, and shyness. This indicates that these effects can be considered as meaningful, as they support previous theory and research suggesting that social anxiety, social self-efficacy, and shyness are critical factors related to social surrogacy (Bradshaw 1998).

A final limitation of the present study reflects the sole focus on those who use surrogates, rather than the surrogates themselves. We currently know very little about social surrogates (Arbeau et al. 2012); however, there is likely important information to be uncovered, such as which traits increase the appeal of a surrogate and who is most likely to be recruited (Boucher and Cummings 2017). By deepening our knowledge of social surrogates, we can cultivate a more thorough understanding of the social surrogacy process.

Conclusion

Several noteworthy contributions to furthering knowledge on social withdrawal and social surrogacy have been made through this study. Previous research has shown a positive link between social surrogacy and shyness (Arbeau et al. 2012; Bradshaw 1998), yet whether social surrogacy is related to other forms of social withdrawal, including avoidance and unsociability, has not been investigated in past research. In the current study, patterns of social surrogacy varied between social withdrawal subtypes, further reinforcing the importance of distinguishing between motivations for withdrawn behavior in emerging adulthood (Nelson 2013). Supporting the social surrogate hypothesis (Bradshaw 1998), the findings demonstrated positive associations between shyness and social surrogacy, even while accounting for social anxiety and social self-efficacy. Although shy emerging adults struggle with meeting the social demands placed upon them (Nelson et al. 2008), the results suggest that social surrogacy is one coping strategy that these individuals may use to manage their social anxiety and increase their social confidence and participation in social interactions.

Authors' Contributions LC conceived of the study, participated in its design and coordination, performed the statistical analysis, interpreted the data, and drafted the manuscript. AM participated in the design and coordination of the study, interpreted the data, and drafted the manuscript. KS participated in the design and coordination of the study, and helped to interpret the data and draft the manuscript. All authors read and approved the final manuscript.

Funding The authors did not receive funding to support this research.

Data Sharing and Declaration The dataset generated and analyzed during the current study are not publicly available but are available from the corresponding author on reasonable request.

Compliance with Ethical Standards

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

Ethical Approval Ethics approval for this research was issued by the Saint Mary's University Research Ethics Board (SMU REB file number: 17-046).

Informed Consent Informed consent was obtained from all individual participants included in the study.

