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“I Just Can’t Do It!” The Effects of Social Withdrawal
on Prosocial Behavior

Ashley M. Fraser

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Master of Science

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ABSTRACT

“I Just Can’t Do It!” The Effects of Social Withdrawal on Prosocial Behavior

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While there has been research published on social withdrawal during childhood, little work has been done on the effects of social withdrawal during emerging adulthood. Since emerging adulthood is a time of transition and initiation to new environments and social contexts, it would be expected to be a time of great anxiety for individuals predisposed to social withdrawal (shyness). Shyer emerging adults are at risk for internalizing behaviors, lowered self-concept, and delayed entry into romantic relationships, therefore, they may also be more challenged when it comes to enacting prosocial behaviors. In addition, the inability to self-regulate emotions may mediate this relationship. This study utilized a sample of 774 college students (538 women, 236 men; 79% Caucasian; $M = 20$ years old) to test these hypotheses. Results showed that emerging adults who were more socially withdrawn were less likely to exhibit prosocial behaviors toward strangers, friends, and family members. In addition, results showed that the inability to self-regulate emotions, or cope, mediated this relationship in all cases. Implications include the salience of emotional self-regulation as a prerequisite to prosocial behavior directed toward multiple others and the possibly detrimental influence of shyness on relationship and community involvement during emerging adulthood.

Keywords: prosocial behavior, social withdrawal, emotion regulation

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Introduction

Researchers have shown that more socially withdrawn, or shy, individuals are at risk for internalizing behaviors that may inhibit their ability to interact with others (Cheek & Krasnoperova, 1999). Social withdrawal affects individuals throughout the life course (Caspi, Elder & Bem, 1990), but this dispositional trait may have an especially salient impact during emerging adulthood, a time typically characterized by exploration and new experiences. Previous research has shown that shyer emerging adults may not enter into romantic relationships, take on leadership roles, or pursue a career track as readily as emerging adults who are less shy (Caspi, 2000; Hamer & Bruch, 1997; Leck, 2006). More socially withdrawn emerging adults might also be challenged in exhibiting socially desirable prosocial behaviors toward various targets. This could be because biological inhibitors lead to decreased ability to self-regulate emotions, also termed disregulation (DeWall, Baumeister, Gailliot, & Maner, 2008). Since self-regulation of emotion can enable prosocial behavior (Lopes, Salovey, Cote, Beers, & Petty, 2005), those who are more disregulated (e.g. shyer individuals) may struggle to exhibit prosocial behaviors towards strangers, friends, and family members as well.

Theoretical Foundations

This study is grounded in personality theory, which says individual disposition can be rooted in biological processes (Eysenck, 1994). Seventy-five years ago, Allport (1937) wrote theoretically about personality development, explaining that each individual will have traits, or dispositional factors, that regularly and persistently determine behavior in a variety of contexts and situations. This means that socially withdrawn traits can determine behavior over time because genetics and biology underlie a shy disposition (Calkins, 2004). Since temperament is

present at the time of birth, shyness is believed to appear early in life and influence behavior over time due to temperamental stability (Kagan, 1999).

A theoretical approach that emphasizes disposition, which is similar to personality theory, sheds additional light on the processes examined in the current study because it is also a common framework used when studying prosocial behavior (Eisenberg, Fabes, & Spinrad, 2006). Theorists and researchers have postulated that prosocial behavior will be seen consistently throughout the life-course among some individuals because prosocial behavior is a product of temperament (much like shyness), self-regulatory ability, and personality, which are all considered stable constructs by definition (Eisenberg et al., 1999). Further, there is also evidence that there may even be a “prosocial personality” that emerges early in childhood and then remains stable throughout adolescence and beyond (Eberly & Montemeyer, 1999). Theorists adhering to this position suggest that emotional self-regulation and subsequent prosocial behavior may be rooted in genetic make-up (Eisenberg et al., 1999). Taken together, these theories suggest that dysregulation may be responsible for the potential relation between shyness and prosocial behavior. Thus, the current study attempts to better understand the mechanisms through which this theoretical process might be occurring.

Social Withdrawal

Although less work has been done on the effects of social withdrawal during emerging adulthood, there has been an array of research published on social withdrawal during childhood. Social withdrawal includes consistent displays of solitary behavior among both familiar and unfamiliar peers (Burgess, Rubin, Cheah, & Nelson, 2001), and describes children who experience wariness and anxiety when faced with any kind of social novelty (Coplan, Prakash, O’Neil, & Armer, 2004). There is not necessarily a threshold that one reaches to be considered

socially withdrawn. Rather, shyness can be seen on a continuum where some individuals experience slightly more physiological reactivity than average children while others feel an extreme amount of reactivity.

Physiologically, shy children have lower vagal tone, more adrenaline production, and more reactive sympathetic nervous systems in general (Fox, Henderson, Marshall, Nichols, & Ghera, 2005). These physiological characteristics may help explain why shy children also have more health problems such as irregular sleep patterns, constipation, allergies, and higher cortisol levels (Kagan, Reznick, & Snidman, 1988). Since shyness is a relatively stable trait throughout the life-course (Caspi, Elder & Bem, 1990), risk factors that originate in childhood may have consequences that last into emerging adulthood.

Shy behaviors can also be ameliorated or exacerbated through environmental influences such as parenting (Burgess, Rubin, Cheah, & Nelson, 2001) and peer group experiences. The insecure parental attachment common among shy children (Kochanska, 1998) combined with inhibited temperament poses a great risk for the development of anxiety within the peer group (Rubin, Bowker, & Kennedy, 2009). Indeed, shy children are consistently more bullied, excluded, rejected, and victimized by others (Chen, DeSouza, Chen, & Wang, 2006; Stewart & Rubin, 1995). More withdrawn children also exhibit fewer empathic behaviors toward peers (Findlay, Girardi, & Coplan, 2006). This is not to say that shy children do not have the cognitive capacity to feel empathy, but rather that they are more reluctant to engage in prosocial behaviors associated with empathy such as helping due to social anxiety. Relationships with friends and parents can also be weakened if mothers become over-controlling and over-involved with their children, which is often the case with shy children (Rubin, Hastings, Stewart, Henderson, &

Chen, 1997). These parenting behaviors may prevent shyer children from developing the self-regulation, self-initiated coping, or self-efficacy needed to establish friendships.

Having socially withdrawn tendencies can present additional challenges during emerging adulthood, especially for college students. Emerging adults explore their identities by trying out different jobs and having multiple relationships, however shyer emerging adults may not have as many opportunities to do these things because anxiety inhibits them from interacting. In fact, in two different studies where college students were asked to have a conversation with an unknown stranger, more socially withdrawn emerging adults not only talked less, but also reported greater frequency of negative and anxious thoughts, experienced greater somatic arousal, spent more time self-focusing, and showed more overt behavioral signs of anxiety during the experiment (Bruch, Gorsky, Collins, & Berger, 1989; Melchior & Cheek, 1990). It could be that anxiety over any of these interactions is what prevents a shyer emerging adult from dating, getting a job, getting help, or moving (Hamer & Bruch, 1997; Kerr, Lambert, & Bem, 1996; Leck, 2006).

Shyer emerging adults are also at increased risk for many internalizing problems. Researchers have shown that shyer emerging adults were more likely to have increased anxiety, unhappiness, fearfulness, loneliness, depression, and lower self-concepts than their non-shy peers (Dzwonkowska, 2002; Nelson et al., 2008; Schmidt & Fox, 1995). This can be particularly true if shyer students are concurrently experiencing low levels of support from their families (Mounts, Valentiner, Anderson, & Boswell, 2006), which is likely if they have moved away from home to attend college. Therefore, adding to the problems that come from social anxiety and non-assertiveness, shyer emerging adults may struggle to network, make friends, or get to classes if they are feeling depressed and lonely. Low self-esteem may also compound a shyer emerging

adult's tendencies to withdraw from social settings since self-confidence is often needed to face challenging situations.

Prosocial Behavior

Prosocial Behavior is defined as voluntary behavior intended to help or benefit another (Eisenberg, Fabes, & Spinrad, 2006). It can include many different behaviors ranging from comforting a crying family member to volunteering at a humanitarian organization. Prosocial behaviors have been correlated with a number of positive developmental outcomes during adolescence (Eisenberg, Fabes, & Spinrad, 2006); however less is known about prosocial behavior during emerging adulthood, although researchers have shown that the *variety* of prosocial behaviors increases greatly during this time (Fabes, Carlo, Kupanoff, & Laible, 1999). Emerging adults may also take part in different prosocial activities in attempts to show their developed consideration for others as an indicator of their progress toward adult status (Mayseless & Scharf, 2003). Indeed, relational maturity, which often includes an identity that is oriented toward the consideration of others, has been associated with perceived adult status in emerging adulthood (Padilla-Walker, Barry, Carroll, Madsen, & Nelson, 2008). Additionally, emerging adults who display high levels of altruism also show high levels of moral reasoning and reduced aggression and risk taking behaviors, both indicators of positive development (Carlo & Randall, 2002; Nelson & Barry, 2005).

