

Are gender roles related to purpose in life and well-being in younger and older females?

by

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Abstract

Research shows that holding an egalitarian attitude towards gender roles has been associated with increased well-being, but inability to engage in life goals that reflect these attitudes may lead to feelings of restriction. The current paper looks at how gender roles are associated with purpose in life and well-being through both a quantitative assessment of a female university sample and a coded interview with retired women. The university sample showed no relationship between gender role attitudes and purpose in life, but a significant connection between traditional attitudes and greater depressive symptoms. It was found that older women mentioned gender roles when discussing purpose, and a greater proportion of egalitarian gender roles was associated with higher purpose in life. Based on these results, opportunities for future research and importance of implementing gender roles within a counselling setting are discussed.

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Are gender roles related to purpose in life and well-being in younger and older females?

In many societies, an individual's biological sex at birth prescribes certain roles that they are expected to perform. As children grow, they learn their social roles through various social agents, such as their parents, teachers, and the media. Girls often learn at a young age that it is their role to be a caregiver, which embodies duties such as cooking, cleaning, and raising children. On the other hand, boys learn that their place is in the workforce, bringing in the money for their family and doing any physical labour that might be needed around the house. A change in the social climate has had some effect on the expected roles of men and women (Sweeting, 2014). Certainly there are more women in the workforce (Crompton & Lyonette, 2008) and men may receive less disapproving looks if they choose to stay at home to raise a family. While these advancements may be ideal, gender socialization is still enforced through many social interactions, with various effects on well-being. There is some evidence that gender socialization may affect well-being (Paul & Moser, 2009; Sweeting, 2014), though the relationship between these two constructs is still unclear. There has also been a lack of exploration on the impact of gender socialization across different generations. The current studies look to further explore how engaging in gender roles may impact purpose in life and well-being across two different age groups.

Gender Roles: Attitude, Behaviour, and Consistency

Gender socialization may influence both the specific gender roles that an individual chooses to adopt and their attitudes towards these roles. For example, a young girl who is consistently exposed to the concept of a women's role of a homemaker may be more likely to adopt this role for herself and assume that this is how it should be. Both the act of engaging in

certain gender roles and gender role attitudes (GRAs) appear to have some impact on well-being (Paul & Moser, 2009; Van De Vijver, 2007). Gender roles can be categorized as traditional or egalitarian (Sweeting, 2014). Traditional gender roles reflect the idea that paid work is the role of a man who is regarded as the “breadwinner” of the household, whereas a women’s role is to care for her family and their home. On the other hand, an egalitarian view of gender roles is one in which there is equal involvement in both employment and caretaking (Mickelson, Claffey, & Williams, 2006).

In the case of engagement in gender roles, men and women may both benefit from an equal power share and division of roles (Steil, 1997). Indeed, there is some evidence that an egalitarian approach towards employment and housework may be leading to higher levels of well-being due to fewer life stressors. This positive effect on well-being can also be seen across different cultures and gender (Van De Vijver, 2007). In order to assess how individuals engage in either traditional or egalitarian gender roles, there are a few different types of behaviour that are commonly examined. For example, Van De Vijver (2007) measured engagement in gender roles through assessment of shared household responsibilities. Participants were asked questions regarding both their contribution to household tasks and their childcare responsibilities. Results showed that sharing household responsibilities was beneficial for well-being in terms of mental health, social support, and partner relationship. Other studies also used participants’ employment and explored how heterosexual couples engaged in the workforce (Sweeting, 2014). Findings showed that psychological distress is higher among those who are unemployed. However, this effect was strongest amongst men in mid-working age, suggesting that this may be connected to a traditional sense of masculine identity.

While it appears beneficial for both men and women to engage equally in household tasks and paid employment, it may be the case that even just the perception that paid work and housework are being equally distributed can significantly lead to lower levels of depression (Glass & Fujimoto, 1994). Moreover, perceived distribution of paid work was most important for predicting depression among men, whereas perceived distribution of housework was a more important predictor for women. This may suggest that individuals of both genders are aware of traditional gender norms expectations, and well-being is negatively affected when inequality is present in the domain that is most salient to their gender. Some researchers have hypothesized that this aspect of fairness in a partnership may be a potential explanation for labour division leading to positive effects on well-being (Wilkie et al., 1998). While fairness may account for some variation of role engagement, there has historically been a skewed definition of what is considered fair for both men and women. Even young, undergraduate female students, who one may expect to hold a more egalitarian view of gender roles, often do not expect equality in the division of household chores (Askari, Liss, Erchull, Staebell, & Axelson, 2010). They may desire fairness in a partnership, but they do not believe that they will receive it. In fact, it has been suggested that the attitude held towards gender roles may moderate the perception of fairness (Greenstein, 1996). Where even when the labour division would certainly be categorized as unfair to an onlooker, the women who endorses a traditional mindset may be more likely to view her contribution as fair. Therefore, considering the GRAs held by an individual is a key component of understanding well-being.

There is evidence that both men (Mickelson, Claffey, & Williams, 2006) and older generations (Burt & Scott, 2002) hold more traditional GRAs, with increasingly more egalitarian GRAs being supported by younger generations (Cichy, Lefkowitz, & Fingerman, 2007; Scott,

Alwin, & Braun, 1996). With women's increasing involvement in the workforce, and an overall delayed onset of marriage, there may be less relevance for women to view themselves as homemakers. In fact, adolescent girls may present the most non-traditional attitudes out of all family members, even despite possible traditional views held by their parents (Burt & Scott, 2002). This does not necessarily mean that adolescent girls are abandoning traditional behaviour all together. Instead, they may be more likely to believe that in general, women and men should have the ability to be able to take on various gender roles. In fact, simply having these egalitarian attitudes may be beneficial for the belief-holder in multiple ways. There is some evidence that regardless of actual engagement in gender roles, having more traditional GRAs in general lead to less well-being in the form of poorer mental health (Van De Vijver, 2007; Read & Grundy, 2011), suicidal thoughts (Hunt, Sweeting, Keoghan, & Platt, 2006), and psychological distress (Sweeting, 2014). When these findings on both role behaviour and attitude are taken together, it appears that an egalitarian attitude towards gender roles and adhering to these views through an equal labour division ultimately leads to overall higher well-being. However, in order to understand the larger picture, consideration should be given to the working relationship between attitude and behaviour.

Various studies have shown that consistency between gender role attitudes and behaviour can be beneficial for well-being (though for counter-examples, see Boye, 2009; Lye & Biblarz, 1993; Sweeting, 2014). Early on, there was evidence that unemployed men were more likely to suffer from depression if they regarded themselves as the economic provider of the family, rather than a father and husband figure (Komarovsky, 1940). In other words, if unemployed males held a traditional attitude about what their role should be, but could not engage in the appropriate behaviour to support that role, they were more likely to suffer from depression compared to

participants who were also unemployed but held more egalitarian attitudes. Consistent findings have been shown amongst unemployed housewives. One study found that women who reported more egalitarian views but currently lacked employment reported higher levels of depression than traditionally oriented women who were also unemployed, possibly because they felt restricted in their role (Kingery, 1985).

When addressing household chores, studies have found similar results for the importance of role consistency. Egalitarian husbands have reported more marital satisfaction when household chores were split, with more traditional husbands showing higher satisfaction when faced with less household chores (Perry-Jenkins & Crouter, 1990). Similar effects on well-being have been found for females. In a study involving wives' perception of household labour, participants were asked to report the number of hours they and their spouse spent completing housework per week, how fair they felt this division was, and how stable and happy their marriage was. Gender ideology was measured through a series of question regarding women's roles in the workforce and family. Results showed that when the division of household labour was reported as unequal, egalitarian women were more likely to both perceive this distribution as unequal and report that it was unfair. On the other hand, traditionally oriented women were not as likely to report the division as unequal, even if it statistically was. Furthermore, there is a decline in both marital satisfaction and happiness for egalitarian women who recognize this inequality in housework division (Greenstein, 1996). These results indicate that the negative effects on well-being are not only a product of engaging in an unequal division of work, but of this unequal division impeding on other roles and directions that an egalitarian women envisions for herself. In other words, gender role consistency may impact well-being when an individual feels restricted by the types of goals and life direction that are available for pursuit. If this is true,

research may need to move beyond studying happiness and satisfaction, and turn the focus on how gender socialization influences sense of purpose in life.

Purpose in Life and Gender Roles

Having a sense of purpose can be defined as perseverance towards a stable and far-reaching goal (Damon, Menon, & Bronk, 2003). This goal is considered central to one's life, and the behavioural patterns of an individual will reflect this goal pursuit (Kashdan & McKnight, 2009). Furthermore, having a sense of purpose can allow an individual to attribute meaning to current events in their life (Baumeister, 1991). Feeling a sense of purpose in life has demonstrated beneficial effects in well-being in terms of mental health. Purpose has been linked to different forms of well-being such as reduced anxiety and emotional stress (Ishida & Okada, 2006), decreased depressive symptoms (Johnson et al., 2011), and increased happiness and life satisfaction (Wnuk, Marcinkowski, & Fobair, 2012). While there are clear benefits of pursuing a life goal, many different variables influence both how purposeful one may feel and choice of goal pursuit.