References

- Arbeau, K. A., Coplan, R. J., & Matheson, A. (2012). Someone to lean on: Assessment and implications of social surrogate use in childhood. *Social Development, 21*, 254–272. <https://doi.org/10.1111/j.1467-9507.2011.00612>.
- Arnett, J. J. (2015). *Emerging adulthood: The winding road from the late teens through the twenties*. 2nd ed. New York, NY: Oxford University Press.
- Arnett, J. J. (2016). College students as emerging adults: The developmental implications of the college context. *Emerging Adulthood, 4*, 219–222. <https://doi.org/10.1177/2167696815587422>.
- Barry, C. M., Nelson, L. J., & Christofferson, J. L. (2013). Asocial and afraid: An examination of shyness and anxiety in emerging adulthood. *Journal of Family Studies, 19*, 2–18. <https://doi.org/10.5172/jfs.2012.1979>.
- Boucher, E. M., & Cummings, J. A. (2014). Revisiting the social surrogate hypothesis: Social anxiety and recruiting others for social events. *Journal of Social and Clinical Psychology, 33*, 653–672. <https://doi.org/10.1521/jscp.2014.33.7.653>.
- Boucher, E. M., & Cummings, J. A. (2017). Social anxiety and social surrogacy in college roommate relationships. *European Journal of Personality, 31*, 63–84. <https://doi.org/10.1002/per.2090>.
- Bowker, J. C., Ojo, A. A., & Bowker, M. H. (2016). Perceptions of social withdrawal during emerging adulthood in Lagos, Nigeria. *Journal of Adolescence, 47*, 1–4. <https://doi.org/10.1016/j.adolescence.2015.11.006>.
- Bradshaw, S. D. (1998). I'll go if you will: Do shy persons utilize social surrogates? *Journal of Social and Personal Relationships, 15*, 651–669. <https://doi.org/10.1177/0265407598155005>.
- Brown, L. H., Silvia, P. J., Myin-Germeys, I., & Kwapil, T. R. (2007). When the need to belong goes wrong: The expression of social anhedonia and social anxiety in daily life. *Psychological Science, 18*, 778–782. <https://doi.org/10.1111/j.1467-9280.2007.01978.x>.
- Buote, V. M., Pancer, S. M., Pratt, M. W., Adams, G., Birnie-Lefcovitch, S., Polivy, J., & Wintre, M. G. (2007). The importance of friends: Friendship and adjustment among 1st-year university students. *Journal of Adolescent Research, 22*, 665–689.
- Connor, K. M., Kobak, K. A., Churchill, L. E., Kitzelnick, D., & Davidson, J. R. T. (2001). Mini-SPIN: A brief screening assessment for generalized social anxiety disorder. *Depression and Anxiety, 14*, 137–140.
- Coplan, R. J., & Ooi, L. (2014). The causes and consequences of “playing alone” in childhood. In R. J. Coplan & J. C. Bowker (Eds.), *The handbook of solitude: psychological perspectives on social isolation, social withdrawal, and being alone* (pp. 111–128). West Sussex, UK: John Wiley & Sons, Ltd.
- Coplan, R. J., Rose-Krasnor, L., Weeks, M., Kingsbury, A., Kingsbury, M., & Bullock, A. (2013). Alone is a crowd: Social motivations, social withdrawal, and socioemotional functioning in later childhood. *Developmental Psychology, 49*, 861–875. <https://doi.org/10.1037/a0028861>.
- Denovan, A., & Macaskill, A. (2013). An interpretative phenomenological analysis of stress and coping in first year undergraduates. *British Educational Research Journal, 39*, 1002–1024.