In the majority of work on prosocial behavior, researchers have investigated behavior in relation to strangers. Individuals may help strangers because they feel they have a moral obligation to help any human being in need, regardless of whether or not they have a relationship with that person (Einolf, 2010). However, helping a stranger may be particularly challenging for shy persons whether they feel they have a moral obligation to help others or not. Due to

decreases in group affiliation and intense physiological arousal in the face of novelty (Fox, Henderson, Marshall, Nichols, & Ghera, 2005), a complete stranger may be particularly daunting to approach for a shyer individual. Therefore, shyer emerging adults may be more likely to help in ways that do not involve approaching strangers (Suda & Fouts, 1980), or they may not help at all due to temperamental challenges and social limitations.

While the majority of research focuses on prosocial behavior toward strangers, some researchers have found that most prosocial behavior is actually directed toward those that someone is around most frequently, namely family and friends (Staub & Sherk, 1970). This may be done in an attempt to maintain relationships that are already well established (Eisenberg, 1983), or because behavioral expectations are clearly laid out, encouraged, and reinforced within the home (Coombs & Landsverk, 1988). For these reasons, it would seem that shyer individuals may not have the same inhibitions that they do when attempting to help a stranger. Because prosocial behavior would be occurring in familiar settings, with familiar people, physiological responses may be abated because novelty is abated as well. Also, prosocial behavior may be expected within the family regardless of whether or not children are shy. Within a family, shy emerging adults may also be aware that their prosocial attempts will be accepted and appreciated, making it easier to get over inhibitions they might have.

Contrasted with family relationships, prosocial behavior is often seen among peers because friends are often chosen based upon personality similarity, and individuals are more prone to help those who are similar to themselves (Levy, Freitas, & Salovey, 2002). However, this fact may be confounded for shyer emerging adults in that a lack of friendships leads to a lack of opportunities to help their peers. In the friendships that they do have, it may also be harder to offer assistance because shyer individuals feel they are not emotionally close enough to easily

comfort a peer in distress. Not helping due to dispositional characteristics may in turn create a relationship pattern where helping behavior is not expected. For these reasons, it would seem that shy emerging adults may struggle to act prosocially even toward family members and friends.

Emotional Self-Regulation

Having an inhibited temperament negatively influences an individual's ability to self-regulate his or her emotions, or cope (Calkins, 2004). Coping is defined as conscious efforts to manage or control specific internal and external demands that are taxing or exceed the resources of the person (Lazarus & Folkman, 1991). Eisenberg, Fabes and Murphy (1995) showed that children with more inhibited (shy) temperaments also had an inhibited or avoidant regulatory style, meaning shy children showed higher negative emotionality, greater personal distress, and lower coping ability (more dysregulation) than children with less inhibited temperaments.

However, it must be understood that the inability to self-regulate emotions (or dysregulation) is an inherent temperamental construct much like inhibition is, containing elements of heightened reactivity along with low soothability. Indeed, the fact that shy children have lower vagal tone (Fox, Henderson, Marshall, Nichols, & Ghera, 2005) is evidence that their autonomic nervous systems have trouble self-regulating. Thus, it is not surprising that multiple researchers have linked heightened shyness with lower emotional self-regulation as the two constructs are physiologically interconnected to such a great extent. Rather, this study seeks to show that shy emerging adults struggle to cope, or intentionally make up for what their bodies do not do naturally, more so than non-shy or less-shy others. Developmentally, it may also be that young children's dysregulation is what leads them to act shy in the first place. However, by emerging adulthood, shy behavior is likely firmly established. Therefore, an increased challenge in overcoming physiological reactivity (poor regulation) then compounds the existing shyness.

Particularly in the face of novelty, shyer emerging adults may not be able to overcome or deliberately lessen their emotional response to the extent that they could then help someone in distress.

Understanding this disadvantage is important because researchers have shown that the process of self-regulating emotions, or coping, enables prosocial behavior (Kennedy & Kramer, 2008). For example, DeWall and colleagues (2008) found that when a helping situation presented itself, emotional self-regulation helped manage conflicting motivations (e.g. selfishness v. altruism). However, having consistently heightened biological reactivity may deplete the emotional energy a shyer person has. Not having the emotional or physical energy to help may then cause them to leave a room or building instead of staying to help a stranger, friend, or family member. Again, this is not to say that shyer individuals do not feel concern or empathy for someone in need, rather they may be emotionally unable to overcome their anxiety or fear in order to actually carry out the helping behavior (Young, Fox, & Zahn-Waxler, 1999).

Taking these connections between temperament and emotional self-regulation, and the subsequent connections between emotional self-regulation and prosocial behavior, it would seem that dysregulation may mediate a negative relationship between social withdrawal and prosocial behavior. This may be true because more socially withdrawn individuals are not only inhibited biologically, but also have the added disadvantage of poor coping skills (Blair, Denham, Kochanoff, & Whipple, 2004).

Gender Differences

While we would not expect shyness to be more prevalent in one gender over another due to its roots in biological temperament, some researchers have shown that the *outcomes* associated with shyness may differ by gender, being worse for males (Rubin, Burgess, Kennedy, & Stewart,

2003). However, Nelson et al. (2008) found no gender differences in relation to internalizing behaviors, externalizing behaviors, risk behaviors, or relationship problems for shy emerging adults. Gender differences associated with prosocial behavior are better understood. Indeed, researchers have consistently shown that females show higher levels of prosocial behavior than males (Carlo, Reoesch, Knight, & Koller, 2001), and these differences get larger as age increases through adolescence (Eisenberg & Fabes, 1998). Thus this study is exploratory regard to gender differences.

Hypotheses

Considering the empirical research and theoretical foundations afore mentioned, shy emerging adults may have decreased ability to act in prosocial ways toward strangers, friends, and family members. As discussed in previous literature, this may be due in part to the intense physiological reactivity experienced in the face of novel social interactions (Young, Fox, & Zahn-Waxler, 1999), but also due to relational dynamics between shy emerging adults and their friends and family members (Nelson et al., 2008). While researchers have found that young children with socially withdrawn temperaments at age two were less helpful to others (Young, Fox, & Zahn-Waxler, 1999), we do not know if this remains true in emerging adulthood, a time period that facilitates identity development through exploration of new settings and relationships (Arnett, 2000). Further, we do not know the process through which temperament impacts the inhibition of prosocial behavior. Disregulation may be one factor that links increased social withdrawal with decreased prosocial behavior.

Therefore, this study has three primary research questions. Our first research question asks if being more socially withdrawn is directly associated with decreases in prosocial behavior toward strangers, friends, and family members and we hypothesize that relations will indeed be

negative. Secondly, this study seeks to investigate whether decreased emotional self-regulation, or dysregulation, will partially mediate these associations. We hypothesize that dysregulation will be most salient in relation to strangers, but that it will mediate between social withdrawal and prosocial behavior toward all targets. Finally, we will examine these associations for males and females separately to identify differences across gender. We expect that mean levels of prosocial behavior will be higher for females (Carlo, Reoesch, Knight, & Koller, 2001), but we want to explore how gender may moderate the overall associations between social withdrawal, dysregulation, and prosocial behavior within the model.

Methods

Participants

The participants for this study were selected from an ongoing study of emerging adults and their parents, entitled Project READY (Researching Emerging Adults' Developmental Years). This project is a collaborative multisite study that is being conducted by a consortium of developmental and family scholars. Participants included 774 undergraduate and graduate students (538 women, 236 men; 79% Caucasian; $M = 20$ years old) recruited from four college sites across the country: a mid-sized East Coast private university, a large West Coast public university, a large Midwestern public university, and a large Southern public university.

Procedure

Participants completed the Project READY questionnaire via the Internet (see <http://www.projectready.net>). The use of an online data collection protocol facilitated unified data collection across multiple university sites and allowed for the survey to be administered to emerging adults. Participants were recruited through faculty announcement of the study in undergraduate courses. Professors at the various universities were provided with a handout to

give to their students that had a brief explanation of the study, as well as directions for accessing the online survey. Interested students then accessed the study website with a location-specific recruitment code. Informed consent was obtained online, and only after consent was given could the participants begin the questionnaires. Participants were offered \$20 for their participation.

Measures

Social Preference/Sociability. In order to measure fearful-shyness, participants answered questions from the Child Social Preference Scale that had been adapted for college students (Coplan, Prakash, O'Neil, & Armer, 2004). Questions were answered on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample questions included, "I wish I could spend more time with other people, but I feel nervous about interacting with them," and "Sometimes I turn down chances to hang out with other people because I feel too shy." The portion of this scale used to assess fearful-shyness had adequate internal consistency ($\alpha = .88$).

Emotional Self-Regulation. In order to measure emotional self-regulation, participants answered questions on the Emotional Self-Regulation Subscale (Novak & Clayton, 2001). Participants answered questions on a 5-point scale ranging from 1 (*never true*) to 5 (*always true*). A sample question includes "I am often afraid I will lose control over my feelings." This four-question scale had adequate internal consistency ($\alpha = .83$). Scores will be reverse coded for this study (higher scores indicating disregulation, or lowered ability to self-regulate emotions).

