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Social Withdrawal and Psychological Well-Being  
in Later Life: Does Marital Status Matter?

Melanie Mei Yukie Serrao

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

### Social Withdrawal and Psychological Well-Being in Later Life: Does Marital Status Matter?

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Personality researchers have described dispositional traits to typically show stability over the life course and yet one such trait, shyness, has rarely been examined in later life. Shyness as a global trait has been linked negatively to multiple psychological indices of childhood well-being, including loneliness. Despite the fact that older adults may be already at risk for experiencing heightened loneliness, regret, or decreased fulfillment, research has not assessed these experiences in relation to personality in later life. In recent years, withdrawal research has begun to move past shyness as a global trait to examine the motivations behind socially withdrawn behavior. The current study used regression analyses to examine ways that three facets of withdrawal (shyness, avoidance, and unsociability) may relate to loneliness, regret, and fulfillment in later life. Data from 309 older participants of the Huntsman Senior Games were used to explore associations. Results indicated that shyness, avoidance, and unsociability significantly predicted increased loneliness and regret, and decreased fulfillment to some extent. Further, marital status (married, divorced, widowed) moderated links between withdrawal and psychological indices of later life well-being.

Keywords: social withdrawal, loneliness, later life, regret, fulfillment

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## Social Withdrawal and Psychological Well-Being in Later Life: Does Marital Status Matter?

Many older adults experience social and psychological challenges as loved ones die, as they move into ambiguous social roles, and as they experience physical declines (Pinquart & Sorensen, 2001). In their later years, older adults may have increased social needs as they look to compensate for various physical, emotional, and social losses. Older adults who struggle with or avoid social connections may be at risk for various negative indices of psychological well-being, including heightened loneliness, increased regret, or decreased fulfillment due to increases in various losses (Dahlberg, Andersson, McKee, & Lennartsson, 2015; Holland, Thompson, Rozalski, & Lichtenthal, 2014). Loneliness is a common experience in later life, and has been linked to increased morbidity (Cacioppo & Cacioppo, 2014; Luo, Hawkey, Waite, & Cacioppo, 2012) and mortality (Cacioppo & Cacioppo, 2014; Luo et al., 2012). Similarly, regret encompasses life review colored in a negative light, and has been associated with lower life satisfaction (Jokisaari, 2003; Newall, Chipperfield, Daniels, Hladkij, & Perry, 2009) and increased health problems (Newall et al., 2009). On the other hand, decreased fulfillment, a global assessment of psychological well-being, has commonly been connected with increased mental health problems (Rylands & Rickwood, 2001), conflicted family relationships (James & Zarrett, 2006), and a decrease in quality of life (Rylands & Rickwood, 2001).

Despite these risks, the experiences of socially withdrawn individuals in later life have only recently started to receive attention (e.g., Hill, Yorgason, Nelson, & Jensen, under review). Hill and colleagues (under review) examined links between loneliness and various subtypes of withdrawal, finding significant associations. To build on this emerging work, the purpose of the

current study was to examine ways that social withdrawal subtypes (i.e., shyness, avoidance, and unsocial attitudes) are associated with loneliness, regret, and fulfillment in later life.

Research on loneliness, regret, and fulfillment in old age have indicated decreased loneliness and regret, and increased fulfillment to be linked with a number of factors. These include lower age (Enkvist, Ekstrom, & Elmstahl, 2012; Ferreira-Alves, Magalhaes, Viola, & Simoes, 2014; Lecci, Okun, & Karoly, 1994), male gender (Enkvist et al., 2012; Ferreira-Alves et al., 2014; Lecci et al., 1994), being married (Choi & Jun, 2009; Enkvist et al., 2012; Ferreira-Alves et al., 2014; James & Zarrett, 2006; Lecci et al., 1994; Roesse & Summerville, 2005; Warner, 2012), higher marital quality (Coyne, Thompson, & Palmer, 2002; Frye-Cox, 2013; James & Zarrett, 2006), and living with someone as opposed to living alone (Ferreira-Alves et al., 2014; Gaymu & Springer, 2010; Roseneil, 2006; Russell, 2009).

Marital status may be especially important for older adult psychological well-being as marital relationships provide an important context for later life experiences (Askham, 1995). Previous research has found that not being married was associated with increased loneliness (Warner, 2012), increased regret (Choi & Jun, 2009; Lecci et al., 1994; Roesse & Summerville, 2005), and lower fulfillment (James & Zarrett, 2006) in later life. For example, the lack of a romantic relationship, whether through never being married, widowhood, or divorce, may be linked with heightened negative feelings in later life (Dykstra, 1995; Pinqart, 2003). The current study explores associations between social withdrawal and various psychological factors, as moderated by marital status.

### **Subtypes of Social Withdrawal**

Social withdrawal during childhood has been defined as the consistent display of behaviors involving playing alone in familiar and/or nonfamiliar situations (Rubin & Asendorpf,

1993; Rubin & Coplan, 2004). Researchers and laymen have often misunderstood shyness as a general, global construct. Rubin and Coplan (2004) have therefore classified social withdrawal as an umbrella term to cover subtypes of withdrawal within the general construct that people have often mistaken for trait shyness.

Using an Approach-Avoidance model with children, Asendorpf (1990) has suggested that there are many reasons why individuals might withdraw from social situations. By looking at two different motivations, approaching social situations and avoiding social situations, three subtypes of withdrawal are shy, avoidant, and unsocial. On the approach-avoidance model, shy individuals experience an approach-avoidance conflict (Asendorpf, 1990). In other words, shy individuals have a high desire to interact with people (high-approach), but at the same time experience fear and anxiety that cause many to withdraw from interactions (high-avoidance; Nelson, 2013). Avoidant individuals are classified as having a high-avoidance motive and a low-approach motive. These individuals actively avoid social interactions and have little desire to interact with people. On the other side of the spectrum, unsocial individuals typically demonstrate a low approach motive and low avoidance motive (Asendorpf, 1990). Such individuals are not afraid of interacting with others, nor do they actively avoid others, but are merely less interested in initiating interactions with peers. Unlike shy individuals, the reason they do not interact with others is not due to fear but rather because they prefer solitude.

Although Asendorpf's (1990) model has been used to examine types of withdrawal in early life stages, research has yet to examine these withdrawal subtypes in later adulthood. Hill and colleagues (under review) used Asendorpf's model to examine associations between subtypes of social withdrawal and loneliness in an older sample. Their findings suggest that social withdrawal, no matter the motivation, may add to other factors experienced by older adults

in increasing loneliness in later life. The current study adds to this previous work by examining other crucial elements of life review commonly experienced by older adults (e.g., regret and fulfillment), and how marital status might moderate those relationships.

### **Psychological Well-Being in Later Life**

#### **Loneliness**

Peplau and Perlman (1982) define loneliness as a result of feeling a deficiency in one's relationships. Deficiencies may occur because of a decrease in social networks (Dykstra, 2009) or a decrease in the quality of those networks (Dykstra, 2009; Liu & Rook, 2013). Older adults are no exception in their need and desire for social relationships (Jerrome, 1984; Phillipson, 1997). The reality for many, though, involves increased feelings of loneliness because of the various and more rapid losses faced (Dahlberg et al., 2015; Dykstra, 2009; Pinguart & Sorenson, 2001; Russell, 2009; Wu et al., 2010). Later life transitions can isolate older adults from typical social interactions that they need and desire, and can have negative implications for physical and emotional wellbeing (Hughes, Waite, Hawkley, & Cacioppo, 2004). Specifically, loneliness in later life is commonly linked with health problems (Hawkley & Cacioppo, 2007; Sorkin, Rook, & Lu, 2002), depression (Holvast et al., 2015), and lower self-esteem (Dykstra, 2009).

