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Chronic Strain, Gendered Coping, and Health Outcomes in a Rural Context

By

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Political Science (BA), University of New Hampshire, 2017

THESIS

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ABSTRACT

Although there is a considerable body of literature examining mental and physical health outcomes among adolescents and adults, there is less research that focuses on emerging adulthood and how emerging adults - especially *within* a rural context – experience mental and physical health. Furthermore, less is known regarding how or if gender impacts the relationships between coping style and outcomes among this population. Studies historically show that women report higher rates of anxiety, depressed mood, and chronically debilitating physical illnesses than men. The differences in rates of disorders between men and women is often explained by citing traditional gender roles; psychological and physical stress results when these gender roles and identities are faced with threats, demands, constraints and challenges – or chronic strain. Gender socialization and traditional gender roles also play a part in how men and women may employ different coping styles to manage chronic strain. However, there has been little research regarding gender differences in coping among a rural, emerging adult sample. To address the gaps in research, this thesis uses data collected from emerging adults in a rural New Hampshire county. I find that among the rural emerging adult sample, men and women report similar levels of depressed mood while females report higher levels of both anxiety and physical illness. Men and women report similar levels of chronic strain, and report using problem-focused and avoidance-oriented coping at similar rates. Women report using emotion-focused coping and religious-coping more frequently than their men counterparts. However, gender does *not* moderate the relationship between each coping style and each outcome. Avoidance-oriented coping is significantly and positively associated with depressed mood, anxiety, and physical illness suggesting the use of avoidance-oriented coping increases one's risk of those outcomes. However, the interaction between avoidance-oriented coping and chronic strain shows significant *buffering* effects; that is, the effect of chronic strain on depressed mood and anxiety is weaker among those who report using avoidance-oriented coping with high frequency. These findings have implications for how rural health and mental health policies address coping and chronic strain among emerging adults.

INTRODUCTION

Researchers have long studied the differences in rates of psychological disorders, such as depression and anxiety, between rural and urban samples. While early studies show mixed results with regards to rates of psychiatric illness between urban and rural samples (Dohrenwend and Dohrenwend 1974; Kessler et al. 1994), more recent scholars find increased odds of depression and anxiety disorders in urban areas (Peen 2010). Though rates of rates psychological disorders may be more prevalent in some urban areas, individuals in rural areas may fare worse with regards to severity. When compared to urban residents, women from rural counties are nine times more likely to be hospitalized for issues relating to mental health (Brown, Warden, and Kotis 2012). Women on average are more likely to report suffering from both depression and anxiety than their male counterparts, and rates are highest among those aged 18-25 (Kessler et al. 1993, 1994, 2005; NIMH 2017; Slopen et al. 2011; Weissman et al. 1984; Weissman et al. 1993). Mental health scholars typically explain variance in rates of psychological disorder by citing traditional gender roles (Gove and Tudor 1973). Women, socially conditioned to occupy less advantaged roles – such as that of homemaker – may be both more vulnerable and exposed to social stressors (Aneshensel and Pearlin 1987; Turner, Wheaton and Lloyd 1995). Women's disadvantaged position in society may also explain why women report more chronically debilitating illnesses and poorer physical health than men (Den and Ostlin 2009; Needham and Hill 2010). While men may face more life-threatening injury or illness, women report physical ailments – such as migraines – that result in more disability, loss of employment, and homebound days (Rollnik et al. 2003; Rozen and Fishman 2012; Snow 2009).

Both psychological and physical disorders are largely linked to chronic strain – or the threats, demands, constraints, and challenges to social roles, environments, or identities (Wheaton and Montazer 2017). Researchers explain that chronic strain results in allostatic load, thus reducing ones’ capacity to cope with additional stressors and resulting in psychological harm (Wheaton and Montazer 2017). While men and women traditionally experience different *forms* of chronic strain (i.e. women are more likely to experience relationship strain or strain associated with parenthood), less is known regarding the distribution of strains during emerging adulthood (Aneshensel and Pearlin 1987; Barnett and Baruch 1985, Gove 1978; Gove and Tudor 1978; Pearlin and Lieberman 1979; Ross and Mirowsky 2013; Rosenfield, Kato and Smith 2017; Taylor 2015). Recent studies suggest that emerging women and men may not follow the traditional trajectories, such as higher rates of anxiety and depression among females, observed by scholars studying gender and health (Frye and Liem 2011). To add to the literature regarding mental health in rural populations, as well as the growing body of literature examining rates of mental and physical health outcomes during emerging adulthood, I ask: *Are there sex differences in outcomes (depressed mood, anxiety, and physical health) among rural, emerging adults? Is there variance in rates of chronic strain between men and women among rural, emerging adults?*

Due, in part, to findings that show individuals in urban areas may experience elevated rates of psychological disorders, urban communities have been met with a greater allocation of funds towards mental health services. This has resulted in an unmet need for care in rural communities (Smalley et al. 2012). Despite nearly 20% of the U.S. population residing in areas deemed rural by the U.S. Census Bureau, residents frequently report structural, cultural and social barriers to health and mental health care (Fox et al. 1999). Rather than rely on mental

health professionals, men and women residing in rural areas frequently seek informal sources of support such as family, neighbors, friends, or religious leaders/organizations (Blank et al. 2002; Cantrell et al. 2012; Fox et al. 1995). Help-seeking behaviors vary by gender; men are less likely than women to use health services, they wait longer before seeking treatment, and often they present with more advanced symptomology (Gorman et al. 2012). This is likely amplified in rural settings given the emphasis on self-reliance (Alston 2010). Furthermore, adolescents and young adults in rural communities rely on their parents or guardians to facilitate the retrieval of mental health treatment (Radunovich and Weins 2012). Parents and guardians of rural youth may be less likely to “buy-in” to their child’s treatment plan, thus resulting in an unmet need for service and detrimental effect on adolescent and young adult health and mental health (Radunovich and Weins 2012). As these adolescents and young adults come of age in rural America, entering emerging adulthood, there is less known about how their access to care during childhood impacts help-seeking behaviors in adulthood. Given the tendency of rural men and women to seek informal or alternative sources of support, it is likely that they rely more often than urban men and women on *individual coping strategies* – as opposed to formal treatment – to alleviate the effects of stress and strain.

Historically, the literature on gender and coping shows that men and women employ different types of coping styles to manage the effects of stress and chronic strain (Howerton and Van Gundy 2009; Lazarus 1966; Li et al. 2006; Pearlin and Schooler 1978). Women tend to employ emotion-focused coping with more frequency, while problem-focused and distractive (or avoidance-oriented) coping has been positively correlated with masculinity; this suggests that men are more likely to utilize these strategies (Frydenber and Lewis 1993; Li et al. 2006). Less is known however, regarding the effectiveness of each coping style for emerging adult men and

women in a rural sample. Recent research suggests that, while originally viewed as an ineffective coping style, emotion-focused coping may reduce the effects of stress when employed by women (Howerton and Van Gundy 2009). Additionally, there is little known about whether different coping styles buffer the effects of chronic strain, and if such processes may vary by sex. To further examine this underexplored area in the literature, I ask the following questions: *Do rates of utilization of each coping style vary by sex? Do coping styles mediate the effects of sex differences on psychological and physical outcomes, while controlling for chronic strain? Does sex moderate the effects of each coping style on each outcome? And last, Do coping styles moderate the effects of chronic strain on outcomes? If so, is this relationship moderated by sex?*

To answer my research questions, I examine a sample of emerging adults from a rural county in New Hampshire. In Chapter 1 of this thesis, I provide an overview of the literature regarding gender differences in chronic strain, psychological/physical outcomes, and coping as pieces of the stress process model. I also provide background on how and why emerging adulthood should be studied as a unique developmental stage of the life course and introduce the implications that living in a rural community may have for coping style choice among men and women. Chapter 2 provides a methodological overview, in which I explain my use of one-way analysis of variance (ANOVA) and ordinary least-squares (OLS) regression analyses. Chapter 3 reviews results, while Chapter 4 of this thesis discusses the findings of my study. Last, Chapter 5 concludes by addressing implications of the findings and discussion.

CHAPTER 1

LITERATURE REVIEW

To answer the research questions of this thesis, I review the literature on the stress process (Pearlin et al. 1981), gender differences in psychological and physical illness, chronic strain, and gender differences in utilization of four coping styles: problem-focused, emotion-focused, avoidance-oriented, and religious (described in detail below). While research typically shows differences in rates of psychological and physical disorder between men and women, less is known regarding the variation in rates between emerging adult men and women in a rural context. Historically, women report higher levels of depressed mood, anxiety, and chronically debilitating physical disorder (Brody et al. 2018). However, emerging adult women in a rural context may report different levels of psychological and physical illness than their young adult or older adult counterparts; researchers have found that individuals in emerging adulthood may present more variability both in how they interpret negative or positive events and in how risk factors, such as gender, differentially impact psychological outcomes (Frye and Liem 2011; Galambos et al. 2006). Frye and Liem (2011) find that previous risk factors do *not* necessarily predict poor mental health outcomes among an emerging adult sample.

Variation in interpretation of negative or positive events between emerging adults and other age groups may also contribute to variation in levels of reported chronic strain between emerging adult men and women. While chronic strain is largely linked to gendered, social role expectations (e.g. women are responsible for child rearing), the literature on emerging adulthood suggests that individuals in this phase of the life course may feel less pressure than younger or

older cohorts to adhere to institutional (i.e. marriage, family) norms that frequently shape role-bound stressors (Arnett 2007; Frye and Liem 2011). The decrease of institutional pressures that traditionally reinforce gender socialization may impact how emerging adult men and women cope; while women typically report using emotion-focused coping styles and men report using problem- and avoidance-oriented coping techniques, this pattern may change in emerging adulthood (Frydenber and Lewis 1993; Howerton and Van Gundy 2009; Li et al. 2006). This thesis examines four coping styles: problem-focused, emotion-focused, avoidance-oriented, and religious coping. Problem-focused coping, originally considered the most “direct” form of coping, involves seeking information and taking action to manage the stressful situation (Lazarus and Folkman 1984; Lazarus 1999). In emotion-focused coping, individuals may distance themselves emotionally as a means of “self-preservation” or seek out emotional support and guidance from others (Lazarus 1999; Lazarus and Folkman 1984; Pearlin and Schooler 1978). Avoidance-oriented coping involves denial, distraction, disengagement, and selective ignoring to mitigate the effects of the stressor; however, theorists speculate that using avoidance-oriented coping may never eliminate the source of the stress itself (Horowitz 1976, 1979; Roth and Cohen 1986). In using religious-coping, individuals turn to religion and prayer to manage their stressors (McCrae and Costa 1986).

Residing in a rural context may also have implications for types of coping styles men and women employ. The lack of health and mental health care facilities, the culture of self-reliance and stoicism, and the resistance to treatment, especially by men in rural areas may make both men and women more likely to rely on individual or informal coping styles such as avoidance-oriented or emotion-focused coping (Alston 2010). However, previous research has shown that among rural adult men, stoicism and retreatism are associated with a negative quality of life

(Murray et al. 2008). It is unclear if emerging adults in rural America will show similar patterns of coping with social stressors and strain, and if or how gender moderates the effect of coping styles on psychological and physical health outcomes.

Gender and the Stress Process

The *stress-process model* (Figure 1) provides a framework for understanding the relationship between chronic stress and psychological well-being/mental health (Pearlin et al. 1981). The model organizes social stress into three domains: the *source* of stress, the *mediators* of stress, and the *manifestations* of stress (Pearlin et al. 1981). For the purposes of this thesis, I focus primarily on chronic life strains, informed by social context, as the source of stress; coping styles as mediating the effect of chronic strain; gender as possibly moderating the relationship between coping style and outcome; coping styles as moderating the effect of chronic stress on outcomes; and depressed mood, anxiety, and physical health outcomes as the manifestations of stress.