Prosocial Behavior. Participants' personal characteristics were examined by assessing their character strengths using the Kindness/Generosity Subscale (Peterson & Seligman, 2004). Participants responded to items on a 5-point Likert scale ranging from 1 (*not like me at all*) to 5 (*very much like me*). This 15-item measure was broken down into three subscales, assessing prosocial behavior toward strangers, friends, and family members. Sample questions for

strangers included, “I really enjoy doing small favors for people I do not really know,” and “I go out of my way to cheer up people who seem sad, even if I do not know them.” Sample questions for friends include, “I help my friends, even if it is not easy for me,” and “I really enjoy doing small favors for my friends.” Sample questions for family members include, “I help my family, even if it is not easy for me,” and “I voluntarily help my family members with things they need.” Internal consistency of these scales was sufficient ($\alpha = .85$ to $.93$).

Results

Descriptive Statistics and Correlations

Bivariate correlations, means, and standard deviations of all study variables (separately for males and females) can be seen in Table 1. Analysis of Variance (ANOVA) tests were also run to better understand differences by gender. Findings suggested that males and females did not statistically differ on measures of social withdrawal, $F(1,766) = 0.015, p = .905$, or disregulation, $F(1,766) = 0.036, p = .849$. However, males exhibited lower levels of prosocial behavior than did females toward strangers, $F(1,766) = 16.29, p < .001$, friends, $F(1,766) = 64.52, p < .001$, and family members, $F(1,766) = 47.24, p < .001$ (see means in Table 1).

Structural Equation Model

Analyses were then conducted using Analysis of a Moment Structure (AMOS; Arbuckle, 2012) to perform structural equation models (SEM). First, a measurement model was conducted with the five latent variables, namely, social withdrawal, disregulation, and prosocial behavior toward strangers, friends, and family members. To test for latent variable invariance as a function of gender, multi-group models were estimated and compared using χ^2 difference tests. Standard procedures were used in AMOS to examine invariance in the latent variables and revealed that model fit was best when measurement weights were constrained across groups but

all other intercepts and residuals were allowed to vary across groups. This model led to acceptable fit, $\chi^2 = 1112.068$, $df = 503$, $p < .001$; CFI = .936; TLI = .930; RMSEA = .040

Next, a structural model was constructed with direct paths between social withdrawal and prosocial behavior towards strangers, friends, and family members, as well as indirect paths using disregulation as a mediator between social withdrawal and prosocial behavior toward the three targets. In terms of direct paths, there were significantly negative associations between social withdrawal and prosocial behavior toward strangers ($\beta = -.17$ [-19], $p < .01$) and family members ($\beta = -.11$ [-.14], $p < .01$) for males and females. The direct path between social withdrawal and prosocial behavior toward friends was significant for females ($\beta = -.21$, $p < .001$) but not for males ($\beta = .06$, $p = .320$). Results suggested that social withdrawal was positively associated with disregulation for males and females ($\beta = .20$ [.24], $p < .001$), and disregulation was subsequently negatively associated with prosocial behavior toward strangers ($\beta = -.11$ [-.10], $p < .05$), friends ($\beta = -.14$ [-.16], $p < .001$), and family members ($\beta = -.12$ [-.13], $p < .001$). All regression weights can be seen in Model 1. Maximum likelihood bootstrapping with a 95% confidence interval (see Shrout & Bolger, 2002) was used to test mediating relations. The test revealed that all of the standardized indirect (mediated) effects were significant ($p = .01$). A table containing standardized direct, indirect, and total effects can be seen in Table 2.

To test for path differences as a function of gender, measurement weights, intercepts, and residuals were constrained across groups and X^2 differences were calculated. This process revealed that only measurement weights should be constrained to be equal across groups due to invariance. Building upon this baseline model, structural constraints were then placed on each distinct regression path to determine if individual estimates differed by gender (Widaman, Ferrer, & Conger, 2010). Only one path constraint led to a reduction in model fit, so the structural

model was allowed to vary across groups on that path, from social withdrawal to prosocial behavior toward friends, but all other paths were left constrained across gender for parsimony and for greater power in estimating the model (Vandenberg & Lance, 2000). This final model yielded acceptable fit $\chi^2 = 930.584$, $df = 493$, $p < .001$; CFI = .954; TLI = .949; RMSEA = .034. To test for path differences and relative strength as a function of target, each path was constrained across targets and X^2 differences were calculated. Results of the X^2 difference analysis showed that all path constraints lead to statistically equivalent models. Thus, the paths between disregulation and all three targets of prosocial behavior were equal in strength.

Discussion

This study sought to examine the relations between social withdrawal and prosocial behavior toward strangers, friends, and family members during emerging adulthood. We also sought to better understand the role of disregulation as a mediator between these variables. This intermediate link helps us better understand how internal processes may both help and hinder prosocial behavior when one has a shy personality. Consistent with our hypotheses, we found that being socially withdrawn was positively associated with disregulation. Disregulation was then negatively associated with prosocial behavior toward all targets (see Model 1). Surprisingly, we found that no pathway between disregulation and prosocial behavior toward separate targets was statistically stronger than the others, meaning the negative indirect relation between social withdrawal and prosocial behavior was not strengthened or weakened due to relational context. Overall, our findings show that the consequences of being more socially withdrawn during emerging adulthood are manifest in multiple contexts, and that disregulation adds to the difficulty of social situations above and beyond shyness.

Prosocial Behavior toward Multiple Targets

Findings revealed that social withdrawal had direct negative associations with prosocial behavior toward strangers, friends, and family members (path to friends significant for females only). The strongest association for males was between social withdrawal and prosocial behavior toward strangers (also significant for females). This aligns with our hypothesis that helping a stranger may be the most difficult for a shy emerging adult due to the social novelty of the situation. Indeed, approaching a stranger ranks among the most fearful situations for those who are not socially withdrawn (Handy & Cnaan, 2007); therefore it is logical that this situation would be even more daunting for those who have increased physiological distress in unfamiliar social situations. Unfortunately, this means that shyer emerging adults may be missing out on the fulfillment and personal enrichment associated with volunteering and helping during the college years (Padilla-Walker, Barry, Carroll, Madsen, & Nelson, 2008).

Interestingly, the strongest association for females was between social withdrawal and prosocial behavior toward friends (this path was non-significant for males). This finding might be explained by the fact that females generally show greater social sensitivity within relationships than males (Derntl et al., 2010) and place greater importance on peer-group belonging (Newman, Lohman, & Newman, 2007). Thus, they may desire friendships more than males and also be more attentive to how their personality traits are affecting their friendships. Further, McNells and Connolly (1999) found that girls were more likely than boys to establish intimacy in their friendships and also feel anxiety over its absence. Indeed, it may be that females feel more anxiety over helping a friend due to the social gravity of that situation. This might have important implications for shyer emerging adult women because a lack of prosocial behavior in a friendship can negatively affect relationships when friendships can provide a buffer to loneliness,

offer support, and give a sense of belonging during the stressful transition to college life (Oswald & Clark, 2003).

Increased physical distance combined with increased pressure to be independent from parents and form new relationships might partially explain the direct negative association between social withdrawal and prosocial behavior toward family members (found for both genders). It could also be that years of over-solicitous parenting (Rubin, Hastings, Stewart, Henderson, & Chen, 1997) perpetuate the need for a socially withdrawn emerging adult to limit interaction (including prosocial behavior) with family members once they are old enough to do so. This parenting practice may also create a pattern for only receiving help rather than giving it to parents, which might also account for the negative association. In turn, decreases in prosocial behavior might contribute to lower relationship quality with family members, which we know exists for those who are more socially withdrawn (Nelson et al., 2008). Indeed, one implication of this finding is that decreased helping behavior might hurt relationships during the college years, especially when coupled with the increased distance for those emerging adults who move out of the parental home. We should note that while the negative association discussed was statistically significant, it was not particularly strong. Thus it should not be assumed that all relationships between shy emerging adults and their parents are strained or deleterious. Nevertheless, our findings do show that social withdrawal during emerging adulthood is associated with lower levels of helping behavior toward all targets.

Regardless of target, shyer emerging adults' decreased prosocial behavior may have intrapersonal implications along with interpersonal ones. Indeed, many individuals may feel that prosocial behavior toward strangers and also within relationships signifies a more moral personality. Indeed, shyer emerging adults may keenly notice that they are not as prosocial as

others and perceive it as a character flaw or failing on their part. This could contribute to internalizing behaviors, or lower self-esteem, as previously documented in the literature on social withdrawal (Nelson et al., 2008; Nelson, Rubin, & Fox, 2005).

Disregulation as a Mediator

While our findings link social withdrawal directly with decreases in prosocial behavior, these associations can also be found indirectly through disregulation. As we hypothesized, it would seem that shy emerging adults, who already experience heightened reactivity due to physiology, also have the disadvantage of not being able to compensate for their body's natural responding. Indeed, in this case increased distress from shyness is accompanied with increased challenge in overcoming it. Interestingly, we found that indirect effects through disregulation were equally significant for strangers, friends, and family members, while direct associations were not. We take this to mean that there may be multiple reasons why shyer emerging adults do not help various others (poor relationship quality, increased novelty, etc.), but the inability to cope is present regardless of relational context. This supports personality theory (Allport, 1937) which suggests that physiology and subsequent personality traits are inborn and consistent across all social settings.