#### **Regret**

Feelings of regret can come about through action or inaction (Gilovich & Medvec, 1995). Gilovich and Medvic (1995) suggest that regrets from inaction may have a more lasting impact in the long run on individuals, as older adults may find themselves wondering what might have been if they had made different choices (Newall et al., 2009). Researchers have found that older adults express regrets related to family (Choi & Jun, 2009; Jokisaari, 2004), intimate relationships (Choi & Jun, 2009; Lecci et al., 1994; Roese & Summerville, 2005), and lack of

connection with others (Newall et al., 2009). In later life, feelings of regret due to missed opportunities are linked to decreased life satisfaction (Lecci et al., 1994; Newall et al., 2009; Torges, Stewart, & Miner-Rubino, 2005), poorer health (Newall et al., 2009), and depression (Lecci et al., 1994).

### **Fulfillment**

Feeling fulfilled might synonymously be described by reports of life satisfaction (Fisher, 1995). During a reflective time in later life (Erikson, 1963), various aspects specific to this time of life might provide unique contributions to whether an older adult feels fulfilled or satisfied. For example, older adults may experience retirement, thus reporting an increase in life satisfaction (Kumar & Srivastava, 2013), spouses may pass away, thus widows and widowers may exhibit a decrease in life satisfaction (Chipperfield & Havens, 2001), becoming a grandparent may provide more satisfaction in later life (Nakahara, 2011), and contact between a grandparent and grandchild predicts higher life satisfaction (Bouchard & McNair, 2016). As a result of the many changes experienced during later life, older adults have typically expressed feelings of fulfillment or higher life satisfaction in association with satisfaction of marital and familial relationships (James & Zarrett, 2006), living with a spouse opposed to living alone (Kim, Hong, & Kim, 2015), and the quality of relationships (Kim et al., 2015).

### **Social Withdrawal and Indices of Psychological Well-Being in Later Life**

Social motivations (a desire to approach versus to avoid) may play an important role in understanding how various forms of withdrawal relate to loneliness, regret, and fulfillment in later life. Given that each subtype of withdrawal is characterized by different motivations for withdrawing from social settings, it is expected that shyness, avoidance, and unsociability may be uniquely linked to loneliness, regret, and fulfillment.

### **Shyness and Indices of Psychological Well-Being**

The interaction between desire and fear as experienced by shy individuals, might hinder wanted and needed social interaction. On one hand, social interactions may naturally decrease for older adults as loved ones die (Pinquart & Sorensen, 2001), and thus become increasingly dependent on others in their later years (Bornstein, 1994; Fiori, Consedine, & Magai, 2008). Further, older adults may appropriately limit social interactions by becoming selective of social and emotional resources (Carstensen, 1992). The decrease in salient social relationships may necessitate the need for older adults to meet new people. However, older adults with higher levels of shyness may lose out on potential associations in later life as their desire for social connection and the need for it that they may feel due to various losses, may be overcome by fear in creating new and meaningful relationships. As a result, shy older adults may feel heightened feelings of loneliness (Dahlberg et al., 2015; Dykstra, 2009; Ferreira-Alves et al., 2014; Pinquart & Sorenson, 2001; Russell, 2009; Wu et al., 2010), as well as subsequent negative outcomes of psychological well-being.

As shy individuals are classified by a high approach and high avoidance motivation, this may ultimately mean that shy individuals are repeatedly unable to do the things they want to do because they are held back by fear. The continual combination of desire, yet inability to act on what one wants, may exacerbate feelings of regret among older adults (Newall et al., 2009), as later life is often characterized by a time of reflection (Erikson, 1963). In addition, older adults may have more time to wonder about how their life could have been different if they had made different choices. Thus, a pattern may become apparent to shy older adults which includes having high desires to approach situations, but being reluctant to do so. Awareness of this cycle experienced in their life may become especially apparent and difficult to live with in later life.

Similarly, this cyclical nature of high desire, but inability to act according to one's desire, might also be represented through lower levels of fulfillment. In later life, there are many avenues in which and older might experience more fulfillment or higher life satisfaction (e.g., retirement; Kumar & Srivastava, 2013; grandparenthood; Nakahara, 2011). However, among shy individuals, the reality for many is that they prolong typical developmental stages (Asendorpf, Denissen, & van Aken, 2008; Caspi, Bem, & Elder, 1988), possibly due to their fear constantly holding them back from doing what they want. Researchers believe that to achieve fulfillment in later life, individuals must properly overcome previous life crises (Hannah, Domino, Figueredo, & Hendrickson, 1996). Thus, if shy older adults are unable to or struggle with fulfilling desires that could have ultimately improved life satisfaction, they may experience lower levels of fulfillment in later life.

Hypothesis 1. The first purpose of this study was to examine the associations between shyness and loneliness, regret, and fulfillment in later life. As later life is often characterized by a time of much loss, the inability to form desired and needed social connections, exhibited by shy individuals, may be especially detrimental to shy older adults. Thus, it was hypothesized that shyness would be positively associated with loneliness. Similarly, due to the constant nature of being held back and not doing the things one wants to do (i.e., high desire), it was also hypothesized that shyness would be positively associated with regret, and negatively associated with fulfillment.

### **Avoidance and Indices of Psychological Well-Being**

In contrast to shyness, the avoidant subtype of withdrawal may have different consequences in later life. On a theoretical basis, it might be suspected that because avoidant individuals have no desire to interact with others, the lack of and decrease in social interaction

would be harmless to older adults. In other words, avoidance may not be linked with higher loneliness in later life because avoidant older adults choose to withdraw from social situations, rather than withdrawing due to fear. However, later life is often a time of increased dependency (Bornstein, 1994; Fiori et al., 2008). If an avoidant older adults constantly chooses to run from unwanted situations, they may not receive the adequate interactions older adults rely on for physical, mental, or social support. Still, there is a lack of research examining avoidant individuals and psychological well-being outcomes. Thus, the current study addresses this gap in the literature by exploring links between avoidance and loneliness in later life.

As avoidant individuals do not approach social situations, and in fact, completely avoid them, it may seem that these individuals are constantly running from unwanted situations and experiences. The continuous action of running may take away possible positive experiences that the avoidant individual could have had if they did not constantly avoid. The lack of positive experiences over a lifetime of avoiding, may become especially apparent during later life, when older adults find themselves in a time of reflection of their past (Erikson, 1963). Thus, avoidant older adults may feel heightened regret, simply due to avoiding any situation that could have brought joy to their life.

Researchers report that a feeling of fulfillment in later life depends on having overcome crises (Hannah et al., 1996). As avoidant individuals typically elude social interactions, it may be that they also steer clear of possible crises. Thus, avoidant older adults may have not been able to overcome previous life crises because they constantly side stepped unwanted social situations. As a result, avoidant older adults may experience less fulfillment in later life because of the inability to overcome crises.