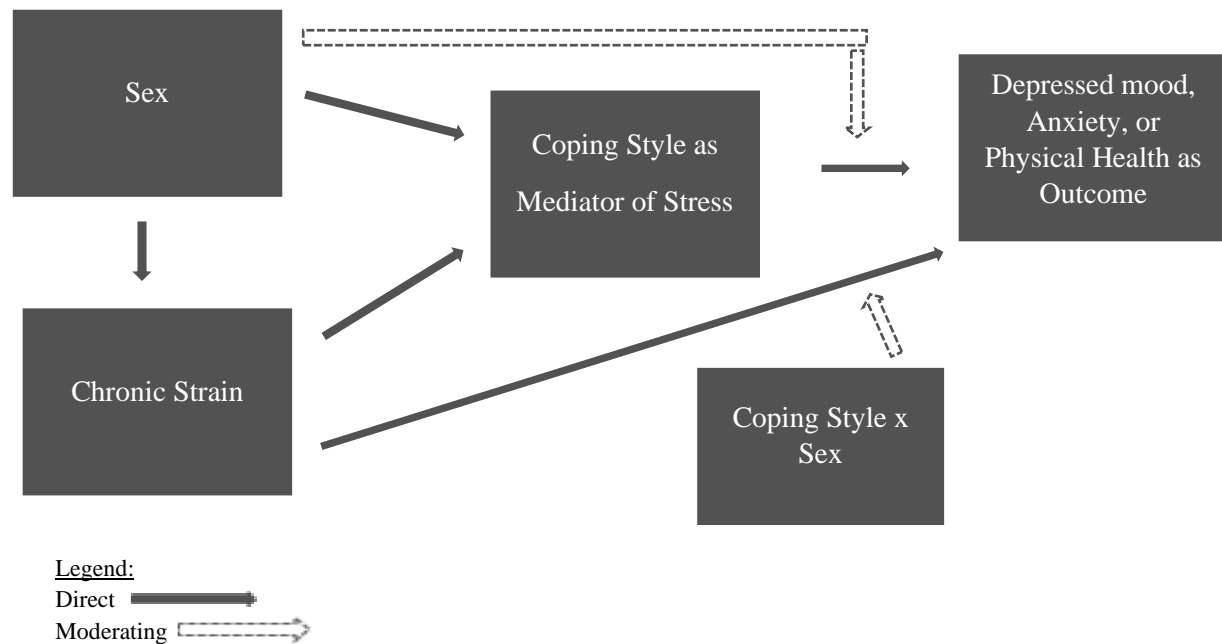


Figure 1: The stress process model (Pearlin et al. 1981) relevant to my research questions:

Chronic stressors, also termed *chronic strain*, are threats, demands, constraints, or challenges to “regularly engaged role(s)”, social environments, or identities (Wheaton and Montazer 2017). Chronic stressors result in *allostatic load*, or the continuous wear and tear on the body that occurs when stressors are long-lasting, repeating, uncertain, and are linked to role occupancy (Danese and McEwen 2012; Wheaton and Montazer 2017). While perhaps less visible than acute life or network events, chronic strain works “insidiously” and has a longer and/or more uncertain time course (Wheaton and Montazer 2017). Role strains associated with parenthood, marriage, occupation, and other relationships contribute largely to chronic strain (Pearlin, et al. 1981; Wheaton and Montazer 2017). Furthermore, these role strains are differentially experienced between men and women (Aneshensel and Pearlin 1987; Barnett and Baruch 1985, Gove 1978; Gove and Tudor 1978; Pearlin and Lieberman 1979; Ross and Mirowsky 2013; Rosenfield, Kato and Smith 2017; Taylor 2015). Women are more likely to

occupy disadvantaged roles both at home and at work, including roles that consist of unpaid labor or those that require high levels of emotion work (Taylor 2015). Furthermore, as gender socialization promotes the belief that women are responsible for child rearing, women are likely to experience higher levels of interpersonal conflict in parental and care-giver roles, as well as role overload and inter-role conflict with regards to the demands of work-life balance (Taylor 2015; Wheaton and Montazer 2017). However, know less about whether this trend is seen in emerging adulthood. As mentioned, the decrease of institutional pressures during this period of the life course may impact what strains are felt by emerging adult men and women as well as how they chose to cope with these strains.

Differential rates and types of chronic stress among men and women contributes to gender differences in rates of both psychological and physical illnesses. Historically, studies find that psychological and physical disorders vary greatly along gender lines; women report depressive symptoms at rates twice those of men, across age groups (Brody et al. 2018). Since the late twentieth century, women have been two to three times more likely than men to experience affective disorders, display increased rates of depression, and experience an earlier onset of these symptoms (Cleary 1987). These findings are consistent with prescribed social roles that suggest while it is more appropriate for women to be expressive in emotional behavior, men must adhere to masculinity standards that inform how they cope with emotional or psychological stressors (Phillips and Segal 1969). Due to this gender socialization, women's tendency to *internalize* their stressors results in a higher prevalence of depression, anxiety, and phobia among women while men's *externalizing* tendencies result in issues such as substance abuse or hyper-aggression (Rosenfield, Kato and Smith 2017). While scholars acknowledge the possibility of biological explanations between males and females, sociologists largely focus on

the social explanation of differences between socially constructed genders (Cleary 1987; Weissman and Klerman 1977, 1983). Theorists have long speculated that social roles are responsible for this discrepancy between men and women's psychological and physical health.

Studies demonstrate that women report depressive symptomology and depressive episodes at rates 2-3x higher than men (Kessler 1993; Kessler 2003; Slopen et al. 2011; Weissman et al. 1984; Weissman and Klerman 1985). The 2017 National Survey on Drug Use and Health (NSDUH) findings show 7.1% of all adults in the United States have had at least one past-year depressive episode, with a higher prevalence of women (8.7%) reporting depressive episodes than men (5.3%) (NIMH). Among adolescents (age 12-17), 13.3% reported at least one past year depressive episode; again, the prevalence was significantly higher among female adolescents (20.0%) compared to male adolescents (6.8%) (NIMH). Additionally, those aged 18-25 were nearly twice as likely (13.1%) as those aged 26-49 (7.7%) to report past-year depressive episodes, and nearly 3x more likely than those aged 50 and older (4.7%) (NIMH). Countless studies posit age as a determining factor in rates of mental health/illness (Mirowsky and Reynolds 2000; Mirowsky and Ross 1992; Schieman, Van Gundy and Taylor 2001; Schieman, Van Gundy and Taylor 2002). Younger adults are likely to report the highest levels of both depression and anxiety, rates of depression fall significantly in middle-age, and rates spike again in older adulthood (Mirowsky and Ross 1992). As roles shift over the life course – such as the progression from student to an employee to a retiree, from single to married and perhaps widowed, and other changes associated with marital, job, and economic statuses – the strains associated with these roles shift as well. This may help explain why in young adulthood, and again in late adulthood, we expect to see higher levels of depressed symptoms than in middle-aged cohorts (Mirowsky and Ross 1992). Using the framework put forth by Jeffrey Arnett to

study *emerging adulthood*, or a period of prolonged transition to adulthood, may expose unique implications on the mental health of individuals in this developmental stage (Arnett 2000; Arnett 2004; Burt and Masten 2010; Tanner 2000). In the late twentieth century, young adults were getting married and preparing for childrearing, having completed their education and settling into long-term jobs (Arnett 2004). Recent trends, however, show this transition into the multiple roles associated with adulthood extending beyond the late teenage years and early twenties with entry into marriage, parenthood, and consistent employment being delayed until the late twenties or even early thirties (Arnett 2004). These changes in the transitional period to adulthood “[have] ushered in a need for a new definition of the normal transition to adulthood” (Tanner 2000:501). With regard to mental and physical health, it is necessary to study this age group as a unique population. As transitional expectations change, traditional role expectations – largely linked to chronic strain – change as well. While age is not the primary concern of this thesis, I believe that these changing age-graded expectations and roles will impact young men and women differently with regards to both mental and physical health – perhaps even narrowing the gap between rates of psychological disorder among these young men and women as gender role expectations shift over time.

As the Diagnostic and Statistical Manual has changed and updated over the years, findings with respect to rates of depression remain consistent (Weissman and Klerman 1985). Weissman and colleagues (1984) show the disparity in rates of depression between men and women is *not* an issue of measurement or recall – women report higher rates of depression across all recall time periods including two weeks, one month, six months, one year, and lifetime. Several possible theories help explain the significant difference in rates of depression between men and women. Weissman and Klerman (1985) report on two psychosocial explanations: the

social status hypothesis and the *learned helplessness hypothesis*. The social status hypothesis suggests that women face social discrimination and therefore find their situation depressing as they are unable to achieve personal mastery, economic independence, or meet their aspirations. The *learned helplessness hypothesis* (Seligman 1974) states women are socially conditioned to fit stereotypical gender roles that suggest women cannot be assertive or independent (Weissman and Klerman 1985). Both hypotheses are largely tied to the social role(s) women occupy in contrast to those occupied by men. Women have been socialized in a way that may make them less equipped to “effectively” cope with social stressors – women are encouraged to express their emotions and share feelings with others, as opposed to take a the active, problem-focused approach utilized by men (Rosario et al. 1988; Sigmon, Stanton and Snyder 1995). Furthermore, women’s traditional role as homemaker is unstructured and invisible, thus offering little prestige or self-esteem – a known buffering resource in the stress-process model (Gove and Tudor 1973). Even women’s entry into the workforce in the late twentieth and twenty-first century did not buffer the effects of stress to reduce discrepancies in rates of mental distress between men and women; women face workplace discrimination and occupy less satisfactory roles compared to their male colleagues and are still expected to complete child rearing and household duties (Gove and Tudor 1973). The traditional roles women occupy – or believe they are meant to occupy as a result of gender socialization – in the social world, workplace, and at home disadvantage women and may increase their likelihood of experiencing chronic strain as well as decrease their ability to cope with this stress, therefore resulting in consistently higher rates of depression among women when compared to men.

Gender differences in rates of anxiety have been less studied than those of depression, despite anxiety’s high comorbidity with other disorders (Asher, Asnanni and Aderka 2017;

McLean et al. 2011; Romans, Cohan and Forte 2011). Anxiety is the most common mental disorder among adults, with 1 in 5 adults reporting past year symptoms of anxiety and nearly one-third reporting any lifetime symptoms (Kessler et al. 2005; NIMH 2017). According to the National Comorbidity Study Replication (NCS-R), the reported past year rate of anxiety is higher among females (23.4%) than males (14.3). Nearly 40% of females report any lifetime symptoms of anxiety compared to only 26% of males (NIMH 2017). Rates of anxiety are highest between adolescence and middle adulthood (18-44 years old). In a review of the literature on gender differences in anxiety disorders, Asher and colleagues (2017) found women to be more likely to report social anxiety disorders and more severe symptoms than men; however, women were found to be *less* likely than men to seek treatment for their symptoms. Asher (2017) suggests these findings may indicate that men, when experiencing symptoms of anxiety, perceive their symptoms to be more problematic than women because they stray further from traditional gender roles of men (i.e. stoicism) than those of women (i.e. expressive). Additionally, women tend to have larger, more diverse social networks; the cost-of-caring hypothesis may explain why social anxiety is more likely to plague women. The cost-of-caring hypothesis, which states women are more negatively affected by network events, may explain why women – who heavily rely on their social networks – may experience more social anxiety than men who are *less* likely to be as dependent on large networks for social support (Taylor 2015). Women's reliance on their social networks may do more harm than good; relationship harmony better predicted women's well-being while self-esteem better predicted men's well-being in a study examining gender differences in subjective well-being (Reid 2011). As gender differences in anxiety remain less empirically studied than differences in rates of depression, examining anxiety as a mental health

outcome is critically important to add to the limited literature on gender differences in the prevalence of anxiety disorders.