There has been little research into the relationship between an individual's gender role engagement and sense of purpose in life. However, some studies have found links between components of these two constructs. It has previously been suggested that differences in purpose may be more related to gender roles enforced in society, rather than biological sex (September, McCarrey, Baranowsky, Parent, & Schindler, 2001). Specifically, this study examined two groups of traits, with the idea that all genders are capable of displaying these traits. This included instrumental traits that resembled stereotypical male traits, expressive traits that reflected stereotypical female traits, and androgynous traits that included a mixture of both. Individuals

who displayed primarily instrumental or androgynous traits reported a greater sense of purpose in life, compared to those with primarily expressive traits. In fact, androgynous individuals reported higher scores across all dimensions of well-being, perhaps demonstrating the positive effects of an egalitarian take on gender roles. Some further evidence supporting this hypothesis comes from Ahrens and Ryff (2006), who found that involvement across stereotypically male and female roles (such as being a spouse, caregiver, employee, etc.) significantly predicted a greater sense of purpose in life. Having a greater sense of purpose may be facilitated through the positive outcomes of multiple gender role engagement, such as increased satisfaction and self-efficacy.

Interestingly, research has reported higher levels of purpose among females (e.g., Lindfors, Berntsson, & Lundberg, 2006). It has suggested that women receive higher scores on purpose in life potentially because the current generation of women believe that they have the potential to successfully compete in environments traditionally dominated by men (García-Alandete, Lozano, Nohales, & Martínez, 2013). For both women and men, multiple gender role involvement is linked to increased psychological well-being, including purpose in life. However, some of the positive psychological effects of multiple role occupancy for women are moderated through educational level, in which only educated females show an increase in well-being (Ahrens & Ryff, 2006). When considered together, these findings suggest that females might be achieving greater senses of purpose in life through the ability to engage in a newer variety of gender roles, but education is necessary to access these roles. A woman who adopts egalitarian GRAs but is unable to actually pursue less traditional gender roles may not be able to obtain a greater sense of purpose in life.

However, it should be noted that there are many ways in which an individual can foster a sense of purpose, and women who adopt traditional gender role behaviour can also experience a growth in purpose. For example, females who become a caregiver for their older parents have higher scores on purpose (Marks, Lambert, & Choi, 2002). Even simply having a general positive attitude towards helping others is beneficial for a higher sense of purpose in female teenagers (Schwartz, Keyl, Marcum, & Bode, 2009). Again, traditional gender roles may play a part in these findings, as a woman may feel it is her role to help others and engaging in this roles inspires a sense of purpose. Furthermore, engaging in multiple gender roles can sometimes be a struggle. While it may be fulfilling for women to engage in both family life and the workforce, this does not always equate with gaining a greater sense of purpose. Findings have shown that for women with children, paid work was associated with increased levels of personal growth but decreased levels of purpose in life (Lindfors, Berntsson, & Lundberg, 2006). For men with children, increased levels of all workload (including paid work) were associated with increased levels of both personal growth and purpose in life. Therefore, while engaging in family life and paid work has a negative effect on purpose for women, men in the exact same situation benefit from engaging in multiple roles. These findings demonstrate the complexity of how an individual develops a sense of purpose and the need for additional research into the relationship between gender roles and purpose.

Purpose in Life and Gender Roles in Older Adulthood

Older adults display unique patterns for purpose in life, in which they greatly benefit from having a sense of purpose, but report lower levels of goal pursuit in later life (Karasawa et al., 2011). In terms of the physical health of older adults, higher levels of purpose in life have

been linked to a lower risk of stroke (Kim, Sun, Park, & Peterson, 2013) and reduced risk of Alzheimer's disease (Boyle et al., 2012). It has even been found that those with a greater sense of purpose were less likely to die when followed up on (Krause, 2009; Zaslavsky et al., 2014). These findings demonstrate the protective qualities that having a sense of purpose can have for the health of older adults. Beyond physical health, purpose has shown to also predict psychological well-being in an older population.

Lacking a sense of purpose has shown to have negative psychological effects for the elderly. When facing age-related stressors, having a sense of purpose may act as a coping mechanism to find meaning within these stressors. Without a sense of purpose, it may be more difficult for older adults to handle the increased stress, and in an existential sense, find continued meaning for their existence. Findings have shown that older adults who have lower levels of purpose display an increase in depressive symptoms (Garner, Bhatia, Dean, & Byars, 2007). However, even when controlling for clinical factors such as depression, results suggest that older adults who consider themselves purposeless still have a stronger wish to die (Bonnewyn, Shah, Bruffaerts, & Demyttenaere, 2014). Other studies have found that older adults experience greater anxiety towards death and the dying process when they lack a sense of purpose (Ardelt, 2003; Missler et al., 2011). Again, this may be because having less purpose in life leaves them with less ways to cope with stressors related to the dying process. These findings strongly support the idea that a greater sense of purpose is indeed beneficial for the overall health of older adults. However, inspiring a sense of purpose in this population has proven to be difficult.

Despite the apparent beneficial factors that purpose in life can bring to older adults, many older adults report lacking a sense of purpose (Heidrich, 1993; Karasawa et al., 2011). There

have previously been a few suggestions on what interventions could potentially be used to induce a sense of purpose in older adults. Findings suggest that older adults may develop a greater sense of purpose through a more religious affiliation (Gerwood, LeBlanc, & Piazza, 1998; Greenfield, Vaillant, & Marks, 2009), exercise programs (Burlew, Jones, & Emerson, 1991), or through the feeling of satisfaction of their psychological needs (Ferrand, Martinent, & Durmaz, 2014).

However, there has been virtually no research into how the gender roles adopted by the older individuals may be impacting their sense of purpose later in life. It may be expected that older adults could experience a change in their sense of purpose once their traditional gender roles are no longer as salient. For example, a man who has found his purpose through employment may feel purposeless when he can no longer work. Similarly, a woman who was a caregiver and a homemaker might experience a loss in her sense of purpose once she is no longer able to perform these duties.

Older generations show more traditional GRAs, which can have an effect on many issues that arise in older adulthood. For example, older adults are often influenced by traditional gender roles in terms of giving and receiving help after recently becoming widowed (Ha, Carr, Utz, & Nesse, 2006). Findings show that women seek more help from their children for their financial needs, while men may struggle to give emotional support during this time. Again, higher education moderates these results, in which widows with higher education rely less on their children for financial support, and more educated widowers provide more emotional support to their children. These findings suggest that being exposed to different roles can be beneficial for well-being even later in life. Another aspect of behaviour affected by traditional gender roles is productivity. Older women tend to remain productive privately through housekeeping, whereas men are more productive in the community (Van der Meer, 2006). If women are choosing to

pursue mostly private activities, they may be missing out on the opportunity for social participation, which has shown to reduce mortality (Hsu, 2007). While these results suggest that following traditional gender roles could be negatively impacting older adults, particularly females, they may also reflect the struggle of maintaining certain gender roles later in life when it may be difficult and less beneficial to do so. If a woman is still trying to continue her role as a homemaker but she is no longer physically able to do so, or alternatively it is isolating her from engaging with others, continuous engagement in this role may be negatively impacting her well-being.

Assessing the Relationship of Gender Roles and Purpose

The current studies examined the relationship between attitudes towards egalitarian or traditional gender roles, purpose in life, and well-being in a sample of both an older and younger female population. Due to the exploratory nature of these studies only female participants were included. Previous research has highlighted the unique gender role attitudes shared by the current generations of younger females (Burt & Scott, 2002), and focusing exclusively on females in both age groups will capture the potentially significant differences observed in these different generations. Also from a methodological standpoint, it was unlikely that the researcher would be able to gather a large enough sample of male participants to observe any significant gender differences. This is due to the substantially larger proportion of women both in undergraduate psychology classes at Carleton University, and living in retirement homes in the Ottawa area. Therefore, solely female participants were used to capture more direct theoretical questions and avoid these methodological issues that would further complicate this exploratory research.

Currently, there are no studies that explicitly examine the relationship between gender role attitudes and sense of purpose. The current studies considered this relationship using two separate methods: an initial survey assessing the relationship between GRAs and purpose, and a more in-depth interview study that determined whether gender roles are referenced when an individual is discussing purpose in life. Not only is this research be the first to assess this relationship, but using two different samples allowed for a more robust look at how gender socialization across different generations has influenced the effect of gender roles on purpose in life and well-being.

Study 1 examined the initial relationship between gender role attitudes and purpose in life through the use of survey data. Female university students answered questions regarding their attitudes towards gender roles, sense of purpose, and emotional well-being. Based on previous research, it was hypothesized that for female university students, having more egalitarian GRAs would be linked to a higher sense of purpose. It was also hypothesized that more egalitarian GRAs would be related to higher scores on well-being in the form of depression and anxiety.

Study 2 expanded on the first study by including a more in-depth approach through the use of interviews with older women living in retirement homes across Ottawa. Participants were asked a series of open-ended questions regarding their purpose, and the answers were coded for phrases regarding either traditional or egalitarian behaviour. Purpose in life, depression, and social isolation will also be measured using validated scales given to the participants. Based on the Sex-role Ideology Scale (Kalin & Tilby, 1978), there are five potential categories that participants may have use when referring to gender roles. These include work roles, parental responsibilities, relationships, special role of women, and motherhood. It was hypothesized that

female participants in retirement homes would be more likely to mention work roles and parental responsibilities when discussing how gender roles influence their purpose. It was also hypothesized that traditional gender roles would be referenced more often than egalitarian. Through correlating the frequency of gender role themes with scores on purpose in life, it was believed that gender roles brought up in the discussion about purpose would be related to participant's scores on purpose in life, depression, and social isolation.

It was not immediately clear though whether mentioning traditional or egalitarian gender roles in Study 2 would have a positive relationship with sense of purpose. Engaging in traditional gender roles may lead to a higher sense of purpose in life, if these roles are still salient to the individual now. For example, a woman whose primary purpose was to raise her children may still feel purposeful if her family is a main part of her life. However, having more traditional gender roles may also negatively impact purpose in life if the individual can no longer engage in the role behaviour. For example, if the same woman is no longer close with her family, she may feel purposeless as being a mother was the main life role she had engaged in for so long. Alternatively, engaging in primarily egalitarian gender roles may overall lead to higher levels of purpose in life, due to a wider range of gender roles that an individual may still be able to engage in to find a sense of purpose.