Hypothesis 2. The second purpose of this study was to examine the association between avoidance and loneliness, regret, and fulfillment in later life. Because avoidant older adults may have accumulated a lifetime of averting social situations and connections, it was hypothesized that avoidance would be positively linked to loneliness and regret, while being negatively linked to fulfillment.

### **Unsociability and Indices of Psychological Well-Being**

On the opposite side of the withdrawal spectrum, unsocial individuals neither approach nor avoid social interaction and as such, *being* alone for these individuals may not translate into *feeling* alone. In their research on solitude in later life, Larson and Lee (1996) found that those who were comfortable during alone time were better adjusted, suggesting that compared to their shy and avoidant counterparts, older adults who prefer solitude might thrive. Still, research examining unsociable personality traits (e.g., introversion) has only suggested a link to loneliness in later life (Peplau & Perlman, 1982; Pinqart & Sorensen, 2001) perhaps due to an insufficient number of studies on the topic (Pinqart & Sorensen, 2001).

Similar to their avoidant counterparts, unsocial individuals are less studied among the withdrawal subtypes. As unsocial individuals are classified as having a low desire to approach social situations, but do not actively avoid them, they might be similarly classified as introverts, who also have a preference for solitude (see Coplan, Ooi, & Nocita, 2015). Research has found that introverts in later life express more regrets when they do actions contrary to what they desire (Seta, Seta, McElroy, & Hatz, 2008). For example, if an introvert would rather stay in for the night but feels forced to be social and go out, then he or she might express this as a regret. As a result, to avoid feeling regret, unsociable older adults may be less likely to engage in unwanted actions; yet still being capable of having other desired experiences. Thus, the lack of engagement

in undesired situations may be exhibited through lower levels of regret for unsociable older adults.

In research on older adults and preference for solitude, Larson and Lee (1996) found that individuals who were comfortable being alone would fare better in later life, a time of much loss and alone time. These older adults seemed to have better psychological adjustment than those who had a more difficult time being alone. It may be that unsociable individuals have a balanced life, because of their ability to enjoy alone time, but also not be held back from outside experiences. As a result, unsociable older adults may reflect back on their life with feelings of fulfillment that their life has fit together in a meaningful way.

Hypothesis 3. The third purpose of this study was to examine the association between unsociability and loneliness, regret, and fulfillment in later life. Research on introversion has suggested that these type of older adults may actually fare well in terms of psychological well-being outcomes because they are comfortable in being alone, without it being necessary. As a result, it was hypothesized that unsociability would not be associated with loneliness and regret, but that it would be positively associated with fulfillment in later life.

### **Marital Status, Social Withdrawal, and Indices of Psychological Well-Being in Later Life**

Studies examining the friendships of shy children have shown that lack of the presence of a friend is linked to increased withdrawal over time (Oh et al., 2008). It may be that withdrawn individuals benefit simply from having someone with you (albeit in a lower quality relationship; Luster, Nelson, & Busby, 2013; Nelson, 2013; Nelson et al., 2008; Tackett, Nelson, & Busby, 2013). Thus, despite difficulty in creating new relationships, if a shy or avoidant older adult is married, they may fare better than their non-married counterparts in relation to loneliness, regret, or fulfillment. Specifically, although not having a large social network, having at least one

person (i.e., a spouse), may help the shy or avoidant older adult feel less lonely. Further, marriage may color the lens through which older adults view their past. The shy or avoidant individual may have regrets because of their inability or lack of desire to engage in various situations, but ultimately, having a spouse could be viewed as accomplishing at least one desired goal in their lifetime, having a shoulder to cry on, or having someone to remind them of the positive aspects in their life. Therefore, as having someone physically and emotionally in your life is both salient and yet difficult to both older adults and withdrawn individuals, examining how marital status might moderate the withdrawal and loneliness, regret, or fulfillment link is an important aspect in understanding withdrawn individuals in later life.

Hypothesis 4. Because much of the withdrawal literature has focused on comparing shy individuals to non-shy individuals and not between the three subtypes of withdrawal, and no research has used the motivations to examine this association in later life, the fourth purpose of this study was to examine the degree to which marital status moderates the associations between withdrawal subtypes and loneliness, regret, and fulfillment in later life. As marriage plays a salient role in the lives of older adults (Askham, 1995), it was hypothesized that individuals with partners would not be as affected by social withdrawal as those that were single.

## **Method**

### **Procedure**

Athletes and spouses involved in the Huntsman Senior Games in St. George, Utah (hereafter referred to as “Senior Games”) were recruited by volunteers at the Senior Games. When athletes participated in a health screening, volunteers who coordinated the screening asked participants if they would be willing to complete a brief survey. Inclusion criteria included being an athlete at the Senior Games over the age of 50. Because too few spouses were involved to

include them in the study, only athlete data was used in the current analysis. The study was approved by the IRB Board of a university in the Western United States.

### **Participants**

Three hundred and four individuals participated in the current study. They ranged in age from 50 to 95 years ( $M_{\text{age}} = 68$ ,  $SD = 8.2$ ), and a little more than half (59%,  $n = 178$ ) were male. The majority of adults were married (79%,  $n = 227$ ), with most being in their first marriage (Mean = 1.66,  $SD = 2.72$ ). For those participants that were currently married or in a stable relationship, the average length of relationship was 36.3 years ( $SD = 15$ ). Approximately 16% of the respondents reported living alone ( $n = 45$ ). See Table 1 for descriptive statistics of the sample.

### **Measures**

#### **Loneliness**

To measure loneliness, participants answered 20 questions from the UCLA Loneliness Scale (Russell, 1996). Response options were on a four-point scale ranging from 1 (*never*) to 4 (*often*). Sample questions included ‘There are people I can turn to’ and ‘I lack companionships’. When applicable, items were reverse scored so that higher scores indicated greater loneliness. The measure showed good reliability ( $\alpha = .88$ ).

#### **Regret and Fulfillment**

Originally taken from Ryff and Heinke’s (1983) measure of ego integrity, the current study assessed two factors of the initial one measure: regret and fulfillment. Participants answered nine questions (five for regret and four for fulfillment) on a six-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Sample questions for regret were ‘Reading old diaries and letters usually brings more pain than pleasure,’ and ‘There are many people whose

life I would prefer to my own,' while sample questions for fulfillment were, 'My life has been fulfilling, and I am not frightened of death,' and 'When I consider the ups and downs of my past life, they somehow fit together in a meaningful way.' Each subscale of the measure showed adequate reliability (regret,  $\alpha = .76$ ; fulfillment,  $\alpha = .65$ ).

### **Social Withdrawal**

To measure social withdrawal, participants answered 12 questions that were modified from the Child Social Preference Scale (Coplan, Prakash, O'Neil, & Armer, 2004). The original scale was revised to be used for emerging adults (Nelson, 2013), and was further revised in the current study for use with older adults by modifying sentences to say "spending time with," rather than "hanging out." Response options were on a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Through this measure, three subtypes of social withdrawal were assessed: Shy was measured with four items (e.g., "I'd like to spend time with other people, but I'm sometimes nervous to"), Avoidant was measured with four items (e.g., "I am the happiest when I am spending time with other people" [reversed]), and Unsocial was measured with four items (e.g., "I like spending time alone more than I like spending time with other people"). The shy ( $\alpha = .86$ ) and avoidant ( $\alpha = .81$ ) subscales showed strong reliability, while the unsocial measure had lower yet adequate reliability ( $\alpha = .68$ ).