As with psychological outcomes, rates of physical illness/health vary between men and women (Arber 2001). The two outcomes are linked through the “brain-body” pathway (Gianaros and Wagner 2015); anxiety and other physiological stress reactions are shown to substantially impact the risk of physical disorder and illness (Gianaros and Wagner 2015; McEwen and Stellar 1993; Needham and Hill 2010; Roy-Byrne et al. 2008). Stress and chronic strain result in allostatic load – or physical wear and tear on the body – eventually straining physiological systems (Juster and Lupien 2012; McEwen and Stellar 1993). Chronic strain, largely tied to gendered roles, is differentially experienced by men and women and therefore allostatic load and physical ailments – linked to strain through the “brain-body” pathway – are also experienced differentially by men and women (Aneshensel and Pearlin 1987; Barnett and Baruch 1985, Gove 1978; Gove and Tudor 1978; Pearlin and Lieberman 1979; Ross and Mirowsky 2013; Rosenfield, Kato and Smith 2017; Taylor 2015). Headaches are one physical ailment associated with chronic stress; previous research shows that while experiencing tension-type headache episodes with the same frequency as men, women develop these headaches at a younger age, are more likely to experience depressive symptoms in conjunction with headaches, and are more significantly burdened by the loss of employment, disability, and homebound days associated with headaches (Rollnik et al. 2003; Rozen and Fishman 2012). Furthermore, in an attempt to uncover gender differences in coping with tension-type headaches, Rollnik and colleagues (2003) find that women who report tension-type headaches scored *lower* on an active, problem-focused coping scale and *higher* on a denial, avoidance-oriented coping measure, thus

underlining the importance of examining the relationship between gender, coping styles, and physical health outcomes.

Masculinity, amplified in rural contexts, is associated with aggressiveness, risk taking, and stoicism – traits incompatible with help-seeking behaviors or chronic illnesses (Arber 2001; Needham and Hill 2010). Chronic physical ailments are believed to undermine self-control, independence, and masculinity and are therefore more aligned with socially constructed norms of femininity and womanhood (Arber 2001). Additionally, despite men's lower utilization of medical services, women are frequently overlooked as patients within primary health fields (Arber 2001; Juvred and Rennels 2016). Biases in health systems and health research, such as medical trials historically being conducted on men and not women, as well as differential exposure and vulnerability to diseases and illnesses, help explain the gender gap in health outcomes (Den and Ostlin 2009).

Global Disability Adjusted Life Years (DALYs), or years lost due to disability or disease, greatly vary by gender (GHO). DALYs lost to females, that are significantly different from those of men, include diseases such as breast cancer, sexually transmitted diseases, migraines, PTSD, panic disorders, and dementia (Den and Ostlin 2009; GHO; Snow 2009). Top DALYs lost to men, that vary significantly from those of women, include war, gout, alcohol use disorder, traffic accidents, violence, intentional injuries, drug use disorder, mouth/liver/lung cancers, and drowning (Den and Ostlin 2009; GHO; Snow 2009). Women are more likely to suffer from chronic and psychological conditions – such as headaches or depression – while men are more likely to lose life years to reasons consistent with the gendered division of labor (i.e. going to war) (Den and Ostlin 2009; Needham and Hill 2010). Despite changing gender role norms, these findings have remained relatively stable over time (Juster and Lupien 2012). Given our

knowledge of the “brain-body” pathway (Gianaros and Wagner 2015), and previous findings that suggest women cope differently than men when addressing their chronic illnesses (Rollnik et al. 2003), it is important to understand how the coping styles of emerging adults in a rural context experiencing chronic strain will impact their self-reported physical health outcome.

Chronic Strain and Coping Style(s)

Individuals cope with the effects of chronic stressors in a variety of ways. Often, one’s chosen coping style for a given stressor is dependent on the demands placed on them by other social stressors (Evans, Jacobs, Dooley, and Catalano 1987). Coping, or the response one presents to “prevent, avoid, or control emotional distress”, functions in one of three ways (Pearlin and Schooler 1978:3). First, coping can be a response that *changes* the situations that are generating the chronic strain. Pearlin and Schooler (1978) cite this as the most “direct” way to manage life-strains. However, not all individuals have the ability or resources to *change* the situation that creates stressors; chronic strain – especially that associated with one’s social roles such as parenthood, marriage, or occupation – is difficult to simply *change* and walk-away from. As discussed, these social roles are largely tied to gender and gender socialization. Second, coping can be comprised of responses that control the *meaning* of the stressful/strainful situation or experience (Pearlin and Schooler 1978). While this response occurs *after* the strainful experience has taken place or while it is ongoing, individuals’ appraisal can change how *threatening* the situation is thus preventing psychological distress. Some individuals and social groups can view the threat as minimal, while others appraise the situation as intense and highly threatening (Pearlin and Schooler 1978). Third, coping responses can occur after distress has emerged, as a means of managing stress and psychological harm. This function is typically

emotion-oriented and may do little to mitigate the actual strainful experience (Pearlin and Schooler 1978).

Studies of stress and coping traditionally organize coping styles into three different categories: *problem-focused*, *emotion-focused*, and *avoidance-oriented* coping (Lazarus and Folkman 1984; Lazarus 1999). Coping styles, or “categories of behavior in response to stressful events”, are best understood as tools one can access when faced with a stressful situation (McCrae and Costa 1986:387). There has been debate over whether coping styles are linked to specific personality traits and individual characteristics (i.e. coping as a fixed trait), or if coping should be thought of as a *dynamic* process where individuals assess the situation and choose the appropriate coping method that will prove most effective for that situation (Carver, Scheier, and Weintraub 1989; McCrae and Costa 1986).

In a problem-focused coping approach, individuals *seek information* regarding their strainful situation, and attempt taking action to mitigate the negative effects associated with their situation or experience (Lazarus and Folkman 1984; Lazarus 1999). This approach is consistent with *changing* the situation – a method Pearlin and Schooler (1978) cite as the most direct and perhaps the most effective. *Emotion-focused* coping relies on changing the meaning of the threatening situation, in line with the second function discussed by Pearlin and Schooler (1978), and “regulating the emotions tied to the stress situation” (Lazarus 1999:114; Lazarus and Folkman 1984). Carver and colleagues (1989) explain how seeking support for *emotional* reasons differs from seeking support for *instrumental* reasons; seeking emotional support is conceptually linked with emotion-focused coping while instrumental support is conceptually related to problem-focused coping (Carver et al. 1989). This thesis measures emotion-focused

coping as seeking emotional support, among other factors, and therefore is distinct from problem-focused coping (Appendix B).

Lazarus (1999) theorizes that individuals employing *emotion-focused coping* may distance themselves emotionally as a means of self-preservation. However, this emotional “distance” or avoidance has been conceptualized as a third style of coping distinct from that of traditional *emotion-focused* coping: *avoidance-oriented* or *approach-avoidance* coping (Lazarus 1999; Roth and Cohen 1986). This third style of coping suggests that individuals will employ selective ignoring, denial, disengagement, distraction, or procrastination techniques to manage stressful emotions associated with strainful life experiences (Carver 1997; Carver et al. 1989; Roth and Cohen 1986) (see Appendix B for list of measures). Horowitz (1976, 1979) warns that by employing *avoidance-oriented* coping methods, and ignoring the problematic situation at large, individuals “[fail] to perceive or take advantage of opportunities to escape from the stressful situation” thus never eliminating the primary source of distress (Horowitz 1976, 1979; Roth and Cohen 1986:815). Furthermore, in their study examining the association between personality traits and coping strategies, McCrae and Costa (1986) show strategies associated with avoidance – such as wishful thinking, indecisiveness, and passivity – are less effective at eliminating distresses caused by recent stressful life events while those strategies associated with both problem- and emotion-focused coping were effective at reducing distress (McCrae and Costa 1986).

While not ordinarily studied as one of the traditional methods of coping, a fourth coping style will be examined in this thesis: *religious coping*. Rural America has long held religion as a core tenet of daily life; however younger adults are less likely than their older counterparts to be as invested in religious life (Dillon and Savage 2006; Heinegg 2013; Swierenga 1977). Using

religion during times of stress can have both buffering effects, as well as possible exacerbating effects on outcomes of psychological distress (Schieman et al. 2013). Research has shown that using religion to cope can have moderating effects when stressful situations have more *practical* solutions or when individuals are suffering chronic emotional difficulties (Schieman et al. 2013). However, religious coping may also result in individuals deferring to deities, reducing the perceived need for personal control (Koenig 2009). This deferential approach may temporarily alleviate psychological distress but, similar to avoidance-oriented coping, does not get at the underlying causes of chronic strain. In a review of the literature on coping using religion, Koenig (2009) finds that many studies show that those who engage in religious coping report lower rates of depression, suicide, and anxiety. Additionally, faith-based coping mechanisms proved to be effective at eliminating distress (McCrae and Costa 1986). Important to note, however, is that cross-sectional studies do not expose direction of influence; some scholars suggest that increased use of prayer or religious service attendance is a *result* of strainful experiences rather than the reverse order (Schieman et al. 2013). Increased prayer comes as a *response* to stressful events or anxious feelings, and therefore it cannot be assumed that religious coping is an ineffective method for reducing symptoms of depression or anxiety if statistical tests show a positive association between the two. Given the rural sample used in this thesis, I felt it was important to examine whether there are gender differences in religious coping and if using religious coping impacts depressed mood, anxiety, or physical health among emerging adults.

Gender and Coping Style(s)

While research consistently shows disparities between men and women's rates of psychological and physical illness, there is less known about how each gender's preferred coping styles may impact this disparity (Frydenber and Lewis 1993; Howerton and Van Gundy 2009).

Women are more likely than men to use emotion-focused coping – however, research findings are mixed with respect to the effectiveness of this approach (Howerton and Van Gundy 2009; Lazarus 1966; Li, Gieuseppe and Froh 2006; Pearlin and Schooler 1978). While traditional scholars would suggest emotion-focused coping is not the most *direct* way to mitigate the effects of stressful experiences, Frydenber and Lewis (1993) note styles cannot be deemed as “intrinsically dysfunctional” and therefore cannot be labeled as good or bad (Pearlin and Schooler 1978). Howerton and Van Gundy (2009) find sex interacts with emotion-focused coping to reduce depressed mood – indicating emotion-focused coping may, in fact, be an effective method for managing stress among women. In the same study, Howerton and Van Gundy (2009) find no gender differences in the effectiveness of problem-focused coping in reducing depressed mood after controlling for race and socioeconomic status. In a study examining the association between coping mechanism and masculinity, Li and colleagues (2006) find problem-focused coping and distractive coping to be positively correlated with masculinity – leading to the assumption that men are more likely to engage in these methods (Li, DiGieuseppe and Froh 2006). Furthermore, and contrary to early scholars, they find avoidance-oriented coping to be *negatively* associated with depressed mood (Li, DiGieuseppe and Froh 2006). Additionally, Moral and colleagues (2015) found, in a study of older adults, avoidance techniques were effective at – at least temporarily – alleviating the initial discomforts of social stressors (Melendez et al. 2018; Moral et al. 2015). However, less is known with regards to the effectiveness of using avoidance-oriented coping to reduce the effects of chronic strain on psychological *and* physical outcomes among younger, emerging adults. Frydenber and Lewis (1993) state females rely more on social support, direct action, and emotional expression than their male counterparts but are also more likely to use withdrawal as a mechanism to alleviate the

effects of stress. Males, in the same study, report higher rates of using resignation and acceptance of the situation (Frydenber and Lewis 1993). As this brief review of the literature demonstrates, while women may be more likely than men to use emotion-focused coping and problem-focused coping – despite the latter’s association with masculinity – there is limited research on how each coping mechanism may vary in effectiveness across gender.

This thesis seeks to examine rates of utilization vary by gender; how each mechanism impacts the relationship between chronic strain and three health outcomes (depressed mood, anxiety, and physical health); and if gender interacts with any one of the four coping styles (problem-focused, emotion-focused, avoidance-oriented, and religious coping) to impact the relationship between chronic strain and the health outcomes. Based on my review of the literature, I predict that females will report higher rates of both depressed mood and anxiety, and worse physical health. Furthermore, I predict that females will more frequently employ emotion-focused coping while males – especially given the rural context – will more frequently report using avoidance-oriented coping. I predict emotion-focused coping will work to *reduce* the effects of chronic strain on psychological and physical outcomes for females among the sample of rural emerging adults. Avoidance-oriented coping is expected to decrease reported depressed mood and anxiety among males in the sample, as discussed in the reviewed literature, but increase the effects of chronic strain on physical illness as ailments left untreated result in more advanced and severe symptomology.

CHAPTER 2

METHODS

This thesis uses data from Wave V of the Coös Youth Study (CYS). The Coös Youth Study, with support from the Neil and Louise Tillotson Fund, started data collection activities in 2008 surveying 7th and 11th graders in each of Coös County's public middle and high schools. Coös County is the northernmost county in New Hampshire and, despite being the largest geographically, houses the smallest population with an estimated 31,589 residents as of July 2019. Relative to the rest of the state, the county experiences elevated levels of poverty, low incomes, and an aging population. Furthermore, the layoffs from and closures of paper mills in recent years have contributed to a low employment rate. Of those aged sixteen and older, only 56.2% of the county's residents are in the labor force compared to 67.7% for the state of New Hampshire.