In order to provide initial quantitative evidence to further address the questions raised in Study 2, Study 1 was used to help clarify the relationship between GRAs and purpose in life, as well as provide further evidence for the relationship between GRAs and emotional well-being. Study 2 then examined the extent to which older women bring up gender roles when discussing their purpose in life. If it was found that participants do indeed bring up gender roles when

discussing their purpose, responses were analyzed to see if the type of gender roles were related to a quantitative measure of purpose in life.

Method

Study 1

Participants.

Participants consisted of 115 female undergraduate students from Carleton University. Students completed the study in exchange for 0.25% credit in a first or second year Psychology class. Ages ranged from 17 to 44 ($M = 20.40$, $SD = 4.79$), with most being first year students (53.9%) from average income families (57.4%). The ethnic composition of the sample was mainly White (67.8%), but also consisted of participants who were Black (2.6%), South Asian (7%), East Asian (7.8%), Aboriginal (0.9%), Latin American (0.9%), and other unidentified ethnicity (13%). Finally, the sample was primarily exclusively heterosexual (84.3%).

Procedure.

Participants completed a survey through the Carleton online SONA system. They were informed that the purpose of the study was to assess the relationship between attitudes and well-being. After consenting to participate, participants answered questions related to demographics, gender role beliefs, and well-being. Upon completion, they were debriefed and received course credit for their participation in the study.

Measures.

Sex-role Ideology Scale. Gender role attitude was measured with the Sex-Role Ideology Scale (Kalin & Tilby, 1978). This is a 30-item scale that measured participants' beliefs about gender roles. A sample item of the scale includes "A woman should have exactly the same freedom of action as a man." This scale has been modified to exclude questions on provocative topics unrelated to the current research questions, such as sexuality and abortion. The scale has been validated across a wide variety of groups including male and female students, feminist organizations, and traditional organizations such as religious unions (Cota & Xinaris, 1993; Kalin & Tilby, 1978). The total scale has an alpha of .85, with the traditional and feminist subscale having an alpha of .84 and .70, respectively.

Psychological Well-Being Scale. The Purpose in Life subscale of the Psychological Well-Being Scale (Ryff, 1989b) was used to measure a participant's sense of purpose in life. This 7-item scale includes questions such as "I enjoy making plans for the future and working to make them a reality." The scale has shown to be valid and reliable for a young female population (Ryff, 1989a). Cronbach's alpha was .79.

Depression Anxiety Stress Scale–21. Emotional well-being was measured using the Depression Anxiety Stress Scale (Lovibond & Lovibond, 1996). Specifically, this 21-item scale measured three related emotional states: anxiety, depression, and stress. The scores for all 21-items were combined together in order to gain an overall assessment of well-being. This scale includes items referring to how the participant has felt in the last week, such as "I felt that I was using a lot of nervous energy." Studies have shown this scale is a valid method for measuring well-being amongst female university students (Lovibond & Lovibond, 1995). Chronbach's

alpha was .81 for the stress subscale, .93 for the depression subscale, and .87 for the anxiety subscale.

The Satisfaction with Life Scale. The Satisfaction with Life Scale was used to measure positive well-being. The scale contains five items including, “So far I have gotten the important things I want in life.” Research has shown that The Satisfaction with Life Scale is suitable for use across different age groups, including university students (Diener, Emmons, Larsen & Griffin, 1985). This scale has an alpha of .89.

Study 2

Participants.

Sixteen female participants were recruited from retirement communities across Ottawa. Ages ranged from 71 to 94 ($M = 85$, $SD = 6.27$), and participants time in retirement homes varied from a few weeks to five years. Only two participants lived with partners in the home. The retirement homes were encouraged to communicate what they believed would be satisfactory compensation. It was decided that a talk would be given at the homes regarding the results that found in the study and the various implications this could have for activity planning.

Procedure.

Prior to conducting interviews, interviewers received training and instructions in order to conduct consistent and appropriate interviews. Participants signed up for the study through recruitment inside the retirement home. After the participant signed the informed consent, the interview began. The participant was given a large-print copy of the script to follow along with. First, the interviewer asked demographic questions. Participants either began with the open-

ended questions, or the quantitative measurement questions, in order to ensure that the first section did not influence the second. In the open-ended section, participants were asked questions about their purpose throughout life, their activity level, and barriers they face when engaging in everyday activities. In the measurement section, participants were asked questions on their sense of purpose, pathways to this purpose, activity engagement, social isolation, and geriatric depression. At the end of this section, the participant was asked to describe a positive event that has occurred in the past week. Upon completion, the participant received a verbal debriefing as well as a written copy.

Measures.

The measures that are relevant to the current research will be detailed here.

Open-ended Purpose Discussion. This measurement included 18 questions, three of which were used to code for the impact of gender role engagement on purpose throughout the life course. A sample question includes, “Thinking about you recent life experiences, what would you say is your main life goals or direction at this moment?” If while answering these three questions, the participant referred to an answer in a previously asked question (Specifically, “I will first ask you to describe the goal or life direction that you have been thinking about for the last few minutes. What is the purpose of this goal?”), this answer was also analyzed. These items were developed to assess what individuals naturally bring up when discussing their purpose. The questions that were used to analyze the data ask specifically about the participant’s sense of purpose at three different ages, allowing for reflection on how sense of purpose has changed across the lifespan. This also provided further information on how gender roles influence sense of purpose across throughout the life of a participant.

Psychological Well-Being Scale. For consistency, the purpose subscale from Ryff (1989b) was again used with this sample in order to gain a quantitative measurement of purpose in life. This scale has also been validated for use with older adults (Ryff, 1989a). Cronbach's alpha was .46.

Perceived Isolation Scale. The Perceived Isolation Scale (Cornwell & Waite, 2009) is a 9-item questionnaire used to assess well-being in the form of social isolation from friends and family. It includes questions such as "How often do you feel that you lack companionship?" This scale has previously been successfully used to measure social isolation in older adults (Cornwell & Waite, 2009). It was important to include this scale as a measure of well-being in an older adult population, as the negative effects of social isolation may be more severe due to life course transitions taking place during this age (Hawke & Cacioppo, 2003). This scale can be split into two sections: how isolated the participant feels in general, and how often they can open up to and rely on their family, friends, and partner. The first subscale had an alpha of .78, while the second had an alpha of .73. Scores for questions on relationships with one's partner were not included in the second analysis due to low sample size.

Geriatric Depression Scale. For another measurement of well-being, the Geriatric Depression Scale (Parmelee & Katz, 1990) was used. This measurement is used to assess depression specifically in an older adult population. The scale contains 15 items including "Do you prefer to stay at home, rather than going out and doing new things?" This scale was developed and validated specifically for use with older adults (Wall, Lichtenberg, MacNeill, & Deshpande, 1999), and has been included in this study to achieve the most accurate measurement of depression for the age group used in this study. Chronbach's alpha was .47.

Results

Study 1

Bivariate correlations were conducted to analyze the associations between gender roles, purpose in life, and well-being. A positive correlation was found between purpose and life satisfaction ($r(115) = .43, p < .001$), while a negative correlation was present between purpose and stress ($r(113) = -.27, p = .004$), anxiety ($r(114) = -.42, p < .001$), and depression ($r(113) = -.42, p < .001$). When measured on a continuum, overall gender role attitude was not significantly correlated with purpose in life, life satisfaction, depression, anxiety, or stress (Table 1). However, when the traditional and feminist subscales were examined separately, traditional gender role attitude was positively correlated with depression ($r(113) = .19, p = .04$).

Study 2

In order to determine if participants naturally brought up gender roles when discussing their purpose in life, categories from the Sex-role Ideology scale (SRIS) were used to code each interview for mentions of gender roles (Table 2). First, each question was coded for whether the gender role type was present or absent. If present, each role was coded as traditional or egalitarian. This created 30 separate categories and 480 unique codes. Initial coding was done by the primary investigator, with an undergraduate student providing secondary coding for the purpose of inter-rater reliability. Overall raters agreed on 78.75% of ratings, with individual category reliability ranging from ICC = .09 to ICC = 1.00 (Table 3). Discrepancies in coding were resolved through discussion between both raters.

In order to assess which gender-role categories were predominately mentioned, the frequency of mention was examined for each category and a percentage of mention was calculated. In total, 56 roles were mentioned across the 16 participants interviewed. Work roles and parental responsibilities were mentioned most frequently by participants. Out of the total number of roles mentioned, work roles accounted for 42.86% of mentions, while parental responsibilities made up 39.29% of total roles mentioned overall. An example of traditionally coded work roles and parental responsibilities can be observed in a statement from one participant who explained "... once I had children and then my marriage ended and I was a single mother, my goals were my kids. And my job really came second." On the other hand, another woman spoke about more egalitarian behaviour after she married her military husband. Instead of converting to a military wife lifestyle, she expanded on why this was not for her by stating "... in the mid-50s, the wife was supposed to stay at home and make the white picket fence life for their husband and it wasn't long after we were married that I decided that that was not me, and I went to [find] a job." Relationships with others, special role of women, and motherhood were also mentioned but to a lesser extent. T-tests were conducted to compare the frequency of mention against a null hypothesis of zero. Both work roles ($t(15) = 6.71, p < .001$), and parental responsibilities ($t(15) = 6.21, p < .001$) were mentioned a significant number of times. While the other categories were all mentioned, the amount of mentions was not significant when tested against a null hypothesis of zero (Table 4).