### **Marital Status**

Participants were asked to indicate their marital status, with six response options: Married, separated due to marital problems, divorced, widowed, never married, and remarried. For the current study, those who said that they were married or remarried were grouped into a 'married' category, those who said that they were separated or divorced were combined into a 'divorced/separated' category, and 'widowed' individuals were grouped into their own category.

‘Never married’ individuals were dropped from analyses due to an insufficient number of participants in the group.

### **Controls**

Participants reported their age in years. They also indicated their gender (“0” coded as male; “1” coded as female). Participants were asked to indicate who they lived with. Response options included: alone, spouse/partner, adult child, older family member, or other. For the current study, those who reported they lived with a spouse/partner, adult child, older family member, or other were combined into a ‘with someone’ category, while those who said “alone” were categorized as such. Because higher marital quality has been linked with decreased loneliness, regret, and increased levels of fulfillment (Coyne et al., 2002; Frye-Cox, 2013; James & Zarrett, 2006), marital quality was controlled for in the current study. Participants answered five questions from the Norton Marital Quality Index (Norton, 1983). Response options were on a six-point scale ranging from 1 (*very strongly disagree*) to 6 (*very strongly agree*). Sample questions included ‘We have a good relationship’ and ‘My relationship with my partner is very stable.’ Higher scores indicate greater marital quality. The measure showed excellent reliability ( $\alpha = .97$ ).

### **Age, Gender, and Living Arrangements**

Participants reported their age in years. They also indicated their gender (“0” coded as male; “1” coded as female). Participants were asked to indicate who they lived with. Response options included: alone, spouse/partner, adult child, older family member, or other. For the current study, those who reported they lived with a spouse/partner, adult child, older family member, or other were combined into a ‘with someone’ category, while those who said “alone” were categorized as such.

### Analysis Plan

Descriptive statistics and correlations were examined for each of the main study variables (see Tables 1 and 2). Next, three subtypes of withdrawal were modeled as predictors of loneliness, regret and fulfillment within a multivariate regression model, controlling for age, gender, marital status, marital quality and living arrangement. Because the three subtypes of withdrawal (shy, avoidant, and unsocial), were significantly correlated ( $r$ 's all  $> .23$ ), three separate regression models were estimated to avoid collinearity. To examine marital status as a moderator of withdrawal to loneliness, regret, and fulfillment associations, interaction effects between each withdrawal subtype and marital status were examined. Specifically, interaction effects explored comparisons between withdrawn (shy, avoidant, and unsocial) married individuals, withdrawn (shy, avoidant, and unsocial) divorced/separated individuals, and withdrawn (shy, avoidant, and unsocial) widows in relation to loneliness, regret, and fulfillment.

### Results

As seen in Table 2, correlations between the independent and dependent variables were of the expected magnitude and in expected directions. Only shyness was significantly positively associated with loneliness ( $r = .28, p < .001$ ) and regret ( $r = .31, p < .001$ ). Fulfillment was significantly negatively associated with shyness ( $r = -.28, p < .001$ ) and avoidance ( $r = -.13, p < .05$ ). Other notable correlations include marital quality to loneliness ( $r = -.22, p < .01$ ), regret ( $r = -.23, p < .001$ ), and fulfillment ( $r = .21, p < .01$ ). Correlations between social withdrawal variables were significantly associated as well (shy and unsocial:  $r = .24$ ; shy and avoidant:  $r = .41$ ; unsocial and avoidant:  $r = .40$ ).

## Regression Analyses

### Shyness

Ordinary least squares regression models were used to assess how subtypes of withdrawal predicted loneliness, regret, and fulfillment in later life (see Model 1 of Tables 3, 4, and 5). To address the first hypothesis, shyness was modeled as a predictor of loneliness, regret, and fulfillment in later life, controlling for age, gender, living arrangement, marital status, and marital quality. A significant overall model was found when predicting loneliness ( $F(7, 204) = 4.60, p < .001$ ), regret ( $F(7, 221) = 6.58, p < .001$ ), and fulfillment ( $F(7, 221) = 5.22, p < .001$ ), suggesting that shyness and controls were better at predicting the current relationships than a random model. After controlling for all covariates, shyness was significantly associated with loneliness ( $b = .06, p < .001$ ), regret ( $b = .24, p < .001$ ), and fulfillment ( $b = -.18, p < .01$ ). Specifically, a one unit increase on the Likert scale for shyness was associated with a .06 (1/4<sup>th</sup> of a SD) increase on the Likert scale for loneliness, a .24 (nearly 1/4<sup>th</sup> of a SD) increase in regret, and a .18 (nearly 1/4<sup>th</sup> of a SD) decrease in fulfillment. Further, predictors accounted for nearly 14% of the variance in loneliness ( $R^2 = .14$ ), 17% of the variance in regret ( $R^2 = .17$ ), and 14% of the variance in fulfillment ( $R^2 = .14$ ).

### Avoidance

To address the second hypothesis, avoidance was modeled as a predictor of loneliness, regret, and fulfillment in later life, controlling for age, gender, living arrangement, marital status, and marital quality. A significant overall model was found in predicting loneliness ( $F(7, 208) = 2.46, p < .05$ ), regret ( $F(7, 227) = 3.14, p < .01$ ), and fulfillment ( $F(7, 227) = 2.94, p < .01$ ). After controlling for all other covariates, avoidance was related to greater loneliness ( $b = .04, p = .07$ ; albeit only at a trend level) greater regret ( $b = .14, p = .05$ ), and decreased fulfillment ( $b = -.12, p$

< .05). Therefore, a one unit increase on the Likert scale for avoidance was associated with a .04 increase (1/6<sup>th</sup> of a SD) on the Likert scale for loneliness, a .14 increase in regret (nearly 1/6<sup>th</sup> of a SD), and a .12 decrease (nearly 1/6<sup>th</sup> of a SD) in fulfillment. Further, predictors accounted for nearly 8% of the variance in loneliness ( $R^2 = .08$ ), 9% of the variance in regret ( $R^2 = .09$ ) and 8% of the variance in fulfillment ( $R^2 = .08$ ).

### **Unsociable**

To address the third hypothesis, unsociability was modeled as predicting loneliness, regret, and fulfillment in later life, controlling for age, gender, living arrangement, marital status, and marital quality. The overall models were not significant in predicting loneliness ( $p = .39$ ), regret ( $p = .60$ ), or fulfillment ( $p = .10$ ).

### **Interaction of Marital Status and Social Withdrawal Variables**

To address if married, widowed, or divorced older adults differed in how withdrawal subtypes were linked with loneliness, regret, and fulfillment, interaction effects were added to the regression models (see Models 2 of Tables 3, 4, and 5). Using married older adults as the reference group, in first predicting loneliness, significant interaction effects were found between shyness and marital status (widowed individuals:  $b = .37, p < .001$ ; see Figure 1 for a graphic representation of shyness by marital status in predicting loneliness). A simple slopes test showed that shyness was linked with loneliness among widowed ( $b = .42, p < .001$ ) and married respondents ( $b = .05, p < .01$ ), while the association trended towards significance for divorced/separated individuals ( $b = .10, p = .07$ ).