The intention of the CYS is to ask students and young adults about aspirations for future academic and economic success; beliefs about economic opportunities within their local communities; attachment to Coös County; family, school, and community relationships; and health and social behavior as they transition from high school into young adulthood. The CYS has followed these two cohorts over the past 12 years. Wave V of the CYS yielded 309 responses; 200 females (64.7%) and 109 males (35.3%). The average age of the entire sample was 22.6 years old, with ages ranging from 19 to 26 – consistent with the emerging adulthood phase of the life course. The sample was 96.1% white, 1.3% Asian-American, and less than 1%

each Native American, Hispanic/Latino/a, or “other”. At the time of the survey, nearly all (99.0%) respondents had graduated high school or earned their GED.

Analytic Strategy

All my analyses will be conducted using Stata/SE 16.0 statistical analysis software. In the first stage of analysis, I conducted one-way analyses of variance (ANOVA) to examine differences in rates of each coping style, chronic strain, depressed mood, anxiety, and physical health between males and females. To examine whether each coping style significantly impacted levels of each depressed mood, anxiety, and physical health, I then conducted ordinary least squared (OLS) regression analyses on each outcome variable controlling for age, socioeconomic status, and sex. To uncover whether the effect of each coping style on each outcome (depressed mood, anxiety, and physical health) varied by sex, I added two-way interactions terms (*coping x sex*) into the models in each regression analysis. To reduce multicollinearity, independent variables used in the interaction terms were standardized (Aiken and West 1991). Last, I entered three-way interaction terms (*coping x sex x chronic strain*) into the regression analyses to uncover whether the two-way interactions vary by level of chronic strain. Again, the independent variables used in the interaction terms were standardized.

Measures

Dependent variables.

To measure depressed mood, I relied on Radloff’s (1977) Center for Epidemiology Studies Depression Scale (CED-D) and used 12 items (Appendix A) to assess symptoms of depression. Respondents were asked to assess whether, in the past 30 days, they experienced each of the 12 items “Not at all” (0), “Occasionally” (1), “Frequently” (2), or “Almost all the

time” (3). This measure is internally reliable with a Chronbach’s alpha (α) score of .97. Instead of using the summed total of the 12 items, I instead used the *rowmean* command in Stata to calculate the average score of the 12 items comprising the *depressed mood* scale for each of the respondents; a maximum score of 3 indicates that respondents chose “Almost all the time” (3) as their answer for *all* of the 12 items. The average score of *depressed mood* among participants was 0.7; however, the scores were relatively skewed so I adjusted for skewness in my analyses by using the natural logarithm of this average depressed mood score (*ln_depress*).

Anxiety is measured by using the average score of a 6-item measure consistent with DSM-IV criteria (Appendix A) ($\alpha = .89$). Participants responded in the same manner as depressed mood (ranging from “Not at all” (0) to “Almost all the time” (3)). The average score for *anxiety* among respondents was 1.1 out of maximum of 3. To uphold consistency, the natural logarithm of anxiety (*ln_anxiety*) was also used in analyses.

To measure physical health outcomes, I relied on 8 survey items that ask about physical health in the past 30 days (Appendix A) ($\alpha = .84$). Example questions include “How often did you have headaches?” and “How often did you have a stomach-ache?”. Responses ranged from “Never” (1) to “Every day” (6). A *higher* score indicated the respondent experienced *more* physical ailments, and therefore experienced worse health in the past 30 days. The average physical health score was 2.4 however, results were skewed so I again use the natural logarithm of physical health in my analyses (*ln_physhealth*).

Independent variables.

Socioeconomic status (SES), or the composite measure that includes individuals’ educational attainment, household income, and occupational status, represents where individuals

or groups of individuals fall on the social hierarchy (Dutton and Levine 1989). Studies have long shown the link between SES and a multitude of health outcomes (Adler et al. 1994; Dohrenwend and Dohrenwend 1970; McLeod and Kessler 1990; Smith 1998). Those of a higher SES often report better health, and more readily access resources that can help moderate the impacts of stress and strain on health outcomes. To measure SES, I use two items available in the dataset: household income, and occupation. Occupation was asked as an open-ended question on the survey among those who reported being “Employed (part time)” (2), “Employed (full time)” (3), or “Self-Employed” (4). I recoded each open-ended response into a numerical category using Hollingshead’s (1957) framework where the minimum score of 1 represented the equivalent of farm/day laborer and the maximum score of 9 represented a job equivalent to senior management or professional occupation (such as physician) (Hollingshead 1957). For respondents who indicated their employment status as “Stay-at-home parent” (4), “Unemployed and looking for work” (5), “Unemployed and not looking for work” (6), Disabled (7), or “Other” (8), I assigned them an occupation score of 1 (Hollingshead 1957). I imputed the mean occupation score (4.12) in missing cases. To create my composite measure socioeconomic status, I summed the z-score of occupation (zI_{occup}) and the z-score of household income (zI_{income}). The distribution of SES is shown in Table I.

Wave V of the Coös Youth measures coping styles using selected items from the Brief COPE (Carver 1997). *Problem-focused coping* is measured using four items, *emotion-focused* using three items, and *avoidance-oriented coping* measured using three items (Howerton and Van Gundy 2009). Religious coping, or *coping using religion*, is measured using two items: *You try to find comfort in your religion or spirituality*, and *You pray more than usual*. Respondents

report how frequently they use specific coping styles on a four-point scale: “Not at all” (0), “A Little” (1), “Sometimes” (2), or “A lot” (3). See Appendix B for the full list of coping items.

To measure chronic strain, I use 39 items from the survey consistent with Wheaton’s (1994) chronic stress measure (Turner, Wheaton and Lloyd 1995; Turner and Avison 2003; Turner et al. 2004). Instead of using the summative total from the 39-items, I take the average score reported to represent chronic strain. Wave V includes questions relating to general strain, strain with school, strain from parents, discrimination, relationship strain, occupational strain, and strain associated with parenthood (Appendix B). Questions were asked on a 3-point scale: “Not true” (1), “Somewhat true” (2), “Very true” (3). Because I used the mean score rather than the summative total, a score of 1 means the respondent faces the *minimum* level of chronic strain and reported “Not true” (1) to all questions regarding strain while a score of 3 would mean the respondent answered “Very true” (3) to *all* questions regarding strain.

CHAPTER 3

RESULTS

Analyses of Variance

In the first stage of analysis, I conducted one-way analyses of variance to examine differences in rates of each coping style, chronic strain, depressed mood, anxiety, and physical health between males and females (Table 1).

TABLE 1: Mean, Std. Dev., and range for entire sample and Male/Female

	Mean	Std. Dev.	Min.	Max.	Male Mean	Female Mean
<i>Problem-Focused Coping</i>	8.2	3.2	0	12	8.1	8.3
<i>Emotion-Focused Coping</i>	4.4	2.4	0	9	3.2***	5.0***
<i>Avoidance-Oriented Coping</i>	1.1	1.8	0	9	0.9	1.2
<i>Religious Coping</i>	0.6	0.9	0	3	0.8**	1.4**
<i>Chronic Strain (Avg.)</i>	1.4	0.3	1	2.6	1.4	1.4
<i>Depressed Mood (Avg.)</i>	0.7	0.6	0	2.7	0.7	0.8
<i>Anxiety (Avg.)</i>	1.2	0.7	0	3	1.0*	1.2*
<i>Physical Health (Avg.)</i>	2.4	0.9	1	5.6	2.2***	2.6***

*** (p < 0.001) ** (p < 0.01) * (p < 0.05)

There was no significant difference between males and females reported use of *problem-focused* coping, or *avoidance-oriented* coping. Females (mean = 5.0) were significantly (p < 0.001) more likely to report engaging in *emotion-focused* coping strategies than males (mean = 3.2) which is consistent with the literature and women's tendency to exhibit internalizing behaviors. Additionally, females (mean = 1.4) reported significantly (p < 0.01) higher levels of *religious* coping than their male (mean = 0.8) counterparts. Interestingly, there were no significant difference in reported symptoms of depressed mood between males and females.

There was, however a statistically significant ($p < 0.05$) difference between the average *anxiety* score of females compared to males as well as a significant difference ($p < 0.001$) difference between the mean *physical health* scores of males and females. Females reported both higher levels of anxiety as well as higher levels of physical health issues than their male counterparts.

There was no significant difference between males and females with regards to socioeconomic status, nor marital status (not shown). The younger cohort, averaging 20.4 years old, was significantly more likely than the older cohort, averaging 24.3 years of age, to report higher scores of *depressed mood* and *anxiety*. This aligns with the literature regarding the parabolic association between age and mental health (Mirowsky and Reynolds 2000; Mirowsky and Ross 1992; Schieman, Van Gundy and Taylor 2001; Schieman, Van Gundy and Taylor 2002). There were, however, no significant differences with regards to *physical health* between the younger and older cohort.

Reported chronic strain rates did not vary by significantly gender. However, those in the younger cohort reported significantly higher ($p < 0.05$) levels of chronic strain (1.42) than the older cohort (1.35). After examining each specific domain of chronic strain, findings show females reported significantly higher ($p < 0.05$) levels of both relationship strain (1.12) and strain associated with parenthood (1.06) than their male counterparts (1.08 and 1.01, respectively).

Regression Analyses

To examine whether the utilization of each coping style significantly impacted levels of each depressed mood, anxiety, and physical health, I conducted ordinary least squares (OLS) regression analyses on each outcome. I first examined depressed mood as the outcome (dependent) variable. As previously mentioned, the distribution of *depressed mood* is skewed so

I used the natural log of depressed mood in my analyses (*ln_depress*). In Model 1, I inserted the control variables (sex, SES, age, and chronic strain) into the model. In Models 2-5, each coping style (*problem-focused*, *emotion-focused*, *avoidance-oriented*, and *religious*) was added one at a time in addition to the controls. Model 6 included all controls as well as *all* coping styles. The same analytic method was repeated for the other two outcomes (anxiety and physical health).

TABLE 2: OLS Regression Results on Natural Logarithm of Depressed Mood (*ln_depress*)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Sex</i>	-.10	-.11	-.05	-.07	-.13	-.05
<i>SES</i>	-.00	-.00	-.00	-.00	-.00	-.00
<i>Age</i>	-.04*	-.04*	-.04*	-.04*	-.04*	-.04*
<i>Problem-focused coping</i>	-	-.01	-	-	-	-.00
<i>Emotion-focused coping</i>	-	-	.03*	-	-	.03
<i>Avoidance-oriented coping</i>	-	-	-	.13***	-	.12***
<i>Religious Coping</i>	-	-	-	-	-.03	-.03
<i>Chronic Strain</i>	1.8***	1.7***	1.8***	1.4***	1.7***	1.4***

*** (p<0.001) ** (p<0.01) * (p<0.05)

Table 2 (above) shows the results of the regression analyses on the log of depressed mood. Adjusting for age and socioeconomic status, sex was nonsignificant across all six models. Across all models, age remained significantly related to variance in depressed mood score. In Model 6, where all coping styles and chronic strain are added into the model, the regression coefficient for age is -.04, and significant at $p < 0.05$. Because the coefficient is negative, for every one-year increase in age, average depressed mood is predicted to *decrease* by .04 points. Emotion-focused coping slightly explained variance in depressed mood ($p < 0.05$), but *only* when there were no other coping styles in the model (Model 3). Problem-focused coping and religious coping did *not* significantly impact variation in depressed mood. Avoidance-oriented

coping, however, greatly and significantly influenced variation in the average depressed mood score, even after controlling for chronic strain. When avoidance-oriented coping was added into the model (Model 4), the regression coefficient for this coping style was .13 and significant at $p < 0.001$. After controlling for all covariates, coping styles, and chronic strain, the regression coefficient for avoidance-oriented coping *decreased* to .12 in Model 6, however was still significant at $p < 0.001$. Unsurprisingly – as the two are highly correlated (Appendix C) – chronic strain greatly impacts reported levels of average depressed mood; for every one-point increase in chronic strain, the score of average depressed mood increases 1.4 points (Model 6). Because the regression coefficient for chronic strain *decreases* from Model 1 (1.8) to Model 6 (1.4) – while remaining significant – and avoidance-oriented coping has a significant main effect on depressed mood, this means that avoidance-oriented coping partially mediated the relationship between chronic strain and depressed mood.