This data was also examined by collapsing across gender role category and analyzing purpose in life across the three separate time points (young adulthood, adulthood, and present) to determine what time period yielded the highest mention of gender roles. Most roles were mentioned in young adulthood, with 44.64% of roles being mentioned during this time. Many

women spoke on entering the workforce or starting a family in young adulthood. When one woman was asked about her purpose in young adulthood, she quickly stated, “Marry the man I had my aim on. And I did... It was sort of automatic you know. You went through life, I wasn’t interested in nursing and that was the only thing that was available at the time.” For the other time periods, 32.14% were mentioned during adulthood and 23.21% of roles were mentioned during the present. One participant explained the types of life roles taken on in adulthood by stating “... our adult goals are really guided by your family and your children and what you have, because they are your responsibility.” While referenced to a lesser extent, women did sometimes still speak of engaging in gender roles at the present time. One participant explained “... since I’ve come here, the people, if they want something started they will come and I’ve started a church service, I’ve got that all in place. And I have an audio book club where I read books to the people who can’t see the books.”

Again, t-tests were conducted to examine the significance of mention. When tested against the null-hypothesis of zero, gender roles in young adulthood ($t(15) = 6.48, p < .001$), adulthood ($t(15) = 6.26, p < .001$), and present time ($t(15) = 3.90, p = .001$) were all mentioned a significant number of times. These three time periods were further broken down by separately observing the amount of traditional and egalitarian roles mentioned at each point in time. For each time period, participants mentioned a significant number of both egalitarian and traditional roles (Table 5).

Furthermore, in order to assess whether traditional roles were mentioned more often than egalitarian gender roles overall, the mean proportion of egalitarian roles mentioned was examined. A t-test was also conducted against a null-hypothesis of .50, reflecting that the

individual mentioned just as many traditional roles as egalitarian roles. It was found that participants mentioned both traditional and egalitarian roles fairly evenly ($M = .47$, $SD = .35$), and that egalitarian proportion of roles mentioned was non-significant when tested against .50, further indicating that the sample was neither entirely traditional or egalitarian.

Finally, the relationship between gender roles, purpose in life, and well-being was further examined through correlations between the structured scales used. One participant did not provide cohesive answers for this section, and as such their answers were not included in this analyses. It was found that the relationship between gender roles and purpose in life was approaching significance ($r(13) = .49$, $p = .07$), in which a higher proportion of egalitarian roles mentioned was associated with higher levels of purpose in life. There was no significant relationship between any of the other variables and proportion of roles mentioned (Table 6). Furthermore, results suggested that participants reported scores that would be interpreted as low on depressive symptoms ($M = 3.27$, $SD = 1.79$), average in terms of social isolation ($M = 1.47$, $SD = .50$), and average on purpose in life for an older adult population ($M = 4.25$, $SD = .81$).

Discussion

The current research was primarily focused on establishing a relationship between gender roles and sense of purpose in life, and how traditional and egalitarian roles may be connected to purpose in life and well-being. Study 1 was used as an initial assessment of these constructs within a female university population. To expand on these preliminary results, Study 2 employed an in-depth qualitative method with older females to further examine how gender roles relate to purpose in life through engagement in a variety of different life roles.

Are gender roles related to purpose in life?

The initial question that this research wanted to address is, are gender roles related to purpose in life? The results from Study 1 would suggest that gender role attitude is unrelated to purpose in life. Study 1 did replicate previous findings, in which purpose in life is related to well-being in the form of fewer symptoms of emotional distress (Ishida & Okada, 2006) and greater satisfaction in life (Wnuk, Marcinkowski, & Fobair, 2012). However, there was neither a relationship between overall GRAs and purpose in life, nor a relationship between separate scores of traditional and egalitarian attitudes, and purpose in life. Still, the findings in Study 2 suggest that individuals do reference gender roles when discussing purpose in life, and these roles may be directly related to how purposeful they feel. Many women directly discussed how restrictive engaging in traditional gender roles could be, and reflected on how these restrictions may or may not have affected their purpose in life. Even as early as young adulthood, some women were unable to pursue goals due to restrictive gender roles. One woman reflected on her desire to be a teacher, “But being the oldest of six children, in that time there were no loans or anything... I had to go to work so I couldn’t go. That was my biggest dream shot down.” Other participants echoed this idea of being forced into a more traditional caregiver role due to familial struggles at an early age. However, other women spoke at length about engaging in egalitarian gender roles. One participant had dedicated her career to advocating for women’s rights and helping victims of sexual assault. She stated that her mother had always encouraged her “... to pursue my goals and my loves and that’s what I did.”

The discrepancy from Study 1 and Study 2 may be associated with the methods used. In Study 1, GRAs were assessed by measuring attitudes towards general statements about gender roles. Perhaps, individuals may not feel a personal connection to these general statements that would affect their personal goals and direction in life. For example, many of the questions from

the SRIS focused on attitudes surrounding being a wife, mother, and career woman. While university students may certainly have differing opinions about these life roles many are not currently in a caregiver or breadwinner role. Therefore, attitudes towards these questions may have little to do with the types of goals they are currently pursuing.

The findings from Study 2 reflect the necessity of looking more directly at the personal impact that gender roles have throughout life. While Study 2 used the categories established in the SRIS, it did not assess explicit attitudes towards gender roles. Instead, Study 2 had individuals discuss their role engagement throughout life. Participants were not asked directly about gender roles, they instead brought them up in discussion. This allows for reflection on how gender roles have personally influenced the type of goals pursued throughout the lifespan.

Furthermore, the age and environment of each sample may affect the relationship between gender roles and purpose in life. While the current studies are limited with respect to how much they can discuss the impact of gender roles on purpose over the lifespan, the findings can speak to the effect that different time periods and environments may have on this relationship. It is known that young women in this generation are more likely to hold egalitarian attitudes (Burt & Scott, 2002), but the commonality of women attending secondary schooling in this current time period may reflect how this egalitarian view is now more of the norm. If attending post-secondary school is viewed as a common goal to have amongst young women, then these goals may be unrelated to their gender role attitudes. When the women in retirement homes were asked about their purpose in young adulthood, many talked about the importance of attending post-secondary school or finding stable employment, and this discussion was often framed around what was available to women at the time. Perhaps as these current university

women take on different life roles upon leaving school, the greater distinction of paths they can take may influence how their attitude towards gender roles affects their goal pursuit.

What types of gender roles are related to purpose in life?

To expand on this initial question, the current research also examined what type of attitude and engagement in gender roles is related to purpose in life. It was hypothesized that for Study 1, higher levels of egalitarian gender role attitudes would be associated with a greater sense of purpose. For Study 2, it was believed that participants would mention more traditional gender roles, and discussion of traditional or egalitarian roles could be uniquely related to purpose, depending on what life roles are still salient to the individual during this time. While Study 1 found no relationship between GRAs and purpose in life, Study 2 suggests that discussing more egalitarian gender roles is associated with higher levels of purpose. This lends support to the hypothesis that an egalitarian attitude or engagement in more egalitarian gender roles have allowed older women a wider variety of opportunities to pursue their purpose.

However, contrary to the initial hypothesis stating that participants would mention more traditional gender roles, Study 2 displayed a fairly even split between participants who mentioned a higher proportion of egalitarian gender roles and those who mentioned more traditional roles. This suggests that across the three different time points, women often discussed a variety of both traditional and egalitarian roles when reflecting on their purpose. Indeed, when asked about their purpose, many women mentioned positive experiences with finding a partner and raising a family and these experiences were observed as traditional gender roles. For example, when asked about her purpose in young adulthood, one participant stated, “Well raise a good family was a really big one for me, I loved having a family... my life has been wrapped

around young people and kids.” This suggests that a sense of purpose may still be cultivated through traditional gender roles. However, as many women lose this caregiver role in older age these roles may become less relevant, which may lead to this association between traditional gender roles and lower levels of purpose.

Study 2 also looked at specific types of gender roles that were mentioned as participants discussed their purpose in life. As hypothesized, work roles and parental responsibilities were mentioned most frequently in discussion. This makes theoretical sense, as work roles and parental responsibilities have aspects that resemble goal-setting behaviour more so than relationships with others, or attitudes towards the special role of women and motherhood. For example, those who work and raise children often have stable and far-reaching goals for advancing in their career or reaching certain milestones with their children. Alternatively, the other categories have less observable behaviour that can be related to goal-pursuit. Results also indicated that gender roles were discussed most often in young adulthood. This could be due to methodology, in which participants were asked about purpose in young adulthood first and thus had the most to say on this topic. However, these findings may also support the idea that older women who grew up in a different generational context took on work roles and parental responsibilities at a younger age than the current generation of female university students, and this may affect how their gender roles are related to sense of purpose. As these women were more likely to start careers or become a primary caregiver upon initially leaving home, this may have provided opportunities for cultivating a greater sense of purpose in life at a younger age. Again, while the sample from Study 1 were mainly in young adulthood, similar results may not have been present because the university sample is not taking on these life roles as early on as the retirement sample was.

Are gender roles related to well-being?