Indeed, this finding also suggests that a relationship context may not be as salient to prosocial behavior as is physiological response. Emotional self-regulation may be prerequisite for many behaviors, but certainly for prosocial behavior toward others, including those with whom there is a relationship. Indeed, the ability to disregard aversive emotions, focus on the recipient, and maintain attention to the problem at hand are steps that must be taken within most helping situations, regardless of the beneficiary. Thus, this skill may be vital to acquire (particularly for those who are more socially withdrawn), in order to enhance relationships and

be more active members in the community during a time when involvement facilitates self-esteem and identity development (Arnett, 2000).

This finding is consistent with existing literature showing that increased social withdrawal is associated with decreases in disregulation and a separate body of literature showing that disregulation is associated with decreases in prosocial behavior. However, this mediational model shows that increased shyness is associated with decreases in prosocial behavior *via* disregulation. Indeed, no literature that I am aware of has explained the association between shyness and prosocial behavior using intrapersonal mediators. It may seem intuitive that a more socially withdrawn personality would be associated with decreased social interaction; however, this model allowed us to explore how an internal factor may account for this association. While we have found that the inability to cope is part of the explanation, we note that other mediators between shyness and prosocial behavior may exist (e.g. anxiety, self-esteem, relationship quality) that are in need of further investigation.

Gender Differences

Although we did report higher mean scores on prosocial behavior for females, our model showed very few gender differences in direct and mediated paths. In fact, the only pathway that differed by gender was the direct one found between social withdrawal and prosocial behavior toward friends (as discussed above). We interpret our results to mean that social withdrawal is generally affecting emerging adults similarly during the college years, regardless of gender. Our findings correspond with Nelson et al.'s (2008) conclusions that the social consequences of being shy are just as salient for females as males in modern American culture. The opportunities and pressures to be educated, network, and pursue a meaningful occupation have never been greater for both men and women. Being socially withdrawn can inhibit exploration in any of these areas

as well as in regards to prosocial behavior. Since prosocial behavior is beneficial to development for males and females, our findings demonstrate that being socially withdrawn may have negative drawbacks within relationships and communities for both genders.

Limitations and Conclusions

This study adds to the current literature on social withdrawal and prosocial behavior during emerging adulthood in a number of ways. However, the study is not without limitations. First, while I did find meaningful associations, they were small to moderate in strength. Social withdrawal during emerging adulthood is a relatively unexplored area of research at present and more work needs to be done examining behavior as well as intrapersonal mediators in order to truly understand the challenges that face shy emerging adults during this time. Results show that shy emerging adults are struggling to self-regulate their emotional responses and participate in helping behavior. However, not as much is known about their overall adjustment to college life.

Secondly, our data examined college students specifically rather than a more generalizable population of emerging adults. This limitation is particularly salient as the most socially withdrawn emerging adults may not attend universities or move into campus housing. Indeed, it could be that many to most shy emerging adults live with the family of origin longer and attend community college or work close to home. This group of shy emerging adults may have an entirely different set of challenges than those who attend universities out of high school.

Thirdly, we did not have sufficient data to examine relationship quality within this sample. Since we know that shy individuals have lower relationship quality with friends and family members to begin with (Nelson et al., 2008) and that relationship quality is related to prosocial behavior (Eisenberg, 1983), data measuring these constructs would have been particularly helpful in understanding these relations.

Fourth, our data was cross-sectional in nature and therefore causality cannot be determined. Longitudinal data would be helpful in achieving a more realistic picture of how shy emerging adults on and off of college campuses progress through this highly exploratory and transitory time of life. Indeed, longitudinal studies might also examine how the role of emotional self-regulation or other mediators can assist in dealing with the social anxiety that accompanies a shy disposition.

Finally, we are also aware that there may be multiple reasons for an individual to be more socially withdrawn. Indeed, while we know that temperamental disposition is at the root of social fear, some individuals may withdraw from social settings due to disinterest or active rejection from the peer group. Findings and implications may be far different for the student who is shunned rather than another student who wants to be involved (or prosocial), but feels too much anxiety to do so. Hopefully, future research will tackle some of these complex questions and processes.

Despite these limitations, findings significantly add to the extant literature on social withdrawal and prosocial behavior during emerging adulthood. Prosocial behavior has been linked to a number of positive developmental outcomes during emerging adulthood, including the reaching of adult status. Findings show that being socially withdrawn can hinder prosocial behavior and that a lack of coping skills can perpetuate this negative association in relation to strangers, but also in relation to those one is closer to (family and friends). However, this finding may have positive implications. If emotional self-regulation can be emphasized and learned by those who are socially withdrawn, it may be a useful tool in soothing social unease among multiple others, including strangers, friends, and family members. This is consistent with existing literature showing that emotional self-regulation facilitates conflict resolution and

enhances relationships (Kennedy & Kramer, 2008). Emerging adulthood is often a time of stress, big decisions, and constant change. However it can also be a time of great opportunity and happiness. This study shows that disposition can have a large effect on the emerging adulthood experience and demonstrates how personality traits can both facilitate or limit opportunities to help others.

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Appendices

Tables

Table 1 *Bivariate correlations, means, and standard deviations for social withdrawal, emotion dysregulation, and prosocial behavior toward strangers, friends, and family members. Correlations below the diagonal are for males, above the diagonal are for females.*

	1	2	3	4	5
1. Social Withdrawal	-	.16***	-.22**	-.23***	-.13**
2. Emotion Dysregulation	.29***	-	-.16***	-.12**	-.16***
3. Prosocial Behavior: Strangers	-.10	-.05	-	.41***	.28***
4. Prosocial Behavior: Friends	.03	-.16*	.56***	-	.44***
5. Prosocial Behavior: Family	-.16*	-.19**	.47***	.56***	-
<i>M(SD)</i> Males	2.81 (1.01)	2.27 (0.93)	3.35 (0.75)	4.00 (0.73)	3.99 (0.81)
<i>M(SD)</i> Females	2.82 (1.01)	2.26 (0.80)	3.67 (0.69)	4.38 (0.53)	4.36 (0.62)

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

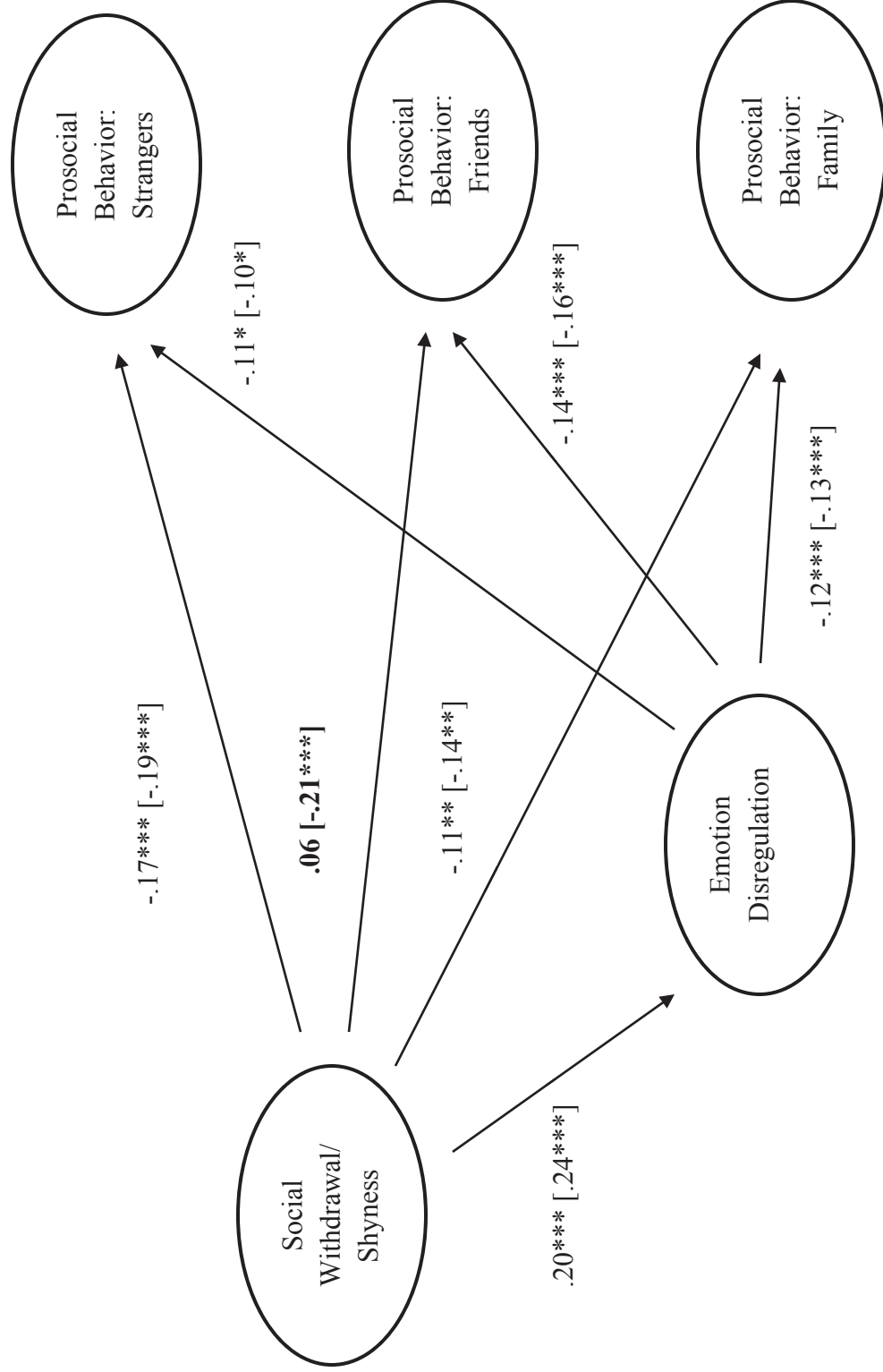
Table 2 *Direct and indirect effects of emotion dysregulation and social withdrawal on prosocial behavior toward strangers, friends, and family members reported for males and females*