Table 3 (below) shows results of regression analyses on the natural log of anxiety. Neither age nor sex remained significant across all six models. Neither problem-focused, emotion-focused, nor religious coping significantly explained variation in anxiety in any of the models. Similar with depressed mood, avoidance-oriented coping significantly explained variation in levels of anxiety. In Model 6, after all coping styles and chronic strain were added into the model, the regression coefficient for avoidance-oriented coping was .06 and significant at $p < 0.001$. Again, avoidance-oriented coping mediated the impact of chronic strain on anxiety. The regression coefficient for chronic strain decreased from 1.2 in Models 1 to 1.0 in Models 4 and 6, after the inclusion of avoidance-oriented coping.

TABLE 3: OLS Regression Results on Natural Logarithm of Anxiety (*ln_anxiety*)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Sex</i>	-.17*	-.17*	-.13	-.15*	-.18*	-.14
<i>SES</i>	.01	.01	.02	.02	.01	.01
<i>Age</i>	-.03	-.03	-.03	-.03	-.03	-.03
<i>Problem-focused coping</i>	-	-.00	-	-	-	-.00
<i>Emotion-focused coping</i>	-	-	.02	-	-	.01
<i>Avoidance-oriented coping</i>	-	-	-	.07**	-	.06**
<i>Religious Coping</i>	-	-	-	-	-.02	-.02
<i>Chronic Strain</i>	1.2***	1.2***	1.2***	1.0***	1.2***	1.0***

*** (p<0.001) ** (p<0.01) * (p<0.05)

TABLE 4: OLS Regression Results on Natural Logarithm of Physical Health (*ln_physhealth*)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Sex</i>	-.14***	-.14***	-.13***	-.12***	-.14***	-.13***
<i>SES</i>	-.00	-.00	-.00	-.00	-.01	-.00
<i>Age</i>	-.01	-.01	-.01	-.01	-.01	-.01
<i>Problem-focused coping</i>	-	-.01	-	-	-	-.00
<i>Emotion-focused coping</i>	-	-	.00	-	-	.01
<i>Avoidance-oriented coping</i>	-	-	-	.05***	-	.05***
<i>Religious Coping</i>	-	-	-	-	-.02	-.01
<i>Chronic Strain</i>	.62***	.60***	.62***	.48***	.61***	.47***

*** (p<0.001) ** (p<0.01) * (p<0.05)

Last, Table 4 (above) shows regression analyses results for the natural logarithm of physical health. Unlike the results of depressed mood or anxiety, sex remained significant across all models in the regression on physical health (Model 1-6). Even after the addition of all

controls, coping styles, and chronic strain, the regression coefficient for sex in Model 6 was -.13 and significant at $p < 0.001$. The effect size of sex did not change substantially from Model 1 (-.14) to Model 6 (-.13), suggesting chronic strain does not mediate the effect of sex on physical health. Avoidance-oriented coping remains significant across Models 4 and 6. Again, results show that avoidance-oriented coping mediated the effects of chronic strain on physical health.

Two-Way Interactions

After the first round of analyses, I found that both avoidance-oriented coping and chronic strain remained statistically significant factors impacting levels of depressed mood, anxiety, and physical health. Furthermore, sex was a significant predictor across all models in the OLS regression on physical health. To uncover whether the effect of each coping styles on each outcome (depressed mood, anxiety, and physical health) depended on sex, as well as whether coping styles moderated the relationship between chronic strain and each outcome, I added two-way interaction terms into the models in each separate regression analysis (*coping x sex* and *coping x chronic strain*). To reduce multicollinearity, independent variables used in the interaction terms were standardized (Aiken and West 1991).

Coping Style x Sex

Table 5 (below) shows the regression results for depressed mood, including interaction terms for each coping style by sex, testing whether gender moderates the effect of each coping style. In Models 2 through Model 5, each interaction term (each of the four coping styles by sex) was added individually. The same procedure was repeated for the other two outcomes, anxiety and physical health. None of the interaction terms were significant across any of the models

(Model 2-5). Sex did not interact with any of the four coping styles to significantly impact levels of depressed mood. This means that the effects of coping on depressed mood do not vary by sex.

TABLE 5: OLS Regression Results of interaction effects between standardized coping styles and sex on natural log on depressed mood (*ln_depress*)

	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Sex</i>	-.05	-.05	-.05	-.05	-.04
<i>SES</i>	-.00	-.00	-.00	-.00	-.00
<i>Age</i>	-.04*	-.04*	-.04*	-.04*	-.04*
<i>Problem-focused coping (Standardized)</i>	-.01	.01	-.01	-.01	-.00
<i>Emotion-focused coping (Standardized)</i>	.07	.07	.07	.07	.07
<i>Avoidance-oriented coping (Standardized)</i>	.21***	.21***	.21***	.22***	.21***
<i>Religious Coping (Standardized)</i>	-.05	-.05	-.05	-.05	-.05
<i>Chronic Strain</i>	.40***	1.4***	1.4***	1.4***	1.4***
<i>Problem-focused coping (Standardized) x Sex</i>	-	-.03	-	-	-
<i>Emotion-focused coping (Standardized) x Sex</i>	-	-	-.00	-	-
<i>Avoidance-oriented coping (Standardized) x Sex</i>	-	-	-	-.02	-
<i>Religious Coping (Standardized) x Sex</i>	-	-	-	-	.01

*** (p<0.001) ** (p<0.01) * (p<0.05)

Results are similar regarding the regression on the natural log of anxiety (Table 6, below). There were no significant two-way interactions between coping and sex. This means gender does not moderate the effects of coping style on the average anxiety score; each coping style has the same effect on anxiety regardless of gender.

TABLE 6: OLS Regression Results of interaction effects between standardized coping styles and sex on the natural log of anxiety ($\ln_anxiety$)

	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Sex</i>	-.05	-.13	-.14	-.13	-.14
<i>SES</i>	-.00	.02	.02	.02	.01
<i>Age</i>	-.04*	-.03	-.03	-.03	-.03
<i>Problem-focused coping (Standardized)</i>	-.01	.03	-.01	-.01	-.01
<i>Emotion-focused coping (Standardized)</i>	.07	.04	.06	.05	.04
<i>Avoidance-oriented coping (Standardized)</i>	.21***	.11**	.10**	.12**	.11**
<i>Religious Coping (Standardized)</i>	-.05	-.04	-.03	-.03	-.02
<i>Chronic Strain</i>	.40***	1.0***	1.0***	1.0***	1.0***
<i>Problem-focused coping (Standardized) x Sex</i>	-	-.08	-	-	-
<i>Emotion-focused coping (Standardized) x Sex</i>	-	-	-.04	-	-
<i>Avoidance-oriented coping (Standardized) x Sex</i>	-	-	-	-.04	-
<i>Religious Coping (Standardized) x Sex</i>	-	-	-	-	-.05

*** (p<0.001) ** (p<0.01) * (p<0.05)

Table 7 (below) shows the results of the regression analysis on physical health score when two-way interaction terms are included in each model. None of the interaction terms (*coping x sex*) significantly predict levels of physical health. Again, this means that gender does not change the effects of each coping style on the physical health outcome.

TABLE 7: OLS Regression Results including interaction effects between standardized coping and sex on physical health

	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Sex</i>	-.13***	-.13***	-.13***	-.13***	-.13***
<i>SES</i>	-.00	-.00	-.00	-.00	-.00
<i>Age</i>	-.01	-.01	-.01	-.01	-.01
<i>Problem-focused coping (Standardized)</i>	-.01	-.03	-.01	-.01	-.01
<i>Emotion-focused coping (Standardized)</i>	.01	.01	.01	.01	.01
<i>Avoidance-oriented coping (Standardized)</i>	.08***	.09***	.09***	.08***	.09***
<i>Religious Coping (Standardized)</i>	-.03	-.02	-.03	-.03	-.01
<i>Chronic Strain</i>	.14***	.47***	.47***	.48***	.47***
<i>Problem-focused coping (Standardized) x Sex</i>	-	.03	-	-	-
<i>Emotion-focused coping (Standardized) x Sex</i>	-	-	-.00	-	-
<i>Avoidance-oriented coping (Standardized) x Sex</i>	-	-	-	.02	-
<i>Religious Coping (Standardized) x Sex</i>	-	-	-	-	-.05

*** (p<0.001) ** (p<0.01) * (p<0.05)

Coping Style x Chronic Strain

Table 8 (below) shows the results of the regression analysis on the natural log of depressed mood, including the two-way interactions between each coping style and chronic strain. Avoidance-oriented coping and chronic strain each show significant main effects across each model (1-5). The coefficient for interaction term between avoidance-oriented coping and chronic strain was -.12 and statistically significant at $p < 0.001$ (Model 4). This means chronic strain and avoidance-oriented coping interacted to *reduce* the average depressed mood level. These findings show that employing an avoidance-oriented coping style moderated the effect of

chronic strain on depressed mood within this sample. No other two-way interaction terms were significant in the regression on depressed mood.

TABLE 8: OLS Regression results including interaction between each coping style and chronic strain on depressed mood.

	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Sex</i>	-.05	-.05	-.04	-.08	-.04
<i>SES</i>	-.00	-.00	-.00	-.00	-.01
<i>Age</i>	-.04*	-.04*	-.04	-.03	-.04*
<i>Problem-focused coping (Standardized)</i>	-.01	-.00	-.01	.00	-.00
<i>Emotion-focused coping (Standardized)</i>	.07	.06	.07	.06	.07
<i>Avoidance-oriented coping (Standardized)</i>	.21***	.21***	.22***	.29***	.21***
<i>Religious Coping (Standardized)</i>	-.05	-.05	-.05	-.06	-.05
<i>Chronic Strain (Standardized)</i>	.40***	.42***	.40***	.44***	.40***
<i>Problem-focused coping (Standardized) x Chronic Strain (Standardized)</i>	-	.05	-	-	-
<i>Emotion-focused coping (Standardized) x Chronic Strain (Standardized)</i>	-	-	-.03	-	-
<i>Avoidance-oriented coping (Standardized) x Chronic Strain (Standardized)</i>	-	-	-	-.12***	-
<i>Religious Coping (Standardized) x Chronic Strain (Standardized)</i>	-	-	-	-	-.02

*** (p<0.001) ** (p<0.01) * (p<0.05)

Table 9 (below) shows the results of the regression analysis on the natural log of anxiety, including the two-way interactions between each coping style and chronic strain. Again, the coefficient for the interaction term *avoidance-oriented coping x chronic strain* was -.07 and significant at $p < 0.01$. None of the other interaction terms were statistically significant. The significant negative regression coefficient for the two-way interaction term *avoidance-oriented coping x chronic strain* means the avoidance-oriented coping moderates the impact of chronic strain on anxiety. Figure 2 (below) shows how avoidance-oriented coping moderates the effect of chronic strain on both depressed mood (left) and anxiety (right).

TABLE 9: OLS Regression results including interaction between each coping style and chronic strain on anxiety.