Both studies also included measures of well-being in order to analyze the effect of gender roles may have on these variables. It was predicted that more egalitarian attitudes and discussion would be associated with greater well-being in both studies. Study 1 replicated previous findings, in which higher traditional attitudes are associated with greater depressive symptoms. However, there was no relationship between egalitarian attitudes and well-being. This suggests that while holding an egalitarian attitude towards gender roles may not necessarily help young women avoid emotional stress, having traditional GRAs may be detrimental. Given the cross-sectional nature of the work, though, this study is unable to establish the direction of this relationship. It may be that those who have traditional attitudes feel limited in what possibilities are open for them, leading to greater depressive thoughts and more limited coping strategies. On the other hand, higher levels of depression may lead to a more negative perception of what is available for women. For example, studies that have examined the relationship between conventional femininity and suicidal ideation have found that women who are at greater risk for self-harming are those who display “neediness,” or an over dependency on others (Straiton, Roen, & Hjelmeland, 2012). Dependency on others is a stereotypically conventional female gender role, but not necessarily negative as having close connections with others can often be beneficial for well-being. However, women who become over-dependant on others may do so because they believe that other options are not available to them, reinforcing the idea that they must rely on others to support their needs. Women who are dealing with thoughts of suicidal ideation and self-harm may further struggle with finding opportunities to be self-sufficient, and feel forced into this conventional role of relying on others. Therefore, it may be the case that women who endorse traditional GRAs become over-dependent which leads to psychological distress, or those

who are facing psychological distress already see limited opportunities and this reinforces their traditional attitude.

Study 2 found no relationship between gender roles and well-being in the form of depression and perceived isolation. While participants often spoke about happiness or distress when openly discussing their purpose in life, it is unclear how much of this is related to the gender roles they mostly engage in. Given the less than ideal power for the quantitative portion of this study, though, a larger sample would be needed to derive a better understanding of this relationship.

Counselling Implications

The results of this study provide important implications in the area of mental health and counselling. To begin with, the takeaway of this research should not be interpreted as a call for women to abandon all traditional role behaviour. While it certainly would be both restrictive and offensive to claim that a woman can only find a sense of purpose through experiencing a traditional role such as motherhood, it is similarly restrictive to endorse the idea that a woman cannot find purpose and positive well-being through becoming a caregiver. As the interviews in Study 2 suggest, a sense of purpose can certainly be fostered solely through parental responsibilities. Instead, what is reflected through this research is the issue of perceived limited opportunities that may be associated with traditional gender role attitudes.

While the current findings present some interesting initial implications for counselling methods, as this research was primarily exploratory it should be acknowledged that the suggestions offered in this section are primarily presented to generate further discussion in this area. When applicable, these findings will also be taken into consideration along with previous

research to help facilitate a broader discussion on the importance of considering gender roles when intervening on emotional well-being and purpose in life.

Implications for intervening on emotional well-being.

For intervening with female university students, the relationship between traditional GRAs and depressive symptoms demonstrates the importance of incorporating an understanding of gender role attitudes in counselling. It should be mentioned that while higher traditional attitudes and greater depressive symptoms were indeed significantly related in Study 1, this was a relatively weak correlation. However, these results will be taken into consideration with similar findings presented in previous research (Hunt, Sweeting, Keoghan, & Platt, 2006; Van De Vijver, 2007).

As having an egalitarian attitude evidenced no significant relationship with well-being in Study 1, simply encouraging egalitarian attitudes may have little effect on improving depressive symptoms. Instead, it may be beneficial to specifically target what aspect of this traditional attitude is causing emotional distress. Potential targets might be anxiety over expectations of labour inequality in the future (Askari, Liss, Erchull, Staebell, & Axelson, 2010), or pressure to pursue future employment that will not interfere with a family life (Ndobo, 2013). A greater understanding of an individual's attitude towards gender roles will allow for an intervention that is supportive of the women's right to follow a traditional path if she so chooses, but to also encourage the possibility that she is not limited to these options.

On a broader note apart from the current findings, it seems that an early intervention may have important and lasting effects on young females. It has been shown that young women whose mothers scored highly on a scale measuring feelings of being limited by traditional gender

roles were more likely to exhibit anxious somatic depression, unrelated to their mothers' levels of depression (Silverstein & Blumenthal, 1997). This may suggest that from a young age women may take on this anxiety that they, like their mother, will be limited by gender roles. A stronger emphasis on understanding these negative aspects of traditional gender role attitude could potentially stop a cycle like this from continuing. As the results from Study 1 demonstrate that greater traditional gender roles are related to emotional stress in the form of higher depressive symptoms, looking into gender role attitudes of family members or other important outside influences may help expand on these initial findings and provide more clarity for conducting an early intervention.

Implications for intervening on purpose in life.

While results from Study 1 suggest that gender role attitude may not currently be related to a female's goal pursuit while attending post-secondary school, it seems plausible these attitudes will become more important when they encounter new life roles, such as entering the workforce or becoming a parent. If young women are encouraged to explore goals outside of a traditional role, they may benefit from this later in life by finding purpose through the roles that are available to them, even when those are limited. When working to develop goal-setting behaviour in young women, it may actually be valuable to promote an egalitarian attitude so that a wider variety of goals will be seen as available to them upon completing their education. There is evidence that GRAs are malleable and women can decide when to conform to more traditional roles (Tiegs, Perrin, Kaly, & Heesacker, 2007), suggesting that it is indeed possible to intervene on gender role attitude. A successful intervention should explain that embracing an egalitarian attitude does not mean having to always limit engagement in traditional gender roles. Instead, it

means keeping an open-mind to a wider variety of opportunities. Again, while this discussion may seem irrelevant to female university students that are currently focused on different life goals, bringing an egalitarian attitude into middle and older adulthood may prove beneficial for long-term goal-setting behaviour.

Currently, older women who have followed traditional roles throughout their life and are now feeling a lack of purpose may be resistant towards new roles that are inconsistent with their attitudes. If a woman has acted as a caregiver or homemaker her entire life, it will likely be difficult to abandon these roles. However, the reality is that these roles are often unavailable now due to a physical inability to maintain one's living space, or a lack of close contact with family. Results from Study 2, along with other findings in this area (Hedberg, Brulin, & Alex, 2009; Mitchell & Helson, 2016) can be used to highlight some initial suggestions for intervening on purpose in older women, specifically those who feel a less purposeful due to the loss of previous traditional gender roles.

Instead of trying to find purpose through a role that may no longer be available, interventions should instead be tailored towards exploring new opportunities with these women, and encouraging their ability to succeed in a role that they may be inconsistent with their previous attitude. It has been shown that older women find purpose through meaningful daily activities (Hedberg, Brulin, & Alex, 2009). Indeed, many of the women in Study 2 discussed various activities that were purposeful to them, including working in the resident shop, hosting services during the holidays for those who have lost loved ones, and maintaining the library. The later participant spoke on the importance of this work when saying "... after my husband died I started volunteering in a library and I found I enjoyed it, so when I made the decision to move

here I volunteered to look after the library and I have found it to be very satisfying.” It is important to allow outlets for older women to participate in activities that are meaningful to them and encourage women who may previously have avoided these roles to be open to these opportunities. It should also be noted that having a strong sense of purpose is not essential for older women to achieve a sense of fulfillment later in life. Instead, some women find fulfillment not through pursuing goals, but through wonder and appreciation of life (Mitchell & Helson, 2016). If a traditional woman is finding it difficult or unenjoyable to engage goal pursuit that involves a new life role, it may be more beneficial to foster her psychological growth through activities or behaviour that does not require active commitment to such life roles.

Generational context should also be taken into consideration when intervening with different cohorts, specifically older women. Traditional gender socialization was much more prevalent when this age group was being raised, and this is apparent when discussing purpose in life with this sample of women. After being asked about her purpose throughout the three different stages in life, one participant concluded this section with “I think males have got more of a goal in life, you know, then females?” This particular participant had attended university in young adulthood, as well as raised children and travelled to various countries in adulthood. However, her answers primarily focused on her husband’s achievements through these time periods and her final statement seems to reflect the idea that she may have viewed him as having more goals than she did, despite her own achievements. This suggests that women who grew up in this time period may view their limited opportunities as a normal phenomenon of men naturally having more goals. A better understanding of generational context can help when working with women who have been socialized to believe they naturally lack a variety of goals.

Limitations

There are several limitations with the current research. First, the results from Study 1 may not be generalizable for females who do not attend post-secondary school, as goal-pursuit may be significantly different in both samples. For example, a young women who did not attend post-secondary school may already be involved in opportunities for goal pursuit more directly related to gender roles, such as working towards a long-term career, or taking on a parenting role and beginning a family. These types of goals are likely to significantly differ from university students who may be primary focused on education related goals. Similarly, these results may also not be generalizable to female undergraduate students in fields that are more male-dominated than Psychology. In this case, these students may be more conscience of gender roles when engaging in goal-pursuit because they are reminded of gender differences more often and are surrounded by a greater variety of GRAs. Furthermore, the samples for both studies were fairly demographically homogeneous, and the results should not be generalized to other cultures where gender roles may take on different contexts.

Second, the sample for Study 2 consisted of a small group of entirely White women living in higher-SES retirement homes. While this sample was still able to provide a meaningful first glance into the relationship between gender roles and purpose, a larger and more diverse sample will certainly be needed to better understand these connections. Similarly, small sample size was an issue when analyzing scale reliability in Study 2. Both the Purpose in Life Subscale and Geriatric Depression Scale had low alphas, likely due to being underpowered. A larger sample will be needed to properly assess reliability of these scales for future research.

Third, while verbal interviews worked well for the open discussion portion of Study 2, having the participants respond verbally to the quantitative scales led to some participant confusion and vague answers that required further interpretation from the researcher. These methodology issues, along with the small sample, may have also contributed to a lack of significant findings with the quantitative measurements. While verbal scoring was originally done to allow for easier responses from individuals with physical or visual disabilities who may have difficulty filling out written questionnaires, a written response may be necessary to avoid less interpretation in future research.