As seen in Table 4, significant interaction effects were also found between unsociability and marital status in predicting loneliness. Moderation analyses showed significant interaction effects between married (reference group) and widowed individuals ( $b = .31, p < .01$ ). Further,

simple slope analyses indicated that unsociability was linked with loneliness only among widowed older adults ( $b = -.29, p < .05$ ). There were no significant interaction effects found among avoidant individuals.

In predicting regret, significant interaction effects were found in assessing the marital status of shy and avoidant older adults. Using married older adults as the reference group, significant interaction effects were found between shyness and marital status (divorced or separated individuals:  $b = .48, p < .05$ ; widowed individuals:  $b = .85, p < .01$ ) and avoidance and marital status (divorced or separated individuals:  $b = .53, p < .05$ .) For shy older adults, simple slope analyses indicated that married, widowed, and divorced or separated individuals predicted regret. However, for avoidant individuals, only those who were divorced or separated were significantly predicted regret ( $b = .62, p < .05$ ). There were no significant interaction effects found among unsocial individuals.

To produce plots of predicted values, the margin command in STATA was used and simple slopes were created using the quietly: margins command in STATA. The margins plot for marital status on shyness, avoidance, and unsociability, and the loneliness and regret relationship are displayed in Figure 1 (shyness by marital status predicting loneliness), Figure 2 (unsociability by marital status predicting loneliness), Figure 3 (shyness by marital status predicting regret) and Figure 4 (avoidance by marital status predicting regret).

### **Discussion**

The goal of this study was to examine subtypes of social withdrawal (shyness, avoidance, and unsociability) in relation to prominent outcomes of psychological well-being in later life, namely, loneliness, regret, and fulfillment. I also examined how these relationships differed based on marital status (i.e., married, divorced/separated, and widowed). Results suggested that

the three forms of social withdrawal, taken from Asendropf's (1990) approach-avoidance model, can each be linked with negative indices of psychological well-being. In general, results revealed partial support for the hypotheses, in that shyness predicted loneliness, regret, and fulfillment in expected directions, but avoidance only predicted increased loneliness. Hypotheses were not supported for the unsociable withdrawal subtype. It was anticipated that unsociable older adults would be different from their shy and avoidant counterparts in relation to positive and negative outcomes. Surprisingly, in line with shy and avoidant respondents, individuals with higher unsociable scores expressed greater loneliness in later life as well.

Regarding the first hypothesis, findings indicated that shyness significantly predicted increased loneliness, regret, and decreased fulfillment. An established relationship of shyness and loneliness has been found in childhood (Rubin, Bowker, & Gazelle, 2010), adolescence (Bowker & Raja, 2011), and emerging adulthood (Bowker, Nelson, Markovic, & Luster, 2014), yet, this link has only recently begun to be examined in later life (Hill et al., under review). As shy older adults are the only withdrawal subtype that includes the approach motivation (Asendropf, 1990), perhaps desire drives various psychological well-being outcomes. Among shy older adults, the desire for social contact, but fear to approach, might add to the decrease in quantity and quality of social networks that accompanies aging, thus experiencing heightened loneliness.

The approach motivation demonstrated by shy older adults may also explain why shyness was also directly linked to regret in later life. The regret experienced may stem from the desire a shy individual has to do various acts, but the inability to approach. It is possible that in later life, older adults are spend time reminiscing about their past, and the shy older adult has more time to recall all of the things they were unable to do because of fear. Similarly, similar understanding of

shy individuals may help us understand why shyness was significantly associated with lower levels of fulfillment. Hannah and colleagues (1996) build on Erikson's theory of psychosocial development (1963) that to achieve fulfillment in later life, previous crises must be overcome. However, for the shy older adult who has difficulty doing things they desire, this may be exhibited through lower levels of fulfillment in later life.

Findings regarding the second hypothesis indicated that avoidance was linked to loneliness only at a trend level and was not associated with the main effect on regret. Similar to shyness, an established relationship of avoidance and loneliness has been found at younger ages (Bowker & Raja, 2011; Bowker et al., 2014; Rubin et al., 2010), only recently being linked in older adulthood (Hill et al., under review). Although avoidant individuals may choose to avoid social situations, because later life is a time of increased dependency, the realization of not having a social network to rely on may be especially harmful for avoidant older adults. Similarly, avoidance significantly predicted decreased fulfillment in later life. Avoidant individuals may withdraw from unwanted situations. Through avoiding, these individuals may be less likely to work through problems effectively, feeling less fulfilled in various parts of their life.

Lastly, regarding our third hypothesis, findings did not indicate any direct relationships between unsociability and loneliness, regret, or fulfillment in later life. It may be that unsociable older adults fare well in later life and therefore do not exhibit any significant outcomes of psychological well-being. However, when examining the marital status of unsociable older adults, a more accurate picture emerged, as is discussed below.

Moderation analyses allowed for a better understanding regarding social withdrawal and psychological well-being outcomes. In examining how marital status might buffer feelings of loneliness, regret, and decreased fulfillment in later life among withdrawn older adults, results

indicated interesting findings. First, in relation to shy older adults, shy married older adults differed in loneliness and regret from their widowed and divorced/separated counterparts. Comparatively, shy widows expressed the highest level of loneliness. It may be that, although shy individuals have typically reported lower quality relationships at younger ages (Luster et al., 2013; Nelson, 2013; Nelson et al., 2008; Tackett et al., 2013), just having someone has proven to be more beneficial (Oh et al., 2008). Similarly, having spousal/partner companionship in later life may be especially beneficial to the shy older adult. Although, shy divorced/separated older adults lack a partner, the choice to divorce might be buffering feelings of heightened loneliness, when compared to situations that are out of your control, like losing a spouse. The death of a partner, no matter how low the relationship quality, may be increasingly hard for the shy widow, because of the desire for social connection. Shy widowed older adults may feel less capable of creating new and meaningful relationships and repairing lower quality familial relationships.

Further, I found that shy married older adults differed in predicting less regret compared to their divorced/separated and widowed counterparts. As many older adults begin reflecting on their life (Erikson, 1963), divorced/separated and widowed older adults may be better able to recognize their regrets as they may have spent more time thinking about their past relationships. On the other hand, shy married older adults may choose to focus on their marriage, and it may not be as readily apparent for them to see other regrets. Also, older adults sometimes express regrets related to family (Choi & Jun, 2009; Jokisaari, 2004), intimate relationships (Choi & Jun, 2009; Lecci et al., 1994; Roesse & Summerville, 2005), and lack of connection with others (Newall et al., 2009), thus, unmarried shy individuals may have heightened feelings of regret because of their desire, yet inability, to have formed more quality social relationships and the lack of current meaningful relationships.

Findings were particularly interesting for outcomes associated with marital status, the avoidant withdrawal subtype, and regret. Although avoidance was not associated with the main effect on regret, the moderating effect of marital status indicated complex associations. Specifically, avoidant married older adults appeared to differ from their divorced/separated counterparts in predicting regret, suggesting that to better understand avoidant older adults, researchers must take into consideration important social variables unique to this period of life (e.g., later life marriage; Askham, 1995). Although never empirically linked, it may be that there are some similarities between the avoidant withdrawal subtype and other avoidant behaviors. Individuals who use avoidant coping strategies have been shown to at times demonstrate increased negative affect due to rumination (Holahan et al., 2005; Nolen-Hoeksema, Morrow, & Fredrickson, 1993). For divorced older adults, avoidance may be especially harmful where negative life events may become the focus during the reflection period of later life. On the other hand, married adults with avoidant tendencies may encounter fewer negative experiences on which to ruminate.