	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Sex</i>	-.13	-.14	-.13	-.15*	-.13
<i>SES</i>	.02	.02	.02	.02	.01
<i>Age</i>	-.03	-.03	-.03	-.03	-.03
<i>Problem-focused coping (Standardized)</i>	-.01	-.01	-.01	-.00	-.01
<i>Emotion-focused coping (Standardized)</i>	.05	.04	.07	.04	.05
<i>Avoidance-oriented coping (Standardized)</i>	.10**	.10**	.11***	.15***	.10**
<i>Religious Coping (Standardized)</i>	-.03	-.03	-.03	-.03	-.03
<i>Chronic Strain (Standardized)</i>	.30***	.32***	.30***	.44***	.30***
<i>Problem-focused coping (Standardized) x Chronic Strain (Standardized)</i>	-	.06	-	-	-
<i>Emotion-focused coping (Standardized) x Chronic Strain (Standardized)</i>	-	-	-.01	-	-
<i>Avoidance-oriented coping (Standardized) x Chronic Strain (Standardized)</i>	-	-	-	-.07**	-
<i>Religious Coping (Standardized) x Chronic Strain (Standardized)</i>	-	-	-	-	-.01

*** (p<0.001) ** (p<0.01) * (p<0.05)

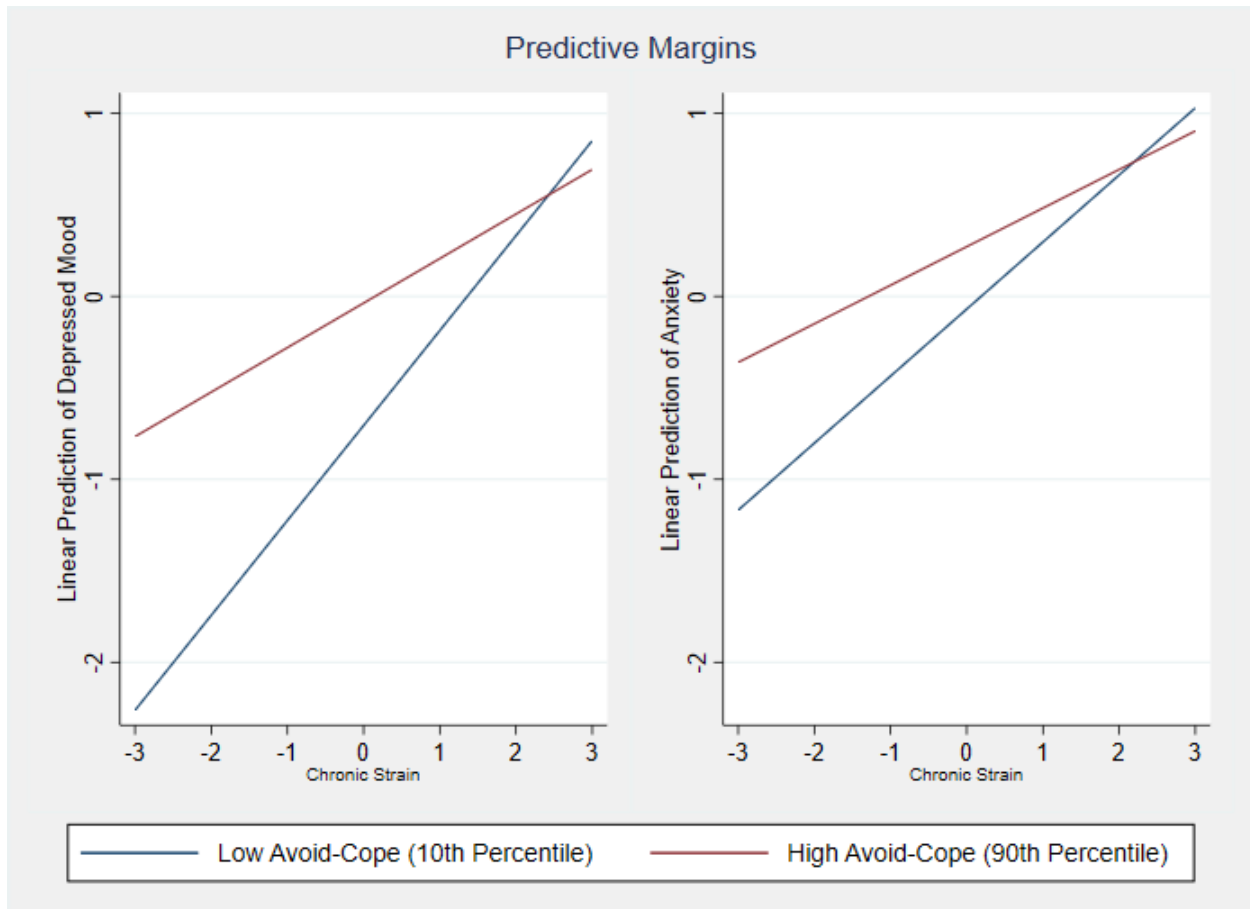


Figure 2: Predictive margins plot showing interaction between avoidance-oriented coping and chronic strain. As displayed, avoidance-oriented coping buffers the impact of chronic strain on both depressed mood and anxiety.

Table 10 (below) shows the results of the regression on physical health, including the interaction terms for each coping style by chronic strain. While both avoidance-oriented coping and chronic strain had significant main effects on the natural log of physical health, there were no significant interactions between coping style and chronic strain across any models (1-5). This means that no coping style moderated the effect of chronic strain on physical health score.

TABLE 10: OLS Regression results including interaction between each coping style and chronic strain on physical health.

	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Sex</i>	-.13***	-.13***	-.13***	-.13***	-.13***
<i>SES</i>	-.00	-.00	-.00	-.00	-.00
<i>Age</i>	-.01	-.01	-.01	-.01	-.01
<i>Problem-focused coping (Standardized)</i>	-.01	-.00	-.01	-.01	-.01
<i>Emotion-focused coping (Standardized)</i>	.01	.00	.01	.01	.01
<i>Avoidance-oriented coping (Standardized)</i>	.08***	.09***	.09***	.10***	.09***
<i>Religious Coping (Standardized)</i>	-.03	-.02	-.03	-.03	-.02
<i>Chronic Strain (Standardized)</i>	.14***	.15***	.14***	.14***	.14***
<i>Problem-focused coping (Standardized) x Chronic Strain (Standardized)</i>	-	.03	-	-	-
<i>Emotion-focused coping (Standardized) x Chronic Strain (Standardized)</i>	-	-	.00	-	-
<i>Avoidance-oriented coping (Standardized) x Chronic Strain (Standardized)</i>	-	-	-	-.02	-
<i>Religious Coping (Standardized) x Chronic Strain (Standardized)</i>	-	-	-	-	.00

*** (p<0.001) ** (p<0.01) * (p<0.05)

Three-Way Interactions

While there were no significant interactions between coping style and sex, there *were* significant two-way interactions between avoidance-oriented coping and chronic strain in the regression analyses on both depressed mood and anxiety. I proceeded to enter three-way interaction effects into the regression analyses to uncover whether the two-way interactions (*coping x chronic strain*) vary by sex. Like with the two-way interaction analyses, I standardize the independent variables used in the three-way interactions.

Tables 11, 12, and 13 (below) show the results of the regression analyses – including the three-way interaction terms *coping x sex x chronic strain* – on depressed mood, anxiety, and physical health (respectively). There were *no* significant three-way interaction terms across any models for any of the outcome variables. This means that the effect of the significant two-way interaction between avoidance-oriented coping and chronic strain on both depressed mood and anxiety did *not* vary by sex.

TABLE 11: OLS Regression Results of three-way interaction effects between standardized coping styles, sex, and standardized chronic strain score on natural log of depressed mood (*ln_depress*)

	Model 1	Model 2	Model 3	Model 4
<i>Sex</i>	-.06	-.05	-.09	-.04
<i>SES</i>	-.00	-.01	-.00	-.01
<i>Age</i>	-.04*	-.03	-.03	-.04
<i>Problem-focused coping (Standardized)</i>	.01	.00	.00	-.01
<i>Emotion-focused coping (Standardized)</i>	.06	.07	.06	.07
<i>Avoidance-oriented coping (Standardized)</i>	.22***	.23***	.33***	.22***
<i>Religious Coping (Standardized)</i>	-.05	-.05	-.06	-.06
<i>Chronic Strain (Standardized)</i>	.39***	.37***	.43***	.38***
<i>Model-Specific Coping¹ (Standardized) x Sex</i>	-.02	-.02	-.11	.01
<i>Model-Specific Coping (Standardized) x Chronic Strain (Standardized)</i>	.06	-.06	-.13***	-.03
<i>Chronic Strain (Standardized) x Sex</i>	.06	.10	.02	.07
<i>Problem-focused coping (Standardized) x Sex x Chronic Strain (Standardized)</i>	-.02	-	-	-
<i>Emotion-focused coping (Standardized) x Sex x Chronic Strain (Standardized)</i>	-	.11	-	-
<i>Avoidance-oriented coping (Standardized) x Sex x Chronic Strain (Standardized)</i>	-	-	.02	-
<i>Religious Coping (Standardized) x Sex x Chronic Strain (Standardized)</i>	-	-	-	.00

*** (p<0.001) ** (p<0.01) * (p<0.05)

¹ For each model, the lower-order interaction terms were entered in the analysis including *coping style x sex*, *coping style x chronic strain*, and *chronic strain x sex*. Model 1 includes the lower-order interaction terms with problem-focused coping, Model 2 includes emotion-focused coping, Model 3 avoidance-oriented coping, and Model 4 religious coping. This table formatting is repeated for the regression analyses on anxiety and physical health.

TABLE 12: OLS Regression Results of three-way interaction effects between standardized coping styles, sex, and standardized chronic strain score on natural log of anxiety (*ln_anxiety*)

	Model 1	Model 2	Model 3	Model 4
<i>Sex</i>	-.15	-.15	-.16	-.14
<i>SES</i>	.02	.01	.02	.01
<i>Age</i>	-.03	-.03	-.03	-.03
<i>Problem-focused coping (Standardized)</i>	.02	-.00	-.00	-.01
<i>Emotion-focused coping (Standardized)</i>	.04	.06	.04	.05
<i>Avoidance-oriented coping (Standardized)</i>	.12**	.11**	.20***	.12**
<i>Religious Coping (Standardized)</i>	-.03	-.03	-.03	-.02
<i>Chronic Strain (Standardized)</i>	.29***	.26***	.28***	.25***
<i>Model-Specific Coping (Standardized) x Sex</i>	-.07	-.05	-.13	-.06
<i>Model-Specific Coping (Standardized) x Chronic Strain (Standardized)</i>	.07	-.00	-.07*	-.01
<i>Chronic Strain (Standardized) x Sex</i>	.09	.14	.10	.11
<i>Problem-focused coping (Standardized) x Sex x Chronic Strain (Standardized)</i>	-.02		-	-
<i>Emotion-focused coping (Standardized) x Sex x Chronic Strain (Standardized)</i>		.04	-	-
<i>Avoidance-oriented coping (Standardized) x Sex x Chronic Strain (Standardized)</i>	-	-	.02	-
<i>Religious Coping (Standardized) x Sex x Chronic Strain (Standardized)</i>	-	-	-	.04

*** (p<0.001) ** (p<0.01) * (p<0.05)

TABLE 13: OLS Regression Results of three-way interaction effects between standardized coping styles, sex, and standardized chronic strain score on natural log of physical health (*ln_physhealth*)

	Model 1	Model 2	Model 3	Model 4
<i>Sex</i>	-.13***	-.13***	-.14***	-.13***
<i>SES</i>	-.00	-.00	-.00	-.00
<i>Age</i>	-.01	-.01	-.01	-.01
<i>Problem-focused coping (Standardized)</i>	-.03	-.01	-.01	-.01
<i>Emotion-focused coping (Standardized)</i>	.00	.01	.01	.01
<i>Avoidance-oriented coping (Standardized)</i>	.09***	.09***	.10***	.09***
<i>Religious Coping (Standardized)</i>	-.02	-.03	-.03	-.01
<i>Chronic Strain (Standardized)</i>	.13***	.13***	.14***	.13***
<i>Model-Specific Coping (Standardized) x Sex</i>	.04	-.01	-.01	-.05
<i>Model-Specific Coping (Standardized) x Chronic Strain (Standardized)</i>	.03	.00	-.02	.01
<i>Chronic Strain (Standardized) x Sex</i>	.04	.05	.02	.03
<i>Problem-focused coping (Standardized) x Sex x Chronic Strain (Standardized)</i>	.00	-	-	-
<i>Emotion-focused coping (Standardized) x Sex x Chronic Strain (Standardized)</i>	-	.02	-	-
<i>Avoidance-oriented coping (Standardized) x Sex x Chronic Strain (Standardized)</i>	-	-	.03	-
<i>Religious Coping (Standardized) x Sex x Chronic Strain (Standardized)</i>	-	-	-	-.02

*** (p<0.001) ** (p<0.01) * (p<0.05)

CHAPTER 4

DISCUSSION

After a review of the literature on gender, stress, coping, and psychological and physical health, I was left with the following questions: *Are there gender differences in rates of depressed mood, anxiety, and physical health? Is there differences in rates of chronic strain between men and women among this rural sample of emerging adults? Do rates of utilization of each coping style vary by sex? Do coping styles mediate the effects of sex differences on psychological and physical outcomes? Does sex moderate the effects of each coping style on each outcome? Do coping styles moderate the effects of chronic strain on outcomes?* The results of my analyses above attempt to answer these research questions. Findings show that there is no significant difference between men and women with respect to depressed mood, yet emerging adult women in this sample report higher rates of both anxiety, and physical illness. Sex does not moderate the effect of any coping style on outcomes. However, avoidance-oriented coping *does* buffer the effects of chronic strain on both depressed mood and anxiety. Below, these findings are discussed in depth within the context of the literature.