Future Directions

These studies have laid a foundation for the initial look into the relationship between GRAs and purpose in life, and have many implications for future research. For a university population, next steps may involve using measures that reflect more personally salient gender roles. For example, using questions that assess an individual's interest in pursuing a more traditional or egalitarian pathway upon graduation, and attitudes towards these pathways, may better capture the relationship between gender roles and purpose in life. However, it may be discovered that, as this research has shown, gender role attitudes have no significant relationship with purpose for women in this age group. If this is the case, longitudinal research could be used to gain a better understanding of when gender roles become connected to goal pursuit across the lifespan.

On another note, this research looked exclusively at women for both methodological and theoretical purposes. However, men clearly have attitudes towards gender roles as well, and their behaviour is similarly shaped by these roles. Previous research has shown that men's well-being

is also related to GRAs, and that they also benefit from engaging in egalitarian behaviour (Steil, 1997). However, since men are more likely to hold more traditional views than women (Mickelson, Claffey, & Williams, 2006), it is likely that the results found in these two studies may differ with a male sample. For example, men who engage in more traditional gender roles may not feel the same limitations as women who also behave traditionally, and subsequently men may be able to engage in a wider variety of goals even into older adulthood. However, men face a unique issue with regards to stigmatization against being primary caregivers. While being unable to pursue paid employment is psychologically distressing for working-age men (Sweeting, 2014), it is unclear if having primarily parental goals produces the same negative results. Future research may want to further examine how differences between female and male gender role attitudes are related to purpose in life and well-being.

A final concept that will hopefully be incorporated into future research is the changing idea of gender and sexuality. While a reliable scale that worked appropriately for the intended sample, the language of the Sex-Role Ideology scale that was used in these studies was very heteronormative. The questions on a wife and husband's role in a marriage may seem irrelevant for a women in a relationship with another women. Considering sexual identity is important, as for individuals who do not identify as heterosexual, gender role attitudes may be more related to self-identified personality characteristics (such as being feminine or butch) than biological sex (Clingman & Fowler, 1976). However, more recent research suggests that identifying as homosexual might be in conflict with traditional gender roles (Pedersen & Kristiansen, 2007), which creates further uncertainty on how LGBT individuals identify with specific GRAs. Similarly, the traditional concept of gender has been changing rapidly and becoming more inclusive of other identities such as transgender, agender, and intersex individuals. For example,

research looking at a small sample of women with an intersex condition showed that these women varied on whether they identified with traditionally female or traditionally male gender roles (Guth, Witchel, Witchel, & Lee, 2006). This interaction between identity and gender role attitudes may provide further confusion for an individual exploring opportunities for goal pursuit. Examining how individuals with different sexualities and genders interpret gender roles, and the effect this has on well-being and purpose in life, could be beneficial for developing more appropriate and useful intervention strategies with these groups.

The current research primarily sought to observe the potential relationship between gender roles and purpose in life. While previous research suggests that having egalitarian attitudes may be beneficial for well-being in women, the connection between GRAs and goal-pursuit seems to be more complex. Though future research will provide further clarity, these studies have demonstrated some initial explanation of this relationship. Primarily, one hypothesis that has emerged is this idea that gender roles may be more related to purpose in older females than younger females, as younger females may be less concerned with ideas surrounding marriage and employment. However, as women age and these roles become more salient, having an egalitarian attitude may allow more opportunities for stable goal-pursuit in older age and less feelings of limitation towards various roles and activities. These findings, as well as the consistent negative relationship between traditional GRAs and emotional well-being in younger females, indicate the importance of incorporating an understanding of gender roles in a therapeutic and interventional practice. While it may be less prevalent in the current generation, many women are still socialized to follow traditional roles and it can be difficult to escape this mindset. Women who follow traditional roles do not need to be deterred from being a caregiver

or homemaker. Instead, it may be beneficial to encourage an open mindset towards the opportunities that are available and the ability to succeed in a variety of roles.

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Table 1

Study 1 correlations between overall gender role attitude, traditional gender role attitude (Trad.), egalitarian gender role attitude (Egal.), purpose in life, emotional well-being, and life satisfaction.

	Overall GRA	Trad. GRA	Egal. GRA	Purpose GRA	Depression	Anxiety	Stress	Life Satisfact ion
Overall GRA	-							
Traditional GRA	-.91**	-						
Egalitarian GRA	.83**	-.52**	-					
Purpose GRA	.08	-.12	.00	-				
Depression	-.16	.19*	-.07	-.42**	-			
Anxiety	-.05	.10	.04	-.42**	.76**	-		
Stress	.08	.00	.17	-.27**	.48**	.42**	-	
Life Satisfaction	.12	-.14	.06	.43**	-.58**	-.43**	-.24*	-

* Correlation is significant at the .05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed).

Table 2

Coding Scheme indicating categories of types of gender roles, subcategories of traditional or egalitarian roles, and examples of expressions that may be coded as each.

Categories		Code	Subcategories	Code
Works Roles	Absent	0		
	Present	1	Traditional	1
			Greater emphasis on her husband's career goals.	
			Egalitarian	2
More focus on her own career goals over her husbands.				
Parental Responsibilities	Absent	0		
	Present	1	Traditional	1
			Belief that a women's duty is to home and children. A man's duty is to take care of financial needs and discipline children.	
			Egalitarian	2
Belief that a mother and father both share responsibilities in the home and family.				

Relationships	Absent	0		
with Others				
	Present	1	Traditional	1
			A married women should not have male friends, and should only associate with appropriate people.	
			Egalitarian	2
			A women should be allowed to associate with whoever she wants to.	

Special Role of	Absent	0		
Women				
	Present	1	Traditional	1
			Appreciating the special treatment of women.	
			Egalitarian	2
			Finding the special treatment of women to be inappropriate.	

Motherhood	Absent	0		
	Present	1	Traditional	1
			Motherhood is a significantly special role that everyone women should strive for.	
			Egalitarian	2

Women can take on different roles, and should not be expected to constantly care for their children.

Table 3

Intraclass correlation coefficient used to determine reliability between the primary researcher and secondary coder for each individual category including Work Roles (WR), Parental Responsibility (PR), Relationship with Others (RWO), Special Role of Women (SROW), and Motherhood. A dash (-) indicates a correlation coefficient that had a zero value.

Role	Intraclass correlation coefficient
WR Young Adulthood	.67
Type of WR Young Adulthood	.75
PR Young Adulthood	.65
Type of PR Young Adulthood	.61
RWO Young Adulthood	.48
Type of RWO Young Adulthood	.60
SROW Young Adulthood	.85
Type of SROW Young Adulthood	.85
Motherhood Young Adulthood	.48
Type of Motherhood Young Adulthood	.48
WR Adulthood	.88
Type of WR Adulthood	.89
PR Adulthood	.77
Type of PR Adulthood	.69
RWO Adulthood	- *
Type of RWO Adulthood	- *

SROW Adulthood	1.0
Type of SROW Adulthood	1.0
Motherhood Adulthood	- *
Type of Motherhood Adulthood	- *
WR Present	.48
Type of WR Present	.48
PR Present	.71
Type of PR Present	.36
RWO Present	.09
Type of RWO Present	-
SROW Present	-
Type of SROW Present	-
Motherhood Present	- *
Type of Motherhood Present	- *

* Scale had zero variance items, which indicates that one rater scored all items in the same way.

Table 4

T-tests conducted against the null hypothesis of zero for gender roles present in each category from the coding scheme.

Category	Mean (SD)	T	% Mention
Work Roles	1.50 (.89)	6.71**	87.50%
Parental Responsibilities	1.38 (.89)	6.21**	87.50%
Relationship With Others	.19 (.54)	1.37	12.50%
Special Role of Women	.38 (.79)	2.09	25.00%
Motherhood	.06 (.25)	1.00	6.25%

** Correlation is significant at the 0.01 level (2-tailed).

% Mention indicates the number of participants who mentioned gender roles in this category, out of the total number of participants.

Table 5

T-tests conducted against the null hypothesis of zero for amount of roles in general at each time period, as well as egalitarian and traditional roles at each time period.

Category	Mean (SD)	T	% Mention
Young Adulthood Total	1.56 (.96)	6.48**	87.50%
Young Adulthood	1.00 (.82)	4.90**	75.00%
Egalitarian			
Young Adulthood	0.56 (.63)	3.58*	50.00%
Traditional			
Adulthood Total	1.13 (.72)	6.26**	81.25%
Adulthood Egalitarian	.50 (.73)	2.74*	37.50%
Adulthood Traditional	.63 (.81)	3.10*	43.75%
Present Total	.81 (.83)	3.90**	62.50%
Present Egalitarian	.44 (.63)	2.78*	37.50%
Present Traditional	.38 (.50)	3.00*	37.50%

* Correlation is significant at the .05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed).

% Mention indicates the number of participants who mentioned gender roles at this time period, out of the total number of participants.

Table 6

Study 2 Correlations between proportions of egalitarian roles present, purpose in life, perceived isolation, and geriatric depression in the retirement home sample.

	Egalitarian Proportion	Purpose	Perceived Isolation	Geriatric Depression
Egalitarian Proportion	-			
Purpose	.49 [^]	-		
Perceived Isolation	-.09	-.44	-	
Geriatric Depression	.37	.10	.38	-

Note: [^] indicates a marginally significant finding, $p < .10$.

Appendix A

Informed consent form (Study 1)

The purpose of an informed consent form is to ensure that you understand the purpose of the study as well as the nature of your involvement. The informed consent form must provide sufficient information such that you have the opportunity to determine whether or not you wish to participate in the study.

How attitude affects well-being in female students.

Research personnel. If you have any questions, comments or concerns regarding this experiment, please contact the following individuals: Primary researcher, Naomi Reesor (naomi.reesor@carleton.ca), or faculty sponsor, Patrick Hill (patrick_hill@carleton.ca)

Purpose. To determine the relationship between attitudes, well-being, and life goals. We are interested in exploring how certain attitudes affect well-being and life goals in female university students.