Lastly, although it was hypothesized that unsociability would predict a decrease in loneliness, the overall model suggested no relationship between the two. However, when examining the marital status of unsociable older adults, a more nuanced association emerged. As older adults increased in unsociability, those who were widowed demonstrated a significant decrease in predicting loneliness, in comparison to their married and divorced counterparts. This finding suggests that there are significant differences between shy widows and unsocial widows, as shy widows demonstrated increasingly high levels of loneliness. It may be that unsocial older widows do not desire social connection as heavily as their shy counterparts. Therefore, the loss of a loved one, although sad, may not be exhibited through feelings of loneliness for some

because of unsociable preferences for solitude. In comparison to their unsociable divorced or married counterparts, unsociable widows, although their preference for solitude, may be receiving enough social support to actually prove beneficial because friends and family may be more willing to help widows or widowers. Whereas, through divorce, children may decrease in attachment and feelings of obligation to their parents (Fingerman, Pillemer, Silverstein, & Sutor, 2012). Also, there is often less contact intergenerational once a divorce takes place (Aquilino, 1994). Although married older adults have someone to turn to for intimacy and dependency, they may rely heavily on their spouse (Pinquart, 2003; Stack, 1998) and not receive enough social support to combat higher levels of loneliness.

Consistently, although withdrawal subtypes predicted worse psychological well-being outcomes, being married showed a buffering effect in experiencing less loneliness, regret, and higher levels of fulfillment when comparing married shy and avoidant older adults to divorced/separated or widowed shy and avoidant older adults. Marriage is obviously an important factor to consider when examining individuals in later life. It seems there is something about having at least one person to turn to for individuals who lack social connections for various reasons. However, among individuals who prefer to be alone, the lack of having someone may not be as important.

### **Limitations**

A number of limitations exist with the current study. First, although links are drawn between the subtypes of social withdrawal and loneliness, regret, and fulfillment in later life, our cross-sectional data only allow us to suggest directionality of our predictors to the study's outcomes, rather than assume causality. Other limitations come from our sampling and recruiting methods. We collected data from a volunteer-based senior games. Because we were examining

outcomes related to social withdrawal in older adults, it is possible that our sample was largely made up of social individuals choosing to participate in various sports. However, despite this limitation, there was still variability among the subtypes of withdrawal measured. This variability was possibly due to the availability of group and individual sports offered at the games. Thus it could be that respondents who reported higher levels of social withdrawal were enrolled in individual sporting competitions. Last, measures were assessed through self report surveys. Future research could possibly benefit from assessing feelings and well-being through observational or other alternative methodologies.

### **Conclusion**

Despite the limitations present, the current study makes significant contributions. First, where previous work has been done on social withdrawal in earlier stages of the life course, the current study extends the social withdrawal field to the aging population. Specifically, similar to childhood, adolescence, and emerging adulthood, shyness and avoidance predicts negative psychological well-being outcomes. Second, as later life might be characterized as a time involving many social and psychological changes, requiring increased dependency on others, the current study assesses other factors that contributes to loneliness, regret, and fulfillment in later life. Specifically, we recognize the importance of marital status in older adults' lives and how being a withdrawn married, divorced/separated, or widowed individual can change various psychological well-being outcomes.

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Table 1.

*Descriptive Statistics for Sample*

Variable	Mean/Percentage (SD)	Range	N
Age	68.02 (8.20)	50 – 95	309
Gender		0 – 1	303
Male	58.8%		178
Female	41.3%		125
Who do you live with		0 – 1	282
Alone	16%		45
With Someone	84 %		237
Marital status		1 – 3	289
Divorced/Separated	11.8%		34
Widowed	9.7%		28
Married	78.6%		227
Marital Quality	4.94 (1.02)	0 – 5	252
Shy	2.37 (1.0)	1 – 5	298
Avoidant	1.97 (.70)	1 – 5	305
Unsocial	3.30 (.74)	1 – 5	304
Loneliness	2.70 (.24)	1 – 4	268
Regret	2.06 (.82)	1 – 6	295
Fulfillment	4.89 (.70)	1 – 6	295

Table 2.

*Correlations Between Study Variables*

	1	2	3	4	5	6	7	8	9	10
1. Age	--									
2. Gender	-.29***	--								
3. Married	-.21***	-.08	--							
4. MQ	.05	-.06	.2**	--						
5. LiveWith	-.14*	-.01	.39***	-.02	--					
6. Shy	-.04	-.00	-.10	-.06	.06	--				
7. Avoidant	.03	-.12*	-.07	-.07	.06	.41***	--			
8. Unsocial	-.04	.04	-.12	-.12	-.02	.24***	.40***	--		
9. Lonely	-.00	-.04	-.06	-.22**	-.02	.28***	.11	.06	--	
10. Regret	-.05	.01	-.15**	-.23***	-.00	.31***	.11	.01	.37***	--
11. Fulfilled	.10	-.09	.06	.21**	-.07	-.28***	-.13*	.07	-.21***	-.41***

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

Table 3.

*Unstandardized Coefficients of Shyness, Avoidance, and Unsociability Predicting Loneliness in Older Adults*

Variable	Model 1		Model 2	
	b	SE	b	SE
<b>Shy</b>	.06***	.02	.05**	.02
Age	.00	.00	.00	.00
Gender - Female	-.00	.03	-.00	.03
Marital Status - Married				
Divorced/Separated	-.14	.10	-.33	.20
Widowed	.07	.10	-.84**	.25
Marital Quality	-.06**	.02	-.06***	.02
Live With Someone	-.07	.10	-.14	.10
Interaction - Married				
Divorced/Separated			.05	.06
Widowed			.37***	.09
$R^2$	.14	--	.20	--
<b>Avoidant</b>	.04 †	.02	.03	.02
Age	-6.00	.00	-.00	.00
Gender - Female	.00	.04	-.00	.04
Marital Status - Married				
Divorced/Separated	-.05	.10	-.29	.21
Widowed	.13	.10	-.06	.27
Marital Quality	-.05**	.02	-.05**	.02
Live With Someone	.01	.10	.02	.10
Interaction - Married				
Divorced/Separated			.11	.10
Widowed			.10	.11
$R^2$	.08	--	.09	--
<b>Unsocial</b>	.02	.02	.03	.02
Age	.00	.002	.00	.00
Gender - Female	-.00	.04	.00	.04
Marital Status - Married				
Divorced/Separated	-.04	.10	-.38**	.40
Widowed	.12	.10	1.18**	.42
Marital Quality	-.05**	.02	-.06**	.02
Live With Someone	.01	.10	-.05	.10
Interaction - Married				
Divorced/Separated			.08	.10
Widowed			-.31**	.12
$R^2$	.06	--	.10	--

Note: † > .05, \* $p$  < .05, \*\* $p$  < .01, \*\*\* $p$  < .001. Married was used as the reference category in moderation analyses.

Table 4.