Gender and Health

Contrary to the literature (Kessler et al. 1993; Kessler et al. 1994; Slopen et al. 2011; Weissman et al. 1984; Weissman et al. 1993), results of this study show there are no significant gender differences in rates of depressed mood among the sample of rural, emerging adults. While the maximum depressed mood score reported in the sample was 2.7 (out of a possible score of 3), males and females reported relatively low *average* scores at 0.7 and 0.8, respectively. The

convergence between depressed mood scores of males and females in this sample may be explained by the heterogeneous nature of emerging adulthood (Arnett 2007). Studies find that emerging adults do not follow the typical psychological trajectories of adolescents or young adults (Arnett 2007; Frye and Liem 2011). Rather, individuals in this phase of the life course present more variability both in how they interpret negative or positive events and in how risk factors, such as gender, differentially impact psychological outcomes (Frye and Liem 2011; Galambos et al. 2006). Frye and Liem (2011) find, after a latent class analysis among emerging adults, female sex predicted membership in a *decreasing* depressive symptom class. Furthermore, findings by Galambos, Barker and Krahn (2006) show depressive symptoms among women aged 18-25 declined at a rate more quickly than that of men. Among their sample, there were no significant gender differences in rates of depressed mood at age 25 (Galambos et al. 2006). Previous research such as that conducted by Frye and Liem (2011) and Galambos and colleagues (2006) tells a story that diverges from the traditional gender differences in rates of depression among adolescents or young adults. Within the period of emerging adulthood, rates of depression among women may be *decreasing* more rapidly than that of men – thus resulting a convergence of rates between genders (Frye and Liem 2011; Galambos et al. 2006). The nearly identical reported levels of depressed mood between males and females in this study, 0.7 and 0.8 respectively, may reflect a more rapid decrease in rates of depression among emerging adult females meaning rates may at least temporarily converge during this phase of the life course. These findings add to the growing body of literature that recommends studying emerging adulthood as a conceptually distinct, and increasingly heterogeneous, phase of the life course.

Unlike rates of depression, the difference in rates of anxiety between males and females were significant at $p < 0.05$, where females reported a higher average anxiety score (mean = 1.2)

compared to their male counterparts (mean = 1.0). These findings align with the literature; adolescent and young adult females consistently report higher rates of anxiety than males (Asher et al. 2017; McLean et al. 2011). Previous literature illuminates the high comorbidity of anxiety and major depressive disorder, especially among young women. Within this sample, depressed mood and symptoms of anxiety are greatly and significantly ($p < 0.001$) correlated for both males (.79) and females (.70) (Appendix C). Despite frequent comorbidity and the high correlation within the sample, it is interesting that gender differences do not appear for both anxiety *and* depressed mood. Simonds and Whiffen (2003) attempted to contextualize previous similar findings; rates of experiencing anxiety *alone*, or both anxiety and depression, are higher among females than males (Simonds and Whiffen 2003). Therefore, individuals experiencing anxiety *alone* may be more likely to be female thus resulting in a gender gap with regard to anxiety but not depression. Future research should continue to examine comorbidity of anxiety and depressed mood among emerging adults, and how or if this consistently varies by gender.

Females in the sample reported *more* physical ailments than males their age, and female sex significantly predicted worse physical health across all regression models. This finding appears to be consistent with the literature suggesting women face more chronically debilitating issues than men (Rollnik et al. 2003; Rozen and Fishman 2012). Headaches, for example, are one physical ailment that women report as more chronically debilitating than men (Needham and Hill 2010; Rozen and Fishman 2012). In this study, females (mean = 2.3) were significantly ($p < 0.001$) more likely to report experiencing frequent headaches than males (mean = 1.9). Given the context of a rural sample, men may be less likely to *report* symptoms of physical disorder (Alston 2010; Arber 2001; Gorman, Eley, and Hossain 2012; Murray et al. 2008; Needham and Hill 2010). As men enter young adulthood, they may be constrained to gender roles amplified in

a rural setting that conceptualize chronic pain or illness as a *weakness* or flaw (Needham and Hill 2010). Women, socially conditioned as the “weaker” gender, may be more willing to report symptoms of headache, fatigue, or illness as it is consistent with gendered patterns of help-seeking behavior (Arber 2001). However, given the rural context and presence of both mental health and primary care Health Professional Shortage Areas (HPSAs) in the county, women may not be receiving the treatment they need to alleviate the pain associated with headaches, fatigue, or illness. Given the findings that show sex as a significant independent predictor of physical health, it is important that future research addresses potential undertreatment of chronically debilitating illnesses among emerging adult women in rural communities.

Gender and Coping

While it was predicted that males would rely more on avoidance-oriented coping, given the rural context and tenets of stoicism and retreatism (Alston 2010; Judd et al. 2006; Murray et al. 2008), there was no significant difference between males and females utilization of avoidance-oriented or problem-focused coping. Despite prior research suggesting rural adolescent males may be less likely than females to seek out guidance as a means of coping with psychological stressors, differences do not appear between males and females with regard to problem-focused coping among this sample of emerging adults (Sung et al. 2006). Differences do emerge, however, with respect to seeking emotional support. The rates of using emotion-focused coping varied greatly between males and females in the sample. While the reported emotion-focused coping score among females was 5.0, males endorsed emotion-focused coping much less frequently with an average score of 3.2. This finding is consistent with the literature, which shows women employ emotional expression and regulation more frequently than men (Frydenberg and Lewis 1993; Howerton and Van Gundy 2009; Li et al. 2006; Phillips and Segal

1969; Sigmon et al. 1995). Furthermore, the lower rates of emotion-focused coping among young men in this sample supports the argument that men in rural communities uphold the principle of self-reliance; the culture of pride, secrecy, and stoicism in rural communities – especially emphasized among men – encourages alternative forms of coping to that of emotional guidance (Alston 2010; Canterll et al. 2012; Murray et al. 2007; Smalley and Warren 2012).

Females in this sample also reported employing religious-coping more frequently than their male counterparts. While not typically explored as one of the “traditional” forms of coping, religious coping has been studied as a form of social control in regulating or reducing alcohol and substance use disorder(s) (Karuse et al. 2018). In a 2018 study, Karuse and colleagues find that while seeking spiritual support offset the effects of stressful events on alcohol use among men, the same effects were not seen among women. In rural areas, substance use disorder (SUD) remains a significant social problem and contributor to suicide, particularly among young males. While this study does not examine rates of alcohol or substance use, future research should examine how gender may interact with religious coping to impact the relationship between chronic stress and SUD in both rural and urban contexts.

Chronic Strain and Coping

Emotion-focused coping did not have the detrimental effects on depressed mood or anxiety as originally hypothesized by early coping scholars due to the supposedly less direct or less effective nature of the coping style (Berman and Turk 1981; Carver 1989; Rosario et al. 1988; Pearlin and Schooler 1978). Additionally, emotion-focused coping did *not* interact with gender to impact the relationship between chronic strain and each outcome; contrary to my hypothesis, emotion-focused coping did not reduce the effects of chronic strain on depressed mood, anxiety, or physical health for females. Unlike past research (Howerton and Van Gundy

2009), there was no evidence that emotion-focused coping served as an effective coping method among emerging adult women in this study despite the frequency of utilization. However, this thesis does not examine the relationship between individual types of strain (i.e. school-related, relationship, work) and health outcomes; emotion-focused coping may, in fact, buffer the negative effects of specific strains on the psychological well-being of certain populations. In a study among pregnant women employed full-time in Thailand, Sanguanklin and colleagues (2014) find that seeking emotional and social support from friends and families moderated the effects of workplace strain on psychological well-being, specifically during pregnancy. Furthermore, a recent review of the literature on coping with politics in the United States suggests that emotional regulation strategies – such as cognitive reappraisal – may moderate the negative impacts of chronic political stressors on individuals’ mental health (Ford and Feinberg 2020). To further explore the potential of emotion-focused coping and emotional regulation strategies in reducing the negative impacts of chronic stressors, future research should examine the relationship between *specific* types of strains and psychological well-being and how the moderating effects of emotion-focused coping may vary by gender, age, or other demographic markers.

The finding of avoidance-oriented coping as a significant predictor of each outcome variable – across all models and accounting for each other coping style – has implications for rural health and mental health policy. Despite hypotheses predicting that sex would interact with avoidance-oriented coping to reduce the effect of chronic strain on depressed mood and anxiety – while increasing the effect of chronic strain on physical health - among males, avoidance-oriented coping had an independent effect on all outcomes for *both* men and women. While perhaps in the past aims by health and mental health agencies were targeted towards either men

or women, results from this study suggest policies should address the use of avoidance-oriented coping for all individuals in a rural community. However, in examining the interaction between chronic strain and avoidance-oriented coping, the use of avoidance-oriented coping *buffered* the effects of chronic strain on both depressed mood and anxiety, suggesting avoidance-oriented coping may be an effective strategy in managing chronic strain among this rural emerging adult sample. These findings are still surprising, given the commonly held perception that ignoring a problem does not make it go away (Horowitz 1976; 1979). They are, however, consistent with previous research that found that avoidance-oriented coping may alleviate the initial effects of stress/strain (Li et al. 2006; Melendez et al. 2018; Moral et al. 2015). While Moral and colleagues (2015) found the use of avoidance strategies to be effective for alleviating the initial effects of strain among *older* adults, findings of this thesis suggest that the using avoidance strategies may also be effective at alleviating social stressors or strain – at least temporarily – among the sample of rural emerging adults. Because this study is cross-sectional, it is unclear whether avoidance-oriented coping strategies are effective in the long-term management of chronic strain among emerging adults. Furthermore, little is known with respect to how avoidance-oriented coping moderates the effect of *specific* types of strain on emerging adults. While avoidance-oriented coping may be effective at buffering the effect of *general* chronic strain – other types of strains may be less compatible with ignoring or avoiding techniques. Strains such as those associated with parenthood – of which most (93.0%) of the sample reported the minimum possible score – may be better addressed with other, more direct, coping styles. In a social emotional parenting program in Australia, the utilization of avoidance-oriented coping strategies such as “keep[ing] to self” significantly decreased after completion of the program along with an *increase* in parent well-being (Guilford et al. 2015). It is possible that avoidance-

oriented coping buffers the effects of chronic strain among this sample of rural emerging adults because they have yet to face strains – such as parenthood – that may be more effectively managed with a problem- or emotion-focused approach.

The lack of significant difference between the reported chronic strain scores of males and females in this sample may suggest that emerging adults are not as tightly bound to gendered social roles that typically contribute to differential rates of overall chronic strain. This period of ambiguity, between adolescence and “full” adulthood, is a time where individuals are allowed to explore and “reinterpret their roles in the context of new or nonexistent institutional structures” (Frye and Liem 2011: 572). The decrease in institutional pressures, such as traditional education, marriage, and the family, may explain the convergence of rates of chronic strain between males and females in emerging adulthood (Arnett 2004). As mentioned, emerging adults may have yet to experience the pressures and role-bound stressors that are shaped within these institutions; as these individuals enter “full” adulthood and find full-time careers, get married, and have children, it is likely that the nature – and distribution – of chronic strains will change. Despite the similarity in overall rate of chronic strain reported by males and females in this sample, emerging adult females already reported experiencing significantly higher levels of relationship strain and strain associated with parenthood than their male counterparts. As this cohort ages out of emerging adulthood and enters adulthood, we can expect to see a greater disparity in chronic strain rates between males and females as they reemerge themselves in institutions that uphold traditional gendered roles and role-bound stressors. Future longitudinal research should be conducted, examining rates and types of chronic strain among men and women as they age into, and out of, emerging adulthood to further add to the body of literature on stress and gender.