- Di Giunta, L., Eisenberg, N., Kupfer, A., Steca, P., Tramontano, C., & Caprara, G. V. (2010). Assessing perceived empathic and social self-efficacy across countries. *European Journal of Psychological Assessment*, 26, 77–86. <https://doi.org/10.1027/1015-5759/a000012>.
- García-Lopez, L., & Moore, H. T. A. (2015). Validation and diagnostic efficiency of the mini-SPIN in Spanish-speaking adolescents. *PLoS ONE*, 10, e0135862 <https://doi.org/10.1371/journal.pone.0135862>.
- Grose, J. R., & Coplan, R. J. (2015). Longitudinal outcomes of shyness from childhood to emerging adulthood. *Journal of Genetic Psychology*, 176, 408–413.
- Helbig-Lang, S., & Petermann, F. (2010). Tolerate or eliminate? A systematic review on the effect of safety behavior across anxiety disorders. *Clinical Psychology: Science and Practice*, 17, 218–233.
- Markovic, A., & Bowker, J. C. (2015). Social surrogacy and adjustment: Exploring the correlates of having a ‘social helper’ for shy and non-shy young adolescents. *The Journal of Genetic Psychology*, 176, 110–129. <https://doi.org/10.1080/00221325.2015.1007916>.
- Meng, H., Huang, P., Hou, N., & Fan, J. (2015). Social self-efficacy predicts Chinese college students’ first-year transition: A four-wave longitudinal investigation. *Journal of Career Assessment*, 23, 410–426. <https://doi.org/10.1177/1069072714547482>.
- Nelson, L. J. (2013). Going it alone: Comparing subtypes of withdrawal on indices of adjustment and maladjustment in emerging adulthood. *Social Development*, 22, 522–538. <https://doi.org/10.1111/j.1467-9507.2012.00671.x>.
- Nelson, L. J., Padilla-Walker, L. M., Badger, S., Barry, C. M., Carroll, J. S., & Madsen, S. D. (2008). Associations between shyness and internalizing behaviours, externalizing behaviours, and relationships during emerging adulthood. *Journal of Youth and Adolescence*, 37, 605–615. <https://doi.org/10.1007/s10964-007-9203-5>.
- Nikitin, J., & Schoch, S. (2014). Social approach and avoidance motivations. In R. J. Coplan & J. C. Bowker (Eds.), *The handbook of solitude: psychological perspectives on social isolation, social withdrawal, and being alone* (pp. 202–223). West Sussex, UK: John Wiley & Sons, Ltd.
- Osorio, F. L., Crippa, J. A., & Loureiro, S. R. (2007). A study of the discriminative validity of a screening tool (Mini-SPIN) for social anxiety disorder applied to Brazilian university students. *European Psychiatry*, 22, 239–243. <https://doi.org/10.1016/j.eurpsy.2007.01.003>.
- Peschard, V., & Philippot, P. (2017). Overestimation of threat from neutral faces and voices in social anxiety. *Journal of Behavior Theory and Experimental Psychiatry*, 57, 206–211. <https://doi.org/10.1016/j.jbtep.2017.06.003>.
- Poole, K. L., Van Lieshout, R. J., & Schmidt, L. A. (2017). Exploring relations between shyness and social anxiety disorder: The role of sociability. *Personality and Individual Differences*, 110, 55–59. <https://doi.org/10.1016/j.paid.2017.01.020>.
- Rubin, K. H., & Barstead, M. G. (2014). Gender differences in child and adolescent social withdrawal: A commentary. *Sex Roles*, 70, 274–284. <https://doi.org/10.1007/s1199-014-0357-9>.
- Rubin, K. H., Bowker, J. C., & Coplan, R. J. (2018). Avoiding and withdrawing from the peer group. In W. M. Bukowski, B. Laursen & K. H. Rubin (Eds.), *Handbook of peer interaction, relationships, and groups*. 2nd ed. (pp. 322–346). New York, NY: Guilford Press.
- Scott, G. G., Boyle, E. A., Czerniawska, K., & Courtney, A. (2018). Posting photos on Facebook: The impact of narcissism, social anxiety, loneliness, and shyness. *Personality and Individual Differences*, 133, 67–72. <https://doi.org/10.1016/j.paid.2016.12.039>.
- Sevinc, S., & Gizir, C. A. (2014). Factors negatively affecting university adjustment from the views of first-year university student: The case of Mersin University. *Kuram ve Uygulamada Egitim Bilimleri*, 14, 1301–1308.
- Sharon, T. (2016). Constructing adulthood: Markers of adulthood and well-being among emerging adults. *Emerging Adulthood*, 4, 161–167. <https://doi.org/10.1177/2167696815579826>.
- Souma, T., Ura, M., Isobe, C., Hasegawa, K., & Morita, A. (2008). How do shy people expand their social networks? Using social surrogates as a strategy to expand one’s network. *Asian Journal of Social Psychology*, 11, 67–74. <https://doi.org/10.1111/j.1467-839X.2007.00244>.
- Taylor, C. T., & Amir, N. (2012). Modifying automatic approach action tendencies in individuals with elevated social anxiety symptoms. *Behaviour Research and Therapy*, 50, 529–536. <https://doi.org/10.1016/j.brat.2012.05.004>.
- Tsui, T. Y. L., Lahat, A., & Schmidt, L. A. (2017). Linking temperamental shyness and social anxiety in childhood and adolescence: Moderating influences of sex and age. *Child Psychiatry and Human Development*, 48, 778–785. <https://doi.org/10.1007/s10578-016-0702-z>.

Leanna M. Closson is an Associate Professor in the Department of Psychology at Saint Mary’s University. Her research focuses on peer relationships and social competence during adolescence and emerging adulthood.

Alicia McVarnock is a Master’s student in the Department of Psychology at Saint Mary’s University. Her research interests include social development and social withdrawal in adolescence and emerging adulthood.

Kellie Sanford is a Bachelor of Arts (Honours) alumna in the Department of Psychology at Saint Mary’s University. Her research interests include social competence among adolescents and emerging adults and the prevention of sexual violence.