Task requirements. Participants will answer a variety of questions related to their attitudes, well-being, and life goals. This includes questions on daily life, feeling, and emotion. This survey should take about half an hour to complete.

Benefits/Compensation. You will receive 0.25% increase in your final grade in PSYC 1001, 1002, 2001, 2002 or NEUR 2001, 2002 for participating in this study.

Potential risk/discomfort. There is no potential physical risk or discomfort associated with this study. Some participants may feel uncomfortable answering questions related to well-being. The risk of experiencing harm is minimal and there is the option to leave questions unanswered without being penalized in any way.

Anonymity/confidentiality.

We collect data through the software Qualtrics, which uses servers with multiple layers of security to protect the privacy of the data (e.g., encrypted websites and password protected storage). Please note that Qualtrics is hosted by a server located in the USA. The United States Patriot Act permits U.S. law enforcement officials, for the purpose of an anti-terrorism investigation, to seek a court order that allows access to the personal records of any person without that person's knowledge. In view of this we cannot absolutely guarantee the full confidentiality and anonymity of your data. With your consent to participate in this study you acknowledge this. However, for the purposes of this study you will not be required to provide any identifying or sensitive information, outside of your initial contact information for future assessments, which is never connected to your data file. This contact information is kept separately from your survey data, on password-protected computers in the locked research laboratory. Moreover, we will not collect information about the computer on which you took the survey (IP address, etc.). All data will be kept on password protected computer hard drives.

The data collected in this experiment will be stripped from any identification after credit has been assigned, making this anonymized data. Your responses will in no way be connected to your

personal information. Only the researchers associated with this project will have access to the data. Information gathered will only be reported in aggregate form (e.g., how attitudes affect life goals). The data will be kept for seven years following the study.

Right to withdraw. You can refuse to answer any question or stop participating at any time for any reason and without explanation. In addition, there will be no penalty for doing so and you will still receive any incentive or reward associated with this study. However, as the data is anonymous, you will be unable to withdraw once the study is completed, as there will be no way to identify which data is yours.

The ethics protocol for this project was reviewed and has received clearance by the Carleton University Ethics Board-B (Reference #). The expiry date for this ethics clearance is _____. If you have any concerns or questions regarding your involvement in this research, please contact:

Professor Shelley Brown, Chair (CUREB-B) or Professor Andy Adler (Vice-Chair)
Carleton University Research Office
Carleton University
1125 Colonel By Drive
Ottawa, ON
K1S 5B6
Tel: 613-520-2600 ext. 4085
ethics@carleton.ca

Consent: I acknowledge that I have read and understood the conditions of my participation. My participation in this study is voluntary, and I understand that if at any time I wish to leave the experiment, I may do so without having to give explanation and with no penalty whatsoever. Furthermore, I am also aware that the data gathered in this study are confidential with respect for my personal identity. I understand that the data in this study will be used for research purposes, such as been published as part of a research article or could be employed as part of a senior thesis. Again, your unidentifiable data (along with the other participants') could be shared with trusted colleagues for these purposes.

By clicking "I agree" below, you are providing consent to take part in the following survey.

I agree

I disagree

Appendix B

Demographics (Study 1)

- 1) What is your age?
- 2) What is your gender?
 - Male
 - Female
 - Other
- 3) What is your sexuality?
 - Exclusively heterosexual
 - Predominantly heterosexual, only incidentally homosexual
 - Predominantly heterosexual, but more than incidentally homosexual
 - Equally heterosexual and homosexual
 - Predominantly homosexual, but more than incidentally heterosexual
 - Predominantly homosexual, only incidentally heterosexual
 - Exclusively homosexual
 - Asexual
- 4) Please specify your ethnicity?
 - White (Caucasian)
 - Aboriginal (First Nations person, Métis, Inuit)
 - Black
 - Latin American
 - South Asian (East Indian, Pakistani, Sri Lankan, etc.)
 - East Asian (Chinese, Vietnamese, Filipino, Korean, etc.)
 - Other
- 5) What year of school are you currently in?
 - First Year
 - Second Year
 - Third Year
 - Fourth Year
 - Other
- 6) In the household of your upbringing, were you considered:
 - Very Poor
 - Poor
 - Average

- Well-Off
- Very Well-Off

Appendix C

Debriefing (Study 1)

What are we trying to learn in this research? Attitude towards gender roles has shown to have an effect on well-being, in which people who hold more egalitarian (liberal) gender role attitudes (GRAs) experience higher levels of well-being. However, those who hold egalitarian GRAs but are unable to pursue goals that reflect these roles do not experience the benefits in well-being. In this study, the measurement of purpose in life has been used to examine participant's goal setting behavior. In completing this experiment, we will gain a better understanding on how GRAs affect purpose in life and well-being for female university students. We hypothesize that those who hold more egalitarian GRAs will experience both higher levels of purpose and higher levels of well-being in the form of less emotional anxiety and greater life satisfaction.

Why is this important to scientists or the general public? With changes in social climate over the last few generations, women have vastly more opportunities available to pursue and a variation of roles to take on. Similarly, young women are more likely to hold egalitarian attitudes towards gender roles. While the relationship between GRAs and well-being has been extensively explored, current research might want to move beyond this relationship to better answer the question of how women's expanding role is affecting their long-term life pursuits. Depending on what the results tell us, it may be beneficial to be aware of GRAs when discussing purpose in life in a counselling setting. More specifically, at a time when young females are pursuing different paths for their future, understanding how GRAs affect their level of purpose in life may allow for preliminary intervention for those with lower levels of purpose in life.

Where can I learn more? You may ask the individuals (Naomi Reesor) involved in this study to email a copy of the following article to you.

Sweeting, H., Bhaskar, A., Benzeval, M., Popham, F., & Hunt, K. (2014). Changing gender roles and attitudes and their implications for well-being around the new millennium. *Social Psychiatry and Psychiatric Epidemiology*, 49(5), 791-809. doi:10.1007/s00127-013-0730-y

What if I have questions later? If you have any questions or comments about this research, please feel free to contact the investigator, Naomi Reesor (naomi.reesor@carleton.ca), or faculty sponsor, Patrick Hill (patrick_hill@carleton.ca)

Should you have any ethical concerns with the study, please contact Dr. Shelley Brown, Chair, Carleton University Research Ethics Board-B (phone: 613-520-2600 ext. 1505; email: Shelley.Brown@carleton.ca). You may also contact the Carleton University Research Compliance Office at ethics@carleton.ca).

Is there anything that I can do if I found this study emotionally draining? Some people may feel some discomfort or distress as a result of participating in psychology experiments. If you

would like to discuss any distress or discomfort that may have resulted from participating in this study, you may wish to contact the Ottawa & Region Distress Centre: at 613-238-1089 (www.dcottawa.on.ca) or the Ottawa Mental Health Crisis Line at 613-722-6914 (24-hour toll-free line: 1-866-996-0991; <http://www.crisisline.ca/home.htm>). If you are a student at Carleton University, you might also contact the Carleton University Health and Counselling Services at 613-520-6674.

Thank you for your participation. Your time and effort are greatly appreciated.

Appendix D

Announcement for Recruitment (Study 1)

Participants will be recruited on the Carleton online SONA system.

Announcement:

“This project is on exploring the effect of attitude on the well-being and life goals of female university students. The study aims to look at the relationship between these concepts. Participants will be asked to answer multiple questions regarding these topics.

There is no potential physical risk or discomfort associated with this study. Some participants may feel uncomfortable answering questions related to well-being. The risk of experiencing harm is minimal and there is the option to leave questions unanswered without being penalized in any way.

Participants will receive 0.25 credit for participating in this study. This study will be conducted entirely online and take approximately 30 minutes to complete.

To be eligible you must identify as a female student and be enrolled in PSYC 1001, 1002, 2001, or 2002 or NEURO 2001, 2002. We are not accepting participants who identify as male for this study.

If you have any questions, please contact primary researcher, Naomi Reesor (naomi.reesor@carleton.ca), or faculty sponsor, Patrick Hill (patrick_hill@carleton.ca).

This research has been cleared by Carleton University Research Ethics Board-B (Protocol #).

Appendix E

Sex-Role Ideology Scale

1. The husband should be regarded as the legal representative of the family group in all matters of law.
2. A wife's activities in the community should complement her husband's position.
3. A woman should have exactly the same freedom of action as a man.
4. The best thing a mother can teach her daughter is what it means to be a girl.
5. A married woman should feel free to have men as friends.
6. Woman's work and man's work should not be fundamentally different in nature.
7. Swearing by a woman is no more objectionable than swearing by a man.
8. A woman is not truly fulfilled until she has been a mother.
9. When a man and woman live together she should do the housework and he should do the heavier chores.
10. A normal man should be wary of a woman who takes the initiative in courtship even though he may be very attracted to her.
11. It is an outdated custom for a woman to take her husband's name when she marries.
12. Women should be paid a salary by the state for the work they perform as mothers and homemakers.
13. Women should be much less concerned about make-up, clothing and body care.

14. Every child should be taught from an early age to feel a special honour and respect for Motherhood.
15. A woman should be appreciative of the glances and looks she receives as she walks down the street.
16. It should be perfectly alright for a mature woman to get involved with a young man.
17. Marriage should not interfere with a woman's career any more than it does with a man's.
18. A man's main responsibility to his children is to provide them with the necessities of life and discipline.
19. A woman should be careful how she looks, for it influences what people think of her husband.
20. A woman who dislikes her children is abnormal.
21. More day care centres should be available to free mothers from the constant caring for their children.
22. Women should be allowed the same sexual freedom as men.
23. A man's job is too important for him to get bogged down with household chores.
24. A woman should be no more concerned with her physical appearance on the job than a man.
25. The first duty of a woman with young children is to home and family.
26. A woman should be more concerned with helping-her husband's career than having a career herself.