Limitations

While this study contributes to the literature on gender differences in chronic strain, coping, and psychological and physical outcomes by examining a sample of rural emerging adults, there are several limitations. First, as previously discussed, this study is cross-sectional. Due to the cross-sectional nature of this thesis, hypotheses cannot be tested that involve direction of influence or long-term effectiveness of certain coping styles. While avoidance-oriented coping may moderate the effects of chronic strain, it is unclear whether this same effect will be seen when the emerging adult sample ages into “full” adulthood. As the cohorts in this sample enter full adulthood and begin to experience different strains – such as those associated with parenthood – the buffering effect of avoidance-oriented coping on overall chronic strain may no longer be significant. Additionally, it is not possible to tell from this study whether the chronic strain reported by individuals in the sample is newly onset or has been relatively stable over the past several years. Nor it is possible to determine direction of influence. As previous research has suggested that avoidance-oriented coping may alleviate the *initial* effects of strain on an individual’s psychological well-being (Moral et al. 2015), the buffering effect offered by avoidance-oriented coping may decrease as chronic strain cumulates over the life course.

Second, this thesis does not examine the relationship between *specific* types of strains, coping, gender, and psychological and physical health outcomes. Previous literature shows that seeking emotional and social support from friends and families may moderate the effects of workplace strain on psychological well-being among women during pregnancy (Sanguanklin et al. 2014). While gender did not moderate the effects of emotion-focused coping on health outcomes in this thesis, it is possible that emotion-focused coping may benefit women when

managing certain, specific, types of stressors. Research should continue to study the relationship between specific categories of strain and physical and psychological well-being, and how the mediating effects of coping style may vary by gender.

Last, while this thesis examined how traditional gender socialization and role strain influence coping style choice and rates of both psychological and physical illness, the study variable used in analyses was reported *sex*, rather than gender. Though the two terms are conceptually distinct, they are often conflated in survey research and academic contexts (Cowan 2005; Westbrook and Saperstein 2015). Studies on gender, stress, and coping may benefit, however, by studying gender-role orientations – such as masculinity and femininity – to more fully understand the relationship between stress and psychological or physical health outcomes. Taylor’s (2015) study, in which they found masculine personality orientations buffered the effect of networks on mental disorders among women, provides support for examining gender-role orientations and personality traits when studying coping, stress, and gender.

CONCLUSION

Like many other rural counties across the country, Coös County experiences elevated levels of poverty, unemployment and Health Professional Shortage Areas; the recent focus on the Opioid Crisis in rural America has brought mental health to the forefront of many policy discussions and the aging population of many rural communities prompts interest in how the next generation of adults – currently in the *emerging adulthood* phase of the life course – experience rural life. A growing body of literature in the sociology of mental health seeks to examine rates of psychological and physical disorder as well as how individuals within rural areas cope with chronic strains and stressors. This thesis adds to the well-established body of literature examining gender differences in psychological and physical health outcomes, as well as adds to the growing body of literature examining gender differences in coping, strain, and outcomes in rural contexts – specifically among individuals in a unique phase of the life course, emerging adulthood.

While historically, young adult women have greater rates of depressed mood than their male counterparts, this study found no gender differences with regard to depressed mood among the emerging adults in the sample. The heterogenous nature of emerging adulthood may explain this finding; young men and women in emerging adulthood feel less pressure to conform to institutional norms or expectations that typically dictate gendered role-bound stressors and demonstrate more variability in how they interpret negative or positive events (Frye and Liem 2011). Recent studies examining emerging adulthood as a distinct stage of the life course show that rates of depression of females may decline more rapidly than those of males during this time

period, thus approaching convergence (Frye and Liem 2011; Galambos et al. 2006). Researchers should continue to study emerging adulthood as a conceptually distinct phase of the life course.

Contrary to my hypotheses, gender did not interact with any of the coping styles to moderate the effects of chronic strain on psychological or physical health outcomes. Avoidance-oriented coping was significantly associated with an increase in depressed mood, anxiety, and physical illness across each model for both men and women – however, avoidance-oriented coping *moderated* the effects of chronic strain on depressed mood and anxiety. It is possible that avoidance-oriented coping buffers the effects of chronic strain among this sample of rural emerging adults because they have yet to face strains – such as parenthood – that may be more effectively managed with a problem- or emotion-focused approach (Gulliford et al. 2015). While there was some variation with rates of specific strains between males and females, such those associated with parenthood and interpersonal relationships, there was no significant variation for overall reported chronic strain. Future research should examine the relationship between specific types of strains and psychological and physical health outcomes, and whether specific coping styles are more effective at reducing negative health outcomes associated with each type of strain for emerging adult men and women. I also recommend longitudinally studying emerging adults as they age into “full” adulthood, to uncover whether rates – and types – of chronic stressors change in different ways for men versus women as they age in a rural context.

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APPENDICIES

APPENDIX A: DEPENDENT VARIABLES

Mental Health Outcome: Past 30 days...

Depressed Mood:

1. w5m8, *I was bothered by things that usually don't bother me*
2. w5m3_rt, *I did not feel like eating: my appetite was poor*
3. w5m11, *I felt that I was just as good as other people* (reverse coded)
4. w5m5_t, *I felt depressed*
5. w5m16, *I thought my life had been a failure*
6. w6m6_t, *I felt fearful*
7. w5m4_t, *My sleep was restless*
8. w5m20, *I talked less than usual*
9. w5m7_t, *I felt lonely*
10. w5m22, *People were unfriendly*
11. w5m24, *I had crying spells*
12. w5m2_t, *I could not get going*

Anxiety:

1. w5an1, *I felt wound up tense or restless*
2. w5an2, *I became easily worn out or fatigued*
3. w5an3, *I had difficulty concentrating*
4. w5an4, *I was easily irritated*
5. w5an5, *My muscles were very tense*
6. w5an6, *I had difficulty sleeping*

Physical Health Outcome: Past 30 days...

1. w5ae1, *How often do you have headaches?*
2. w5ae2, *How often do you feel really sick?*
3. w5ae3, *How often did you wake up feeling tired?*
4. w5ae4, *How often did you tire easily or feel like you have no energy?*
5. w5ae5, *How often did you have a stomach ache?*
6. w5ae6, *How often did you vomit or feel like vomiting?*
7. w5ae7, *How often did you have trouble sleeping?*
- w5ae8, *How often did you seem to feel really health?* (reverse coded)

APPENDIX B: INDEPENDENT VARIABLES

Chronic Strain: 39-item

General:

1. w5ag1, *You're trying to take on too many things at once*
2. w5ag2, *There is too much pressure put on you to be like other people*
3. w5ag3, *Too much is expected of you by others*

School-related:

4. w5ag4, *You find it difficult to balance school demands with social life and/or work*
5. w5ag5, *You are concerned about your ability to keep up your grades*
6. w5ag6, *You are not sure that you will be able to complete your education*
7. w5ag18, *You want to go to college but you don't have the money to pay for it*
8. w5ag19, *You want to go to college but you don't have the grades to get in*

Strain with Parents:

9. w5ag7, *Your parents beliefs are old fashioned*
10. w5ag8, *Your parents expect you to act like they did when they were young*
11. w5ag9, *Your parents are too controlling*
12. w5ag10, *Your parents try to protect you too much*
13. w5ag11, *Your parents are unwilling to see you as an adult*
14. w5ag12, *Your parents ask too many questions about where/what you've been doing*
15. w5ag13, *Your parents don't really remember what it was like to be your age*

Discrimination:

16. w5dc1, *You are treated with less courtesy than other people*
17. w5dc2, *You are treated with less respect than you deserve*
18. w5dc3, *You receive worse service than other people at restaurants and stores*
19. w5dc4, *People act as if they think you are not smart*
20. w5dc5, *People act as if they are afraid of you*
21. w5dc6, *People act as if they think you are dishonest*
22. w5dc7, *People act as if they are better than you are*
23. w5dc8, *You are called names or insulted*
24. w5dc9, *You are threatened or harassed*

Relationship with partner/boyfriend/girlfriend:

25. w5ah1, *Your partner/boyfriend/girlfriend doesn't understand you*
26. w5ah2, *Your partner/boyfriend/girlfriend expects too much of you*
27. w5ah3, *Your partner/boyfriend/girlfriend doesn't show enough affection*
28. w5ah4, *Your partner/boyfriend/girlfriend isn't committed enough to relationship*
29. w5ah5, *You are not sure you can trust your partner/boyfriend/girlfriend*
30. w5ah6, *You have a lot of conflict with your partner/boyfriend/girlfriend*

Work:

31. w5js1, *Your supervisor is always watching what you do at work*
32. w5js2, *You want to change jobs but don't feel you can*
33. w5js3, *Your job often leaves you feeling mentally and physically tired*
34. w5js4, *You don't get paid enough for the job you have*
35. w5js5, *Your work is boring and repetitive*
36. w5js9, *You're looking for a job and can't find the one you want*

Parenthood:

37. w5pa1, *One of the worst things about being a parent is that you feel you can't get out*
38. w5pa2, *Children get on your nerves if you have to be with them all day*
39. w5pa3, *You often feel that you can't stand the children a moment longer*

Coping:

Problem-Focused:

1. w5cs1, *You concentrate your efforts on doing something about it*
2. w5cs2, *You try to come up with a strategy about what to do*
3. w5cs3, *You think about what steps to take*
4. w5cs4, *You take on additional action to try to get rid of the problem*

Emotion-Focused:

1. w5cs6, *You try to get emotional support from friends or relatives*
2. w5cs7, *You let your feelings out*
3. w5cs9, *You feel a lot of emotional distress and you find yourself expressing those feelings*

Avoidance-Oriented:

1. w5cs10, *You say to yourself this isn't real*
2. w5cs11, *You admit you can't deal with it and quit trying*
3. w5cs12, *You refuse to believe that it has happened*

Coping by Using Religion:

1. w5cs13, *You try to find comfort in your religion or spirituality*
2. w5cs14, *You pray more than usual*

APPENDIX C: CORRELATION MATRIX

	Age	SES	Chronic Strain	Prob-Focused Coping	Emo-Focused Coping	Avoid-Oriented Coping	Relig Coping	Depressed Mood	Anxiety	Physical Health
Age	1.0000	0.3266 ***	-0.0961	0.1037	-0.0032	-0.1129	0.0214	-0.1496	-0.0619	-0.1160
SES	0.2656 ***	1.0000	-0.1213	0.1901 *	0.0214	-0.0786	-0.0841	-0.0618	-0.0425	-0.0516
Chronic Strain	-0.0674	-0.0934	1.0000	-0.0908	0.0147	0.2969	0.0439	0.6159 ***	0.5294 ***	0.5214 ***
Prob-Focused	0.0197	0.1405 *	-0.2317 ***	1.0000	0.3954 ***	-0.1197	0.0276	-0.0792	-0.1271	-0.0443
Emo-Focused	-0.0407	-0.0049	-0.0090	0.3258 ***	1.0000	0.1476	0.1750	0.1317	0.0527	0.0435
Avoid-Oriented	0.0030	-0.0431	0.5132 ***	-0.2500 ***	0.1303	1.0000	0.0324	0.3984 ***	0.2278 *	0.3973 ***
Relig Coping	0.0194	0.0057	-0.0352	0.2585 ***	0.1819 **	-0.0704	1.0000	-0.0228	-0.0920	-0.1374
Depressed Mood	-0.1326	-0.0996	0.6010 ***	-0.1766 **	0.0830	0.5507 ***	-0.0941	1.0000	0.7878 ***	0.7378 ***
Anxiety	-0.1325	-0.0495	0.4752 ***	-0.0997	0.0843	0.4350 ***	-0.0384	0.7040 ***	1.0000	0.7414 ***
Physical Health	-0.1216	-0.1145	0.5519 ***	-0.2572 ***	0.0370	0.4941 ***	-0.0845	0.6699 ***	0.6473 ***	1.0000

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Table 1: Correlation matrix of study variables by sex (female below the diagonal, male above diagonal).