<u>Outcome</u>	<u>Effect of Emotion Dysregulation</u>		<u>Effects of Social Withdrawal</u>		Total Effect
	Direct Effect	Indirect Effect	Direct Effect	Indirect Effect	
Prosocial Behavior: Stranger					
Males	-.11*	-.17***	-.02*	-.19**	
Females	-.10*	-.19***	-.03*	-.22**	
Prosocial Behavior: Friends					
Males	-.14***	.06	-.03*	.03	
Females	-.16***	-.21***	-.04*	-.25**	
Prosocial Behavior: Family					
Males	-.12***	-.11**	-.03*	-.14**	
Females	-.13***	-.14**	-.03*	-.17**	

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

Figure

Model 1 Standardized direct and indirect effects of social withdrawal on prosocial behavior directed toward strangers, friends, and family members as mediated by emotion regulation for males and [females]



* $p < .05$, ** $p < .01$, *** $p < .00$; **bolded** path indicates statistical nonequivalence across gender

Comprehensive Literature Review

Introduction

Researchers have shown that more socially withdrawn, or shy, individuals are at risk for internalizing behaviors that may inhibit their ability to interact with others (Cheek & Krasnoperova, 1999). Social withdrawal affects individuals throughout the life course (Caspi, Elder & Bem, 1990), but this dispositional trait may have an especially salient impact on an individual's life during emerging adulthood, a time typically characterized by exploration and new experiences. Previous research has shown that shy emerging adults may not enter into romantic relationships, take on leadership roles, or pursue a career track as readily as emerging adults who are not shy (Caspi, 2000; Hamer & Bruch, 1997; Leck, 2006). More socially withdrawn emerging adults might also be challenged in exhibiting socially desirable prosocial behaviors toward various targets. This could be because biological inhibitors lead to decreased ability to regulate emotions (DeWall, Baumeister, Gailliot, & Maner, 2008). Since internal regulation of emotion can enable prosocial behavior (Lopes, Salovey, Cote, Beers, & Petty, 2005), those who struggle to control their fearful emotions (e.g., shy individuals) may struggle to exhibit prosocial behaviors. Since this premise has not been tested, the purpose of this study is to conduct an examination of the extant literature on social withdrawal, prosocial behavior (toward strangers, family members, and friends), and emotional self-regulation within the context of emerging adulthood. Based upon the reviewed literature, a statistical model measuring these variables will then test whether or not shy individuals' lack of emotional self-regulation is associated with lower levels of helping behavior toward strangers, family members, and friends during emerging adulthood.

Theoretical Foundations

This study is grounded in personality theory, which says individual disposition can be rooted in biological processes (Eysenck, 1994). In fact, theorists have postulated that internal physiological factors can lead to the manifestation of external character traits such as shyness and prosocial behavior. Over 75 years ago, Allport (1937) wrote theoretically about shyness within the context of personality development, writing that each individual will have traits, or dispositional factors that regularly and persistently determine behavior in a variety of contexts and situations. This means that in the case of fearful shyness, socially withdrawn traits will determine behavior over time because genetics and biology underlie a shyer disposition. Fearful shyness especially is thought to be based in biological temperament (Calkins, Fox, & Marshall, 1996; Fox, Henderson, Marshall, Nichols, & Ghera, 2005). Since temperament is present at the time of birth, fearful shyness is believed to appear early in life and influence behavior throughout development due to temperamental stability over time (Kagan, 1999).

A theoretical approach that emphasizes disposition, which is similar to personality theory, sheds additional light on the processes examined in the current study because it is also a common framework used when studying prosocial behavior (Carlo & Randall, 2002; Eisenberg, Fabes, & Spinard, 2006). Theorists and researchers have postulated that prosocial behavior will be seen consistently throughout the life-course among some individuals because prosocial behavior is a product of temperament (much like shyness), regulatory ability, and personality, which are all considered stable constructs by definition (Eisenberg et al., 1999). Further, there is also evidence that there may even be a “prosocial personality” that emerges early in childhood and then remains stable throughout adolescence and beyond (Davis & Franzoi, 1991; Eberly & Montemeyer, 1999; Eisenberg, Carlo, Murphy, & Van Court, 1995; Goodman, 2001; Wentzel,

2003). Theorists adhering to this position suggest that self-regulation and subsequent prosocial behavior may be rooted in genetic make-up as shown through twin studies (Wilson, 1975), and may in fact be heritable across generations (Eisenberg et al. 1999; Rushton, Fulker, Neale, Nias, & Eysenck, 1986; Zahn-Waxler, Robinson, & Edme, 1992). Taken together, these theories suggest that the biological inability to optimally regulate emotion may be responsible for the potential relation between shyness and prosocial behavior. Thus, the current study attempts to better understand the mechanisms through which this theoretical process might be occurring. It will do this through first examining the extant literature on social withdrawal, prosocial behavior, and emotion-regulation, and then investigating a statistical model including these variables.

Emerging Adulthood: A Theory of Development. This study will look at these associations specifically during the developmental stage called emerging adulthood. Emerging adulthood is generally characterized as the age period between the late teens and late twenties in western society (Arnett, 1997, 2000a). It has become a unique period of time when individuals experience frequent change and exploration in areas of love, work, and worldviews (Arnett, 1998; Erikson, 1968; Rindfuss, 1991). Often this stage of life includes attending college. Researchers have shown that nine out of ten young Americans expect to attend college after leaving high school (Schneider & Stevenson, 1999), however only about two-thirds actually do (National Center for Education Statistics, 2002). Whether they attend college from home, move to a university, or end up not going to college at all, this age period includes distinct changes in development. Going into more depth, Arnett (2000a, 2004) has outlined five defining features of this developmental stage, each one of which involves transitions in situation and identity.

The first of Arnett's (2004) defining features of emerging adulthood is perhaps the most central, suggesting that emerging adulthood is the age of identity exploration. Although

adolescence is typically designated as a period of identity formation (Erikson, 1959, 1968), this process is likely to intensify during emerging adulthood because this time period provides exceptional opportunities to try out different ways of living and different options in jobs and relationships (Padilla-Walker, Barry, Carroll, Madsen, & Nelson, 2007). In regards to work, emerging adults generally try out many different jobs. However, work experiences usually become more focused during this time, with emerging adults attempting to discover what they are good at, what they enjoy, and what they think the odds of getting a certain job are (Arnett, 2004; Stringer & Kerpelman, 2010). In many ways, they are laying the groundwork for long-term, satisfying adult careers.

Similar processes are occurring within romantic relationships during emerging adulthood. During this time, emerging adults may have a number of relationships; however their relationships tend to involve deeper levels of intimacy (Feiring, 1996; Furman, Brown, & Feiring, 1999). Through these associations, emerging adults may be attempting to discover what they would want in a long-time partner, what kind of partner they themselves want to be, and what characterizes a satisfying relationship. Again, these associations can lay the groundwork for future, long-term commitments in relationships. Increased exploration during emerging adulthood can not only help in discovering what is favorable, but also in discovering what is *not* liked, what emerging adults are *not* good at, or what they do *not* want to do in the future. These discoveries can be made at work or in relationships, but can also be made as emerging adults explore different identities and worldviews through traveling, trying out different college majors, or volunteering in the community (Mitchell, 2010; Obradovic & Masten, 2007; Ravert, 2009).

The second defining feature of emerging adulthood is that it is an age of instability (Arnett, 2004). While most emerging adults believe that they need to have some sort of “plan,”

that plan is generally subject to many revisions over the seven to ten years of emerging adulthood (Greenspan, 2000). In fact, emerging adults usually have to adjust their plan multiple times as they experience break-ups, change their majors, change jobs, run out of financial aid, or make new friendships. Each of these events (and many others) could lead to a change in relationship status, career path, or residence. In fact, moving rates spike upward at age 18 and then peak in the mid-twenties, showing that emerging adults are a very transient group (U.S. Bureau of the Census, 2003). While these transitions may lead to increased identity formation and satisfaction, they can also add to the instability of this time period.