*Unstandardized Coefficients of Shyness, Avoidance, and Unsociability Predicting Regret in Older Adults*

Variable	Model 1		Model 2	
	b	SE	b	SE
<b>Shy</b>	.24***	.05	.19***	.05
Age	.00	.01	.00	.01
Gender - Female	.11	.10	.12	.10
Marital Status - Married				
Divorced/Separated	-.05	.31	-1.50*	.62
Widowed	.09	.31	-2.10**	.75
Marital Quality	-.13**	.04	-.14**	.04
Live With Someone	-.43	.30	-.71*	.31
Interaction - Married				
Divorced/Separated			.48*	.19
Widowed			.85**	.28
$R^2$	.17	--	.22	--
<b>Avoidant</b>	.14 †	.07	.09	.07
Age	-.00	.01	-.00	.01
Gender - Female	.09	.12	.08	.11
Marital Status - Married				
Divorced/Separated	.05	.30	-1.26	.72
Widowed	.20	.31	-.25	.69
Marital Quality	-.15**	.05	-.15**	.05
Live With Someone	-.27	.30	-.27	.30
Interaction - Married				
Divorced/Separated			.53*	.26
Widowed			.23	.32
$R^2$	.09	--	.10	--
<b>Unsocial</b>	.04	.07	.03	.07
Age	-.00	.01	-.00	.01
Gender - Female	.06	.11	.06	.12
Marital Status - Married				
Divorced/Separated	.12	.30	-1.39	1.22
Widowed	.19	.32	1.07	1.30
Marital Quality	-.14**	.05	-.15**	.05
Live With Someone	-.26	.31	-.32	.31
Interaction - Married				
Divorced/Separated			.39	.32
Widowed			-.26	.37
$R^2$	.07	--	.08	--

Note: † > .05, \* $p$  < .05, \*\* $p$  < .01, \*\*\* $p$  < .001. Married was used as the reference category in moderation analyses.

Table 5.

*Unstandardized Coefficients of Shyness, Avoidance, and Unsociability Predicting Fulfillment in Older Adults*

Variable	Model 1		Model 2	
	b	SE	b	SE
<b>Shy</b>	-.18***	.04	-.16***	.04
Age	.00	.01	.00	.01
Gender - Female	-.17	.09	-.18	.09
Marital Status - Married				
Divorced/Separated	-.12	.28	.55	.57
Widowed	.09	.28	.10	.69
Marital Quality	.11*	.04	.11*	.04
Live With Someone	.18	.27	.30	.28
Interaction - Married				
Divorced/Separated			-.22	.17
Widowed			-.35	.26
$R^2$	.14	--	.15	--
<b>Avoidant</b>	-.12*	.06	-.11	.07
Age	.00	.01	.00	.01
Gender - Female	-.18	.09	-.18	.09
Marital Status - Married				
Divorced/Separated	-.12	.26	.18	.64
Widowed	.03	.28	.11	.61
Marital Quality	.11**	.04	.12**	.04
Live With Someone	.09	.27	.10	.27
Interaction - Married				
Divorced/Separated			-.12	.23
Widowed			-.04	.29
$R^2$	.08	--	.08	--
<b>Unsocial</b>	.10	.06	.10	.06
Age	.00	.01	.00	.01
Gender - Female	-.14	.09	-.14	.09
Marital Status - Married				
Divorced/Separated	-.25	.26	-.04	1.08
Widowed	-.00	.28	-.44	1.15
Marital Quality	.12**	.04	.12**	.04
Live With Someone	.08	.27	.10	.27
Interaction - Married				
Divorced/Separated			-.05	.23
Widowed			.13	.33
$R^2$	.08	--	.08	.10

Note: † > .05, \* $p$  < .05, \*\* $p$  < .01, \*\*\* $p$  < .001. Married was used as the reference category in moderation analyses.