27. Women should not expect men to offer them seat in buses.

Appendix F

Psychological Well-being Scale – Purpose in Life Subscale

Please indicate your degree of agreement (using a score ranging from 1-6) to the following sentences.

I live life one day at a time and don't really think about the future.

I have a sense of direction and purpose in life.

My daily activities often seem trivial and unimportant to me.

I don't have a good sense of what it is I'm trying to accomplish in life.

I enjoy making plans for the future and working to make them a reality.

Some people wander aimlessly through life, but I am not one of them.

I sometimes feel as if I've done all there is to do in life.

Appendix G

Depression Anxiety Stress Scale-21

Please indicate your degree of agreement on a scale of 0 – 3.

0 = Did not apply to me at all

1= Applied to me to some degree, or some of the time

2= Applied to me to a considerable degree, or a good part of time

3 = Applied to me very much, or most of the time.

I was intolerant of anything that kept me from getting on with what I was doing.

I felt I was rather touchy.

I found it difficult to relax.

I found myself getting agitated.

I felt that I was using a lot of nervous energy.

I found it hard to wind down.

I tended to over-react to situations.

I felt that life was meaningless.

I felt that I had nothing to look forward to.

I couldn't seem to experience any positive feeling at all.

I was unable to become enthusiastic about anything.

I felt that I wasn't worth much as a person.

I felt down-hearted and blue.

I found it difficult to work up the initiative to do things.

I was aware of the action of my heart in the absence of physical exertion

(e.g., . . .).

I experienced breathing difficulty (e.g., . . .).

I experienced trembling (e.g., in the hands).

I felt I was close to panic.

I felt scared without any good reason.

I was worried about situations in which I might panic and make a fool of myself.

I was aware of dryness of my mouth.

Appendix H

The Satisfaction With Life Scale

Please use the scale to indicate your agreement with each statement.

1= Strongly Disagree

2 = Disagree

3 = Slightly Disagree

4 = Neither Agree or Disagree

5 = Slightly Agree

6 = Agree

7 = Strongly Agree

_____ 1. In most ways my life is close to my ideal.

_____ 2. The conditions of my life are excellent.

_____ 3. I am satisfied with life.

_____ 4. So far I have gotten the important things I want in life.

_____ 5. If I could live my life over, I would change almost nothing.

Appendix I

Recruitment Flyer (Study 2)



Participate in psychology research about your major life goals!

We are looking for volunteers to participate in a 45-60 minute interview study looking at the types of things older adults report as giving them a sense of purpose. Participants will be asked to reflect upon their life goals from the past and present and share their view of their current situation.

All interviews will take place within your room or another area within the retirement community.

1. ***Contact information***

If you are interested in participating in this research, please fill out your contact information on the sheets provided and place them in the drop box. A researcher will contact you shortly to set up your interview.

If you have any questions about the study, please contact:

The PATH Lab at Carleton University

Email: carleton.path@gmail.com

Phone: 613 520-2600 x 6025

Ethics approval

This study has received approval from the Carleton University Psychology Ethics Board.

Appendix J

Informed Consent Form (Study 2)

The purpose of an informed consent is to ensure that you understand the purpose of the study and the nature of your involvement. The informed consent must provide sufficient information such that you have the opportunity to determine whether you wish to participate in the study.

Present study: Purpose among Retirement Community Residents

Research personnel. The following people are involved in this research project and may be contacted at any time:

Patrick Hill (Faculty supervisor; email: patrick.hill@carleton.ca; phone: 613-520-2600 ext. 2419)

Naomi Reesor (Graduate student; email: naomireesor@cmail.carleton.ca)

Nathan Lewis (Undergraduate student; email: nathanlewis@cmail.carleton.ca)

Ethical Concerns: Should you have any ethical or other concerns about this study, please contact Dr. Shelley Brown (Chair, Dept. of Psychology, shelley_brown@carleton.ca, A513 Loeb Building, 613-520-2600 ext. 1505).

Purpose: The purpose of this study is to explore what older adults report as giving them a sense of purpose in life and how this may be influenced by the activities they engage in and their perceptions of daily life.

Task requirements: You will be asked a series of questions regarding your past and present life goals and how this relates to your daily activities. The interview will take approximately 45 to 60 minutes and will include a short break (~2 minutes).

Potential risk/discomfort. This study will ask you to reflect upon and share your personal goals from the past and present. Some of the questions will ask you to reflect upon how well you are able to do certain tasks, your level of social support, and your mood. It is possible that you may be distressed by some of these personal questions.

Anonymity and Confidentiality. Your name will not be connected to any information you provide during the course of the study. All interview recordings will be stored on a secure computer and any identifying information (e.g. names of family member, location, etc.) you share during the interview will be removed. Only research personnel directly involved in the interview and data transcription will have access to the original recordings. After transcription and removal of identifying information, the recordings will be deleted.

Withdrawing. Should you decide during the interview that you no longer wish to participate, you may inform the interviewer and your recorded responses will be deleted. If you decide after the interview that you do not want your responses to be included in our research, you may contact any of the research personnel listed above and all of your responses will be deleted.

I have read the above form and understand the conditions of my participation. My participation in this study is voluntary, and if for any reason, at any time, I wish to leave the experiment I may do so without having to give an explanation and with no penalty whatsoever. Furthermore, I am also aware that the data gathered in this study are confidential with respect to my personal identity. Signing this form indicates that you have agreed to participate in this study.

Full Name: _____ Signature: _____ Date: _____

Researcher Name: _____ Signature: _____ Date: _____

Appendix K

Demographics (Study 2)

How old are you?

Do you live with a partner here in the home?

If you were previously employed, what was your area of employment?

How long have you been retired?

How long have you lived at this retirement community?

Appendix L

Open-ended purpose questions

I will first ask you to describe the goal or life direction that you have been thinking about for the last few minutes. What is the purpose of this goal?*

Can you describe some of your life goals from when you were a young adult?

Can you describe your life goals from when you were an adult?

Thinking about your recent life experiences, what would you say is your main life goals or direction at this moment?

* Only looked at if participant referred to this question while answering one of the other three time-point questions.

Appendix M

Perceived Isolation Scale

I'm now going to ask you a series of questions about your relationship with others. Please indicate how often you experience each statement. Do you experience them rarely, some of the time, or often?

How often do you feel that you lack companionship?

How often do you feel left out?

How often do you feel isolated from others?

How often can you open up to members of your family?

How often can you rely on members of your family?

How often can you open up to your friends?

How often can you rely on your friends?

How often can you open up to your spouse or partner?

How often can you rely on your spouse or partner?

Appendix N

Geriatric Depression Scale

I'm going to ask you a series of questions. You just need to simply reply yes or no.

Are you basically satisfied with your life?

Have you dropped many of your activities and interests?

Do you feel that your life is empty?

Do you often get bored?

Are you in good spirits most of the time?

Are you afraid that something bad is going to happen to you?

Do you feel happy most of the time?

Do you feel helpless?

Do you prefer to stay at home, rather than going out and doing new things?

Do you feel you have more problems with your memory than most?

Do you think it is wonderful to be alive?

Do you feel pretty worthless the way you are now?

Do you feel full of energy?

Do you feel that your situation is hopeless?

Do you think that most people are better off than you are?

Appendix O

Debriefing (Study 2)

What are we trying to learn in this research?

We are trying to learn about the types of things older adults report as giving them a sense of purpose in life. We are looking to see how this sense of purpose may be influenced by the types of activities individuals engage in and how one's purpose may be affected by common age-related challenges.

Why is this important to scientists or the general public?

This research is important because a strong sense of purpose may be important for maintaining health, yet some studies have found that older adults tend to report lower purpose. This study should help to clarify the types of purpose older adults report and would help researchers design better ways to promote purpose amongst older adults.

What are our hypotheses and predictions?

We predict that many older individuals will report a more social purpose in life (e.g. community involvement, supporting family and friends) compared to the types of purpose they may have reported earlier in life. Furthermore, many older adults have experienced major life changes which we feel will greatly influence their sense of purpose in life. For example, some individuals may draw on these experiences to strengthen or find new directions in life, while such life events may lead others to feel distress and a loss of purpose.

Where can I learn more?

For information on how to find purpose, you can read this article from the Psychology Today website: <https://www.psychologytoday.com/blog/prescriptions-life/201311/helping-you-find-your-life-purpose>. If you are interested in learning more about current research on purpose in life, you can visit the Carleton PATH lab's website at <http://labs.carleton.ca/pathlab/>.

Is there anything I can do if I found this experiment to be emotionally upsetting?

For some, reflecting on major life events and their current situation can be emotionally upsetting. If you feel any distress or anxiety after participating in this study, please feel free to contact your Director of Care, who can connect you with a mental health professional. Or you can contact the Distress Centre of Ottawa and Region at 613-238-3311 (<http://www.dcottawa.on.ca>).

What if I have questions later?

If you have any remaining concerns, questions, or comments about the experiment, please feel free to contact

Patrick Hill (Faculty supervisor) at: patrick.hill@carleton.ca (613-520-2600 ext. 2419),

Nathan Lewis (Undergraduate student) at: nathanlewis@mail.carleton.ca,

Naomi Reesor (Graduate student) at: naomireesor@mail.carleton.ca

Should you have any ethical or other concerns about this study, please contact Dr. Shelley Brown (Chair, Dept. of Psychology, shelley_brown@carleton.ca , A513 Loeb Building, 613520-2600 ext. 1505).

Thank you for participating in this research!