The third defining feature is that emerging adulthood is a self-focused age (Arnett, 2004). As previously mentioned, emerging adults are trying out different jobs, forging new relationships, and experimenting with different plans. One common factor in all this exploring is that the emerging adults themselves are deciding what opportunities or obligations should be pursued and what can be ignored. Indeed, as Arnett (2004) writes, “It is only...during emerging adulthood, that there are few ties that entail daily obligations and commitments to others” (p.13). Instead, there is a lot of freedom to decide how a normal day will play out, with emerging adults choosing whether or not to attend class, apply for jobs, or call home. This is not to say that emerging adults are inherently selfish, but instead to consider that emerging adults are making their own decisions, becoming self-sufficient, and learning about who they are and what they want from life. In these ways, emerging adulthood becomes a training ground where individuals build the skills that they will need to function in everyday life. For example, emerging adulthood may represent the first time that individuals have their own money that can then be spent in a variety of ways (Sneed et al., 2006). As emerging adults allocate funds toward housing, clothing, food, or savings, they can better understand how to budget in ways that allow them to live the

lifestyles they want then and in the future. This can also be a time when emerging adults decide what their own religious beliefs and practices will be, regardless of what ideologies their friends or parents adhere to (Barry, Nelson, Davarya, & Urry, 2010).

Arnett's (2004) fourth defining feature involves emerging adults feeling like they are in-between. Previous studies have shown that Americans consistently state that there are certain criteria for being an adult, with the top three criteria being: accepting responsibility for oneself; making independent decisions; and becoming financially independent (Arnett, 1994, 1997; Nelson, 2003). These criteria represent gradual processes, ones that generally occur during emerging adulthood. That is why the majority of emerging adults report that they both have and have not reached adulthood, or more aptly, that they have reached adulthood in some areas, but not others. While adolescence is typically characterized by dependence upon parents, emerging adults are often out of the house but not fully independent in their own finances or decision making. That is why they may feel like they are not children, but are still in the process of reaching adulthood, which may be an uncertain place to be for some.

Finally, the fifth defining feature of emerging adulthood suggests that emerging adulthood represents the age of possibilities (Arnett, 2004). Regardless of past experiences, many emerging adults have high hopes and great expectations for the future. In fact, in one survey, nearly 96% of 18-24 year-olds felt that they would eventually get to where they wanted to be in life (Hornblower, 1997). To some, emerging adulthood presents increased opportunities to explore new identities and pursue a desired life-course, while uninhibited by common aspects of adulthood such as marriage and parenthood. Since the range of choices in jobs, relationships, college majors, and overall lifestyle is so wide, emerging adults seem to be disproportionately optimistic about achieving all their future goals. In fact, they tend to believe that they will

achieve greater things in areas of love and work than their parents ever did (Arnett, 2000b). In part, these attitudes are why emerging adulthood is characterized as an age where anything is possible, including great changes in identity as well as opportunities to overcome issues that were present in the family of origin.

Review of Literature

Social Withdrawal in Childhood and Adolescence

Although less work has been done on the effects of social withdrawal during emerging adulthood, there has been an array of research published on social withdrawal during childhood. In the child-based literature, the term *social withdrawal* has been used as an overarching construct that can be operationalized by all forms of solitude across familiar and unfamiliar contexts (Rubin, Burgess, & Coplan, 2002). Further, it can include consistent displays of solitary behavior among both familiar and unfamiliar peers (Burgess, Rubin, Cheah, & Nelson, 2001), and describe children who experience wariness and anxiety when faced with any kind of social novelty (Coplan, Prakash, O'Neil, & Armer, 2004). Although there are other reasons for children to be socially withdrawn such as rejection from the peer group, self-consciousness, or social disinterest (Asendorpf, 1991; Buss, 1986; Coplan, Rubin, Fox, Calkins, & Stewart, 1994), this study will focus on those individuals who have high avoidance tendencies due to social fear.

As previously mentioned, some researchers believe that shyness stems from a biological disposition, or temperament, that predisposes infants to be emotionally wary and fearful in response to novelty. About 15 percent of infants display this kind of negative affect and distress when presented with unfamiliar stimuli (Calkins, Fox & Marshall, 1996; Kagan, Snideman & Arcus, 1998). These same infants then tend to display fearful, cautious, and wary behaviors when presented with novel stimuli and strangers in toddlerhood and childhood (Garcia-Coll, Kagan, &

Reznick; 1984). Physiologically, shyer children have lower vagal tone, more adrenaline production, and more reactive sympathetic nervous systems in general (Fox, Henderson, Marshall, Nichols, & Ghera, 2005). This means that in social settings, a shyer child may be more likely to experience “fight or flight” responses and feel more anxiety than a child with an easy temperament. These physiological characteristics may help explain why shyer children also have more health problems such as irregular sleep patterns, constipation, allergies, and higher cortisol levels (Kagan, Reznick, & Snidman, 1987, 1988). These findings convey the biological challenges shyer children face, as well as show that consequences of shyness can persist over time since they are rooted in physiological processes.

While researchers have shown that social withdrawal has its roots in the biological components of temperament, shy behaviors can also be ameliorated or exacerbated through environmental influences such as parenting (Burgess, Rubin, Cheah, & Nelson, 2001). For example, temperamental shyness has been linked to insecure-anxious attachments with parents (Kochanska, 1998). This may be the case because temperamentally shyer infants are often fussy, deregulated, and are hard to soothe. The insecure attachment combined with a more inhibited temperament poses a great risk for the development of later social withdrawal and anxiety within the peer group (Rubin, Bowker, & Kennedy, 2009). This disadvantaged start can then be compounded if mothers also become over-controlling and overinvolved with their children, which is often the case when there is an anxious-insecure attachment (Erikson, Sroufe, & Egeland, 1985). As children begin to show socially withdrawn, anxious, and shy behaviors with age, researchers have consistently found that mothers of those children tend to be “oversolicitous,” controlling, and overprotective (Bayer, Sanson, & Hemphill, 2006; McShane & Hastings, 2009; Rubin, Hastings, Stewart, Henderson, & Chen, 1997). These parenting behaviors

may prevent the shy child from developing behavioral self-regulation, self-initiated coping, or self-efficacy.

Peer group experiences may also exacerbate shy tendencies. Oh et al. (2008) reported that, “Children whose social withdrawal increased over time (compared to those whose withdrawal decreased or who were never withdrawn) were more lonely, depressed, victimized, and excluded by peers” (p.554). Because socially withdrawn behaviors are not developmentally normal in middle childhood, other children can begin to perceive shy children as awkward, atypical, and deviant at a time when peer interactions and relationships are increasingly emphasized (Rubin, Bukowski, & Parker, 2006). Other children’s perceptions combined with shy children’s tendencies to also be unassertive and submissive with peers may help explain why shy children are consistently more bullied, excluded, rejected, and victimized by others (Chen, DeSouza, Chen, & Wang, 2006; Stewart & Rubin, 1995).

Shyer children are also at risk for a host of other negative correlates and outcomes. For example, shy children tend to have fewer friendships than other children, and the friendships they do have are often poor in quality (Rubin, Wojslawowicz, Rose-Krasnor, Booth-LaForce, & Burgess, 2006). Shy and withdrawn children also demonstrate deficits in overall social competence and interpersonal problem-solving skills (Bohlin, Hagekull, & Anderson, 2005). These deficits, along with shy children’s tendencies to escape stressful, emotional situations may explain why shy-withdrawn children also exhibit fewer empathic behaviors toward peers (Findlay, Girardi, & Coplan, 2006). This is not to say that shy children do not have the cognitive capacity to feel empathy, but rather that they are more reluctant to engage in prosocial behaviors associated with empathy such as helping or comforting due to social anxiety. In turn, shy children’s consistent avoidance of social interaction can also contribute to decreases in

prosocial behavior simply because a lack of social experience can lead to the lack of social understanding necessary for helping behaviors (Coplan, Prakash, O'Neil, & Armer, 2004; Eisenberg & Fabes, 1998).

When they fail in social situations, shy children are also more prone to attribute failure to internal causes, leading to lowered self-concept, which can in turn reinforce shy behaviors (Rubin & Stewart, 1996). In fact, as early as age four shy children report feelings of negativity about themselves, loneliness, and display more signs of anxiety and other internalizing problems (Coplan & Arbeau, 2008; Findlay, Coplan, & Bowker, 2009). Since shyness is a relatively stable trait throughout the life-course (Caspi, Elder & Bem, 1990), these risk factors that originate in childhood may have consequences that last into emerging adulthood.

Social Withdrawal and Emerging Adulthood

With the five defining features of emerging adulthood mentioned above in mind, it may be that being socially withdrawn can present additional challenges during this developmental period, especially for college students. First, more socially withdrawn individuals feel increased anxiety in social settings. In fact, in two different studies where college students were asked to have a conversation with an unknown stranger, more socially withdrawn emerging adults not only talked less, but also reported greater frequency of negative and anxious thoughts, experienced greater somatic arousal, spent more time self-focusing, and showed more overt behavioral signs of anxiety during the experiment (Bruch, Gorsky, Collins, & Berger, 1989; Melchoir & Cheek, 1990). Emerging adults explore their identities by trying out different jobs and having multiple relationships, however shy emerging adults may not have as many opportunities to do these things because anxiety inhibits them from interacting. If shy emerging adults struggle to talk with strangers, it may be particularly challenging to ask someone out on a

date, to feel confident going to a job interview, or to ask a professor for help on an assignment. Changing residences might also be particularly stressful because shy emerging adults have to go through the process of severing one contract, finding new people to live with, and then learning to get along with new roommates. It could be that anxiety over any of these interactions is what prevents a shy emerging adult from dating, getting a job, getting help, or moving (Hamer & Bruch, 1997; Kerr, Lambert, & Bem, 1996; Leck, 2006).