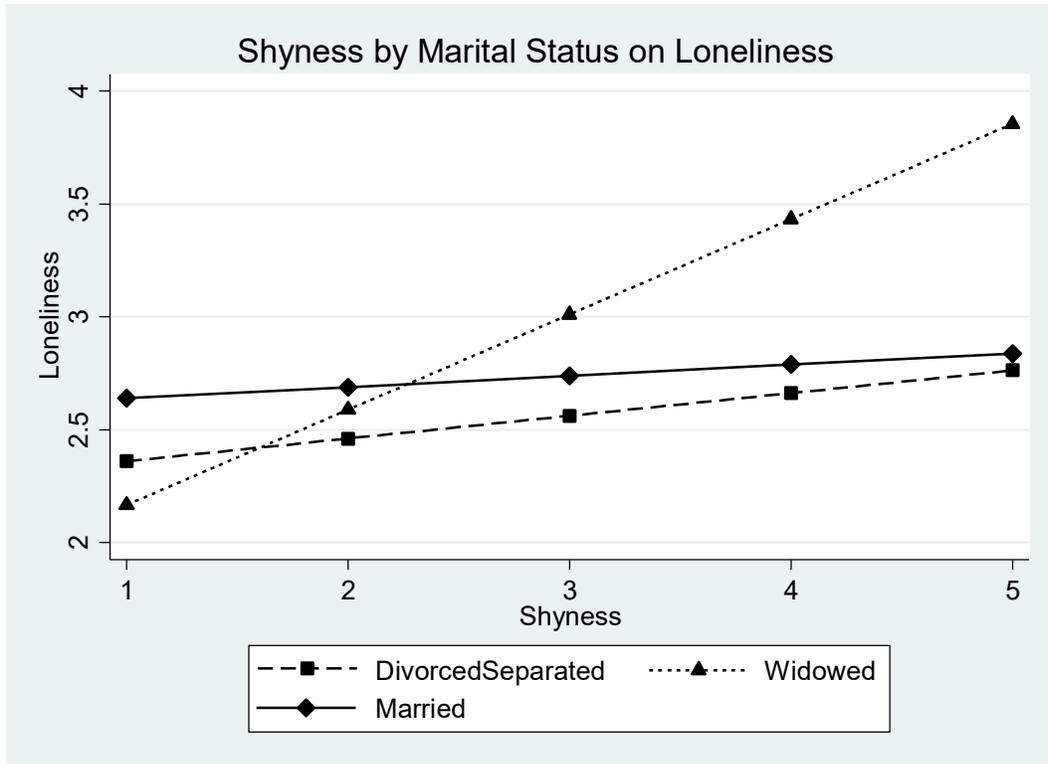


Figure 1. Shyness by Marital Status on Loneliness

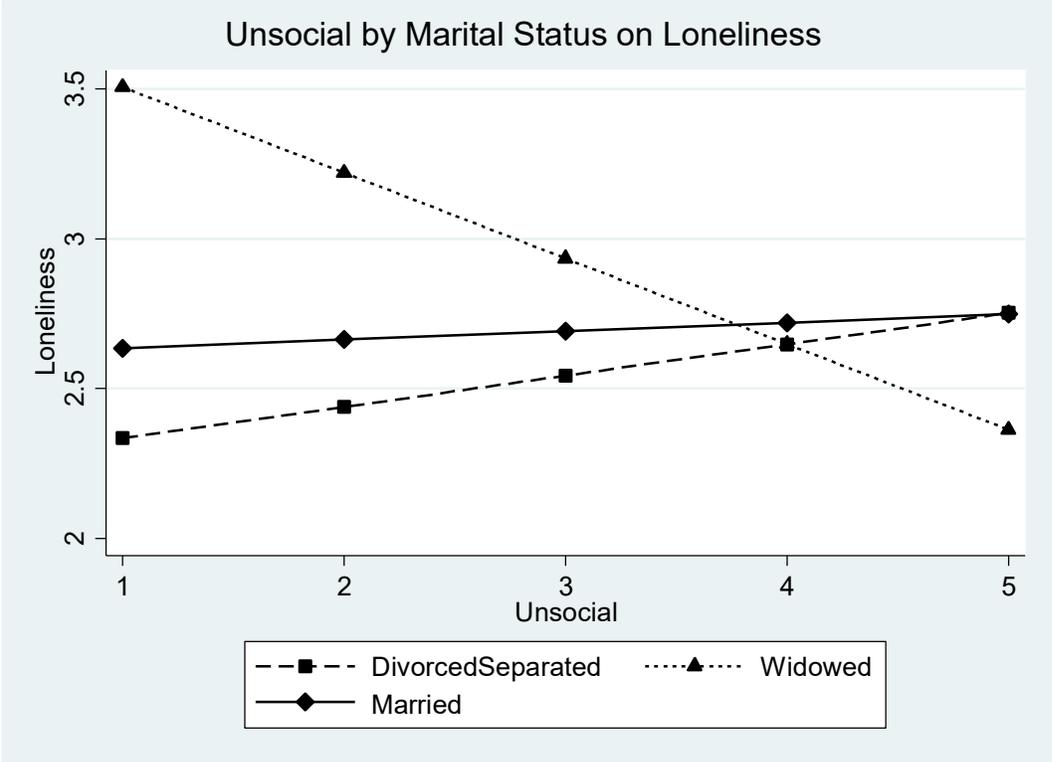


Figure 2. Unsocial by Marital Status on Loneliness

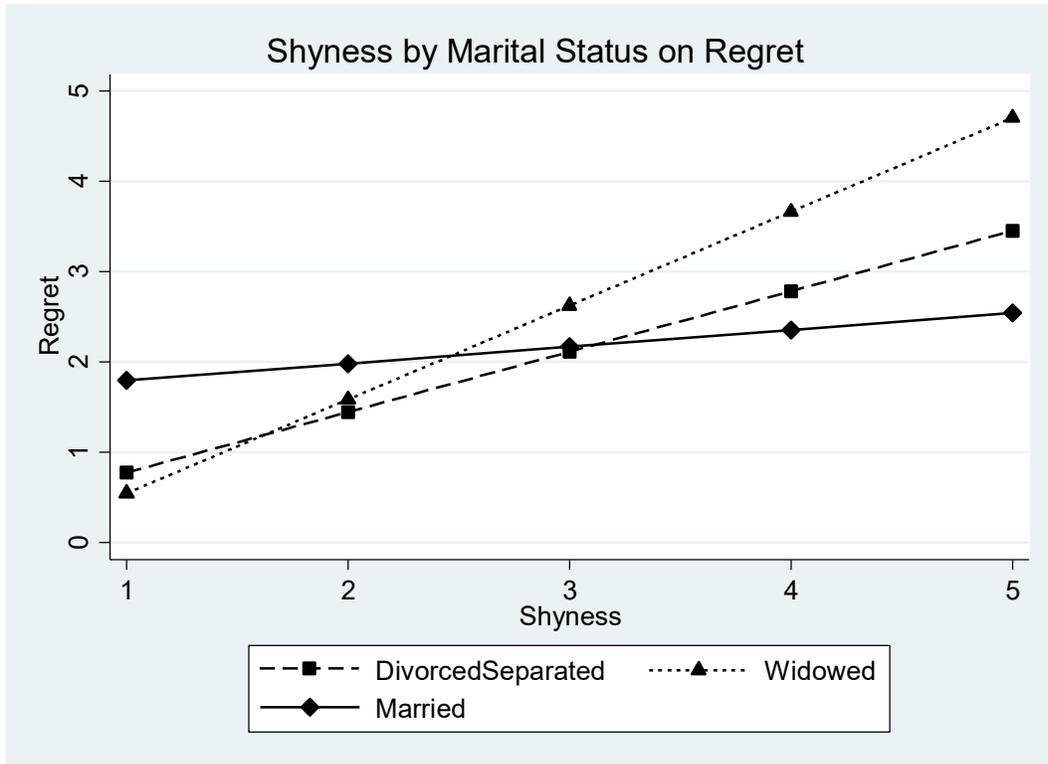


Figure 3. Shyness by Marital Status on Regret

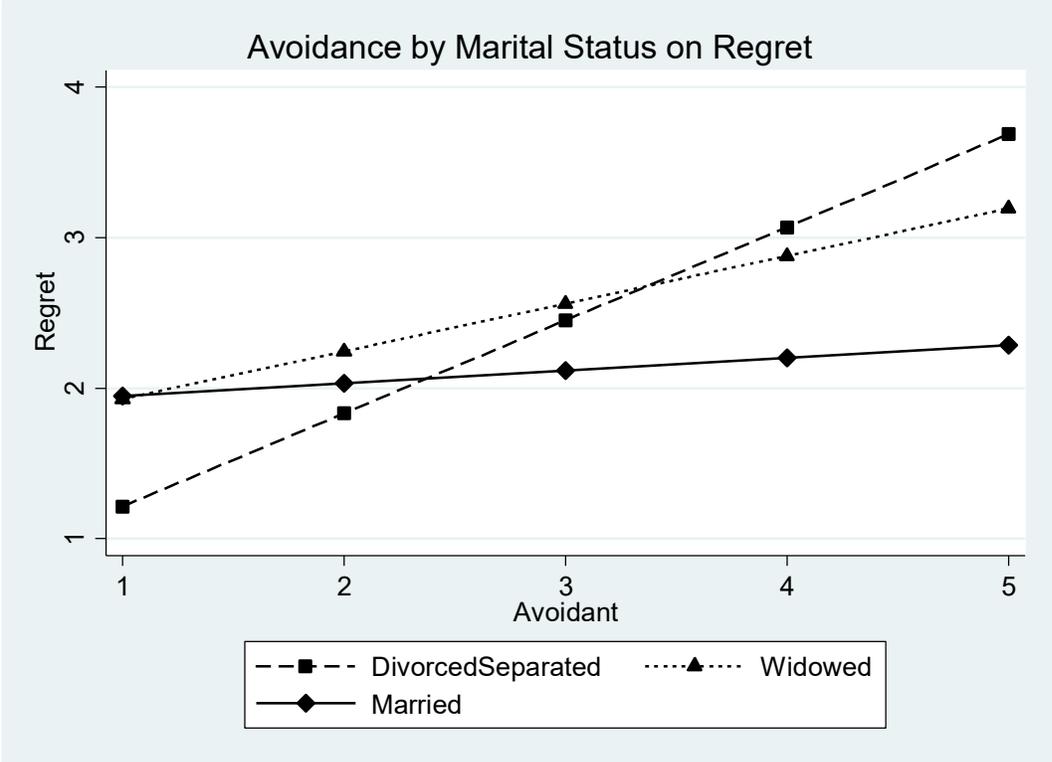


Figure 4. Avoidance by Marital Status on Regret