Further, research has shown that shy emerging adults avoid challenging social settings. They have been rated as nonassertive, less likely to exert influence in group settings, and less likely to desire leadership roles (Caspi, 2000). Again, shy emerging adults may miss out on opportunities for identity development because they are afraid of the frequent changes, experimentation, and independent decision-making that come with emerging adulthood. A shy emerging adult may hesitate more than others to join a club when they do not know anyone else in that club. They may also avoid traveling abroad or pursuing a job change because they are not confident asserting themselves. In turn, these inhibitions can delay life-course planning, self-discovery, and possibly financial independence. Empirical research supports these claims, showing that shy emerging adults do indeed experience delayed career development, and can struggle in their academics (Hamer & Bruch, 1997; Hojat, Vogel, Zeleznik, & Borenstein, 1988; Leck, 2006).

Thirdly, shy emerging adults are at increased risk for many internalizing problems. Nelson and colleagues (2008) have shown that shy emerging adults were more likely to have anxiety, depression, and lower self-concepts than their non-shy peers. Others have shown that shy, unsociable emerging adults were also at increased risk for unhappiness, loneliness, fearfulness, and low self-esteem (Dzwonkowska, 2002; Neto, 2001; Schmidt & Fox, 1995). This

can be particularly true if shy students are concurrently experiencing low levels of support from their families (Mounts, Valentiner, Anderson, & Boswell, 2006), which is likely if they have moved away from home to attend college. Therefore, adding to the problems that come from social anxiety and non-assertiveness, shy emerging adults may struggle to network, make friends, or get to classes if they are feeling depressed and lonely. Low self-esteem may also compound a shy emerging adult's tendencies to withdraw from social settings since self-confidence is often needed to face challenging situations.

It is important to note that shyness and its negative consequences may constitute a cyclical process, in which shy emerging adults refrain from social setting due to anxiety, then feel lonely because that they are not more involved. Their lowered self-concepts and possible depression may then dissuade them from participating further, leading them to withdraw in other settings. In light of the physiological and internalized inhibitors shy individuals are dealing with through this process, enacting prosocial behaviors may be particularly challenging for shy emerging adults as prosocial behaviors require active participation in a social setting.

Prosocial Behavior

Prosocial Behavior is defined as voluntary behavior intended to help or benefit another (Eisenberg & Fabes, 1998; Eisenberg, Fabes, & Spinrad, 2006; Staub, 1978). It can include many different behaviors ranging from comforting a crying family member to volunteering at a humanitarian organization. Prosocial behaviors have been correlated with a number of positive developmental outcomes during adolescence (Cauley & Tyler, 1989; Diener & Kim, 2004; Laible, Carlo, & Roesch, 2004), however less is known about prosocial behavior during emerging adulthood. Since there are advances in cognitive functioning during this time as well as increased interpersonal relationships, there may be greater venues and opportunities for prosocial

behavior. In fact, researchers have shown that the variety of prosocial behaviors increases greatly during emerging adulthood (Fabes, Carlo, Kupanoff, & Laible, 1999). We know that many emerging adults are volunteering their time and skills to global humanitarian associations, as demonstrated by the fact that most of the volunteers in the Americorps and Peace Corps are emerging adults (www.cns.gov/americorps; www.peacecorps.gov). It could also be that emerging adults are taking part in prosocial activities such as these in attempts to show their developed consideration for others as an indicator of their progress toward adult status (Marcia, 1966; Mayselless & Scharf, 2003). Indeed, relational maturity, which often includes an identity that is oriented toward the consideration of others, has been associated with perceived adult status in emerging adulthood (Nelson, et al., 2007; Padilla-Walker, Barry, Carroll, Madsen, & Nelson, 2008). Additionally, emerging adults who display high levels of altruism also show high levels of moral reasoning and reduced aggression and risk taking behaviors, both indicators positive development (Carlo & Randall, 2002; Nelson & Barry, 2005).

When deciding whether or not to participate in prosocial behaviors, Pillow, Lovett, and Hill (2008) showed that people of all ages not only consider the nature of the action, but also the social context in which it will occur. This means that while a person may be willing to help a stranger, friend, or family member, the motivation for prosocial behavior may be different depending upon the situation and the target. In addition, levels of prosocial behavior can also be increased or decreased depending on the individual characteristics of the helper.

Prosocial Behavior toward Strangers. In the majority of work on prosocial behavior, researchers have investigated behavior in relation to strangers. Individuals may help strangers because they feel they have a moral obligation to help any human being in need, regardless of whether or not they have a relationship with that person (Einolf, 2010). Helping a stranger may

also be dependent on contextual factors. For example, people may help strangers more readily when they feel that they are affiliated with the same social group (Ellis & Zarbatany, 2007), or when the receiver is perceived as willing to reciprocate prosocial behavior (Staub, 1995).

However, helping a stranger may be particularly challenging for shy persons whether they feel they have a moral obligation to help others or not. This may be due in part to contextual factors. For example, shy emerging adults may not be associated with many social groups due to their emotional inhibitions, reducing the chances that they will feel affiliated with a group of strangers enough that they would offer help. Due to intense physiological arousal in the face of novelty (Fox, Henderson, Marshall, Nichols, & Ghera, 2005), a complete stranger may be particularly daunting to approach for a shy individual. In fact, researchers have shown that young children who are sociable and *low* in shyness are somewhat more likely to approach novel people and things or help (Diener & Kim, 2004; Stanhope, Bell, & Parker-Cohen, 1987), inferring that those high in shyness are less likely to do so. Others have repeatedly shown this association, highlighting how sociability is particularly salient when looking at personality traits indicative of prosocial behavior that is spontaneous, directed toward an unfamiliar person, or seen in an unfamiliar setting (Eisenberg, Cameron, Tryon, & Dodez, 1981; Stanhope, Bell, & Parker-Cohen, 1987; Young, Fox, & Zahn-Waxler, 1999). Therefore, shy emerging adults may be more likely to help in ways that do not involve approaching strangers (Suda & Fouts, 1980), or they may choose not to help at all due to their temperamental challenges and social limitations.

Prosocial Behavior toward Family Members. While the majority of research focuses on prosocial behavior toward strangers, some researchers have found that most prosocial behavior is actually directed toward those that someone is around most frequently, namely

family and friends (Bigelow, Tesson, & Lewko, 1992; Lin & Lin, 2007; Staub & Sherk, 1970). This may be done in an attempt to maintain relationships that are already well established (Chapman, Zhan-Waxler, Cooperman & Iannotti, 1987; Eisenberg, 1983). It could also be that prosocial behaviors are enacted toward family members because behavioral expectations are clearly laid out, encouraged, and reinforced most often within the home (Coombs & Landsverk, 1988; Kerr, Beck, Shattuck, Kattar, & Uriburu, 2003). This supports Eisenberg's (1983) finding that children often explain their compliant prosocial behaviors within the home by referencing their parents' authority and expectations.

Interestingly, prosocial behavior toward family members is most often seen when a family relationship is characterized by acceptance (Eberly, Montemayor, & Flannery, 1993), high levels of attachment (Eberly & Montemayor, 1999), commitment (Rusbult, Verette, Whitney, Slovic, & Lipkus, 1991), and interdependency (Eberly, 1995). When relationships are generally positive, it could be that family members feel more obligated to help one another. Having positive, involved relationships may also make it easier for individuals to assist their family members because they feel comfortable approaching them. It also makes sense that helping behavior might be more readily offered when someone knows that his or her help will be accepted, as is often the case within a family (Eberly, Montemayor, & Flannery, 1993).

For these reasons, it would seem that shy individuals may not have the same inhibitions that they do when attempting to help a stranger. Because prosocial behavior would be occurring in familiar settings, with familiar people, physiological responses may be abated because novelty is abated as well. Also, prosocial behavior may be expected within the family regardless of whether or not children are shy. If the family is moving for example, it does not seem probable that parents would avoid calling their college student to ask for help just because he or she is shy.

Within a family, shy emerging adults may also be aware that their prosocial attempts will be accepted and appreciated, making it easier to get over inhibitions they might have. Despite these indicators, prosocial behavior directed toward family members may be tempered by the fact that shy emerging adults have poorer relationship quality with their family members (Nelson et al., 2008). Thus this study is exploratory in regard to how prosocial shy emerging adults will be toward their family members.

Prosocial Behavior toward Friends. Prosocial behavior may be enacted toward friends for many of the same reasons it is enacted toward family members (Bigelow, Tesson, & Lewko, 1992). However, individuals usually help their peers for a variety of other reasons as well. For example, Staub and Sherk (1970) found that helping behavior was most often seen when participants had a liking for each other and had a strong need for approval from another child. In Staub's original study, children who met these conditions were far more likely to share with another child as well as reciprocate prosocial behaviors geared toward them. Eisenberg (1983) also found a similar pattern of prosocial behavior, showing that helping behavior was more prevalent among children and adolescents when they liked the person that they were helping. Prosocial behavior could also be seen among peers because friends are often chosen based upon personality similarity, and individuals are more prone to help those who are similar to themselves (Levy, Freitas, & Salovey, 2002).

In the case of shy emerging adults, all of this evidence may be confounded by the fact that shy individuals have fewer friendships and poorer friendship quality (Rubin, Wajslowicz, Rose-Kransnor, Booth-LaForce, & Burgess, 2006). If a positive, reciprocal relationship facilitates prosocial behavior, it may be that shy emerging adults are simply missing out on opportunities to help their peers because they lack a venue for it. In the

friendships that they do have, it may also be harder to offer assistance because shyer individuals feel they are not emotionally close enough to comfort a peer in distress. Again, if a friendship is poor in quality, resulting in a distant connection, a helping situation may also be very novel for a shyer emerging adult, resulting in physiological reactions that inhibit prosocial behavior (Coplan, Prakash, O'Neil, & Armer, 2004). Not helping due to dispositional characteristics may in turn reduce the friendship quality further, creating a negative cyclical process. For these reasons, it would seem that shyer emerging adults may struggle to show helping behaviors even toward the friends that they have.

Emotional Self-Regulation

Shyness may hinder prosocial behavior toward certain targets (e.g. strangers, friends) due to heightened emotional reactivity and distress in the face of novelty (Fox, Henderson, Marshall, Nichols, & Ghera, 2005; Eisenberg, Fabes, & Murphy, 1995). However, having heightened emotional reactivity does not render every person incapable of helping behavior. This is true because for most, even extremely intense emotions can be lessened through emotional self-regulation (Kopp, 1982; Morris & Reilly, 1987). Emotional self-regulation has been viewed in two different, but interconnected ways. First, it has been regarded as the control one has of impinging stimuli and internal states (Fabes, Eisenberg, Karbon, & Troyer, 1994). This means individuals who regulate emotions well are the ones who are able to modulate their initial arousal level, possibly through changing the focus of their attention. Alternatively, emotional self-regulation has been seen as the ability to cope. Coping is defined as cognitive and behavioral efforts to manage specific internal and external demands that are taxing or exceed the resources of the person (Lazarus & Folkman, 1991). In this framework, individuals cannot control the level of emotional arousal they experience. Yet those that regulate well are able to deal with and

possibly ameliorate the emotions they feel after the fact. Unfortunately, more socially withdrawn individuals may not be able to use emotion- regulation (coping) as effectively as others because of the intense fear they feel in the face of novelty.

Having an inhibited temperament negatively influences an individual's ability to regulate his or her emotions (Calkins, 2004). Eisenberg, Fabes and Murphy (1995) showed that children with a more inhibited (shy) temperament also had an inhibited or avoidant regulatory style, meaning shyer children showed lowered emotion-regulation, higher negative emotionality, greater personal distress, and lower coping ability than children without inhibited temperaments. Other researchers have found that more inhibited children have less emotion-regulation overall (Eisenberg, Pidada, & Liew, 2001). This may be due to decreased interaction with other children and greater physiological reactivity in general (Fantuzzo, Sekino, & Cohen, 2004; Yagmurlu & Altan, 2010). However, it must be understood that the inability to regulate is an inherent temperamental construct much like inhibition is, containing elements of heightened reactivity along with low soothability. Indeed, the fact that shyer children have lower vagal tone (Fox, Henderson, Marshall, Nichols, & Ghera, 2005) is evidence that their autonomic nervous systems have trouble regulating themselves. Thus, it is not surprising that multiple researchers have linked shyness with low emotion-regulation as the two constructs are physiologically interconnected to such a great extent. Rather, this study seeks to show that shyer emerging adults struggle to cope, or intentionally make up for what their bodies do not do naturally, more so than non-shy others. Particularly in the face of novelty, shyer emerging adults may not be able to overcome or lessen their emotional response to the extent that they could then help another in distress.

Understanding this disadvantage is important because researchers have shown that the process of regulating emotions, or coping, enables prosocial behavior (Deater-Deckard, 2001; Fabes, Eisenberg, Karbon, & Troyer, 1994; Kennedy & Kramer, 2008). For example, Dewall and colleagues (2008) found that when a helping situation presented itself, emotion-regulation helped manage conflicting motivations (e.g. selfishness v. altruism). They also reported that reduced emotional energy and regulation decreased helping behavior overall. These facts could be especially salient to more socially withdrawn emerging adults since their intense emotional reactivity may cause them to remain self-focused rather than becoming other-focused in a helping situation. Consistently heightened biological reactivity may also deplete the emotional energy a shy person has. Not having the emotional or physical energy to help may then cause them to leave a room or building instead of staying to help a stranger, friend, or family member. This is not to say that shyer individuals do not feel concern or empathy for someone in need, rather they may be emotionally unable to overcome their anxiety or fear in order to actually carry out the helping behavior (Young, Fox, & Zahn-Waxler, 1999).

Emotion-regulation is related to a number of positive outcomes. For example, researchers have found that increased emotion-regulation capacity led to greater prosocial tendencies such as social competence (Calkins, 2004), sensitivity to others (Lopes, Salovey, Cote, Beers, & Petty, 2005), comforting behavior (Fabes, Eisenberg, Karbon, & Troyer, 1994), empathy (Tur, Mestre, & del Barrio, 2004), sympathy (Eisenberg et al., 2007), and prosocial behavior following a conflict (Kithakye, Morris, Terranova, & Myers, 2010). Researchers also found that increased emotion-regulation led to higher relationship quality and prosocial behavior between siblings (Kennedy & Kramer, 2008). In contrast, poor emotion-regulation can lead to social anxiety and internalizing problems for those who experience more social fear (Rydell, Berlin, & Bohlin,

2003; Rydell, Thorell, & Bohlin, 2007). If shy persons cannot cope with their emotions effectively, it would seem that they are at increased risk to develop additional anxiety and internalizing problems rather than the prosocial tendencies that would help them succeed socially. Taking these connections between temperament and emotion-regulation, and the subsequent connections between emotion-regulation and prosocial behavior, it would seem that emotion-regulation (or the ability to cope) may mediate a negative relationship between increased social withdrawal and prosocial behavior. This may be true because more socially withdrawn individuals are not only inhibited biologically, but also have the crucial disadvantage of poor coping skills (Blair, Denham, Kochanoff, & Whipple, 2004). A statistical model including emotion-regulation as a mediating variable between shyness and prosocial behavior toward strangers, family members, and friends can be seen in Model 1.

Gender Differences

While we would not expect shyness to be more prevalent in one gender over another due to its roots in biological temperament, research has shown that the outcomes associated with shyness may be more detrimental to male's development (Rubin, Burgess, Kennedy, & Stewart, 2003). Indeed, numerous researchers have shown that more socially anxious men are less satisfied in their adult relationships (Moller & Stattin, 2001), have more problems in their relationships (Caspi, Elder, & Bem, 1990), and may experience greater emotional distress than shy women (Gest, 1997). In a more recent study on shyness during emerging adulthood, Nelson et al. (2008) remarked that shy males may be "'Off-time' in the customary life-course traditions of emerging adulthood" (p.606). This is due to the delay in entry into marriage, parenthood, and stable careers that has been associated with shyness in emerging adulthood (Caspi et al., 1990; Kerr et al., 1996). In conjunction, Caspi et al. (1990) postulated that shy

women may be less prone to experience negative consequences of shyness due to the more conventional patterns of marriage and homemaking rather than employment that women follow.

However, this latter postulate was questioned as Nelson et al. (2008) found no gender differences in relation to internalizing behaviors, externalizing behaviors, risk behaviors, or relationship problems for shy emerging adults. This finding may be due in part to greater expectations placed on women in the last few decades to be just as exploratory, educated, and occupationally savvy as their male counterparts (Carroll et al., 2007; Whitehead & Popenoe, 2001). Thus, the present culture of emerging adulthood may demand just as much social interaction and novel experience from women as men.

While the gender differences associated with shyness are unclear, those associated with prosocial behavior are better understood. For example, researchers have shown that females are consistently more empathetic than males across all areas of social sensitivity (Derntl et al., 2010), and consequently show higher levels of prosocial behavior than males (Carlo, Reoesch, Knight, & Koller, 2001). This finding has been strengthened as researchers have shown that helpfulness and supportive giving are greater for females across six different cultures (Russell, Hart, Robinson, & Olson, 2003; Whiting & Edwards, 1973) and across peer, parent, and teacher reports in various studies (Eisenberg & Fabes, 1998; Shigetomi, Hartmann, & Gelfand, 1981). These differences also seem to get larger as age increases through childhood and adolescence (Eisenberg & Fabes, 1998). Due to the gender differences noted, in this study we expected that levels of prosocial behavior would be higher for females, but we wanted to explore how gender may moderate the associations between social withdrawal, emotion regulation, and prosocial behavior.

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