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## Exploring the Associations Between Femininity, Burnout, and Health Behaviors Among Middle Age Women

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Exploring the Associations Between Femininity, Burnout, and Health Behaviors Among Middle  
Age Women  
By  
Adelaide Brown<sup>a</sup>

Abstract

To date research on how traditional feminine traits and gender role ideology may impact burnout and health behaviors in women is limited. This paper examines how the aforementioned may be associated with higher burnout rates in a community-based cohort of middle-aged women (40-65 years). This study focuses on western traditional feminine traits and gender role ideology, which describe an individual's attitude regarding their assigned role in society and the strength of association with their role. Women who report a stronger connection to more traditional traits or ideology were expected to report higher rates of burnout.

This study also assesses whether burnout is associated with engagement in specific health behaviors. The study utilizes survey data from the 2018 Online Midlife Women's Data Collection survey to examine these factors. Traditional gender ideology was assessed using the Passive Acceptance subscale of the Feminist Identity Development Scale. Feminine traits were assessed using the Bem Sex Role Inventory. Health behaviors included intuitive eating, frequency of cigarette smoking, exercise frequency, and the average weekly number of alcoholic beverages consumed. Burnout is assessed using the Copenhagen Burnout Inventory.

Findings indicate that traditional gender ideology was not associated with burnout, while feminine traits (e.g., compassionate, sympathetic) were negatively associated with both personal and work-related burnout. In addition, higher levels of burnout were associated with decreased intuitive eating. Higher levels of burnout and a strong endorsement of traditional gender roles were also associated with less frequent exercise. The frequency of cigarette smoking and number of alcoholic beverages consumed are not associated with any of the predictors assessed.

This study is significant in building a stronger understanding of what may cause women to engage or disengage in specific health behaviors. The information gained may be used in future health promotion programs to enhance the lives of middle age women.

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Burnout has long been associated with the workplace, as individuals note how stress from work accumulates to create feelings of intense exhaustion. The World Health Organization defines burnout as the unsuccessful management of chronic workplace stress (World Health Organization, 2019). However, this may not only be caused by the workplace as burnout rates have been increasing in other populations including housewives, students, and unemployed people (Weber, 2000). These people though not employed in a stereotypical workplace still have other responsibilities to attend to. The inability to manage chronic stress in any work type domain may lead to burnout.

One factor that may contribute to burnout rates in women is the concept of traditional gender roles. Gender and sex are two different things with sex being the assignment of male or female, and gender being the social ideas surrounding how men and women should act. Gender is a socialized role with individual behaviors varying based on culture.

Gender ideology and gender traits may also impact the development of burnout. Gender ideology is defined by Duerst-Lahti as “structured beliefs and ideas about ways power should be arranged according to social constructs associated with sexed bodies” (Duerst-Lahti, 2008). Gender traits refer to the personality type traits associated with each gender. In this study gender traits were operationalized through use of the Bem Sex Role Inventory, which investigates both personal traits and the social display of traits. Within western societies women are thought to behave in nurturing ways caring for others emotionally and physically, while men are presumed to be leaders, the heads of households providing for the family economically and making important decisions (Blackstone, 2003). Not all people follow this traditional view of gender roles. In fact, many 21st century western women are taking on additional roles outside of the home. Although in most cases women who work are still faced with pressure to perform work roles and manage household tasks. Employed women with partners who also work have noted an additional 2 hours of work at home per day while men who are employed with partners that also work report an increase in domestic work by 40 minutes (Templeton, 2019). This increase in workload may create added stressors leading women to develop chronic stress (defined as stress lasting longer than 12 months). Some research has found there may be a connection between chronic stress and depression, with long term stressors creating the counter inability to cope with stress (Hammen, 2005). This inability to cope with stress may be related to the development of burnout.

The western view of women as nurturers may contribute to their coping behaviors being more emotionally focused than men. One particular study found women scored significantly higher than men in emotional and avoidance coping and lower in rational and detachment coping styles (Matud, 2004). The emotional and avoidance coping styles used by women to manage stress may appear with other behaviors like smoking. A study on the predictors of risk for smoking relapse in men and women found women were more likely to relapse based on depressive mood, anxiety, anger, and perceived stress, while the motivation to reduce craving was a greater risk factor for relapse in men (Nakajima, 2012). These findings indicate women are more likely to use smoking to manage emotions (like stress), which may be correlated with the finding that women are more affected by the stress of those around them. If women are more affected by the stress of those around them and are taught by western traditional gender norms to

always act as a nurturing figure the accumulation of constant stress from fulfilling these roles may contribute to a lack of energy for self-care with other more positive behaviors. This lack of energy and consequent decrease in positive health behaviors may create a greater likelihood for the development of burnout. After all you can't pour from an empty cup.

With the idea that burnout results from chronic stress there is a question of whether culturally accepted traditional gender roles for women have an influence on burnout rates in middle aged women (40-65 years). To date there is a lack of research examining the burnout rate with relation to traditional gender norms in this cohort. Although middle aged women may have a greater propensity towards developing burnout as research shows they are likely to be involved with more homecare tasks while also employed. According to the World Economic Forum "women work an average of 8 hours and 39 minutes a day – nearly an hour longer than men, when both paid and unpaid tasks are taken into account" (Parker, 2017). This extra hour of work is likely not what makes the situation difficult, rather it is cultural norms instilling the belief in women that they must be the caretakers what makes this difficult. Women who believe they need to fulfill all homecare tasks while also working are likely to struggle under a high workload and unreasonable expectations. The combination of a high workload and unreasonable/unrealistic expectations leads to chronic stress and the development of burnout. Previous research has shown a higher level of total burnout is related to an increased risk of absence from work due to mental and behavioral disorders, diseases of the circulatory system, respiratory system, and musculoskeletal system (Toppinen, 2005). Clearly burnout affects the whole body, and these effects may be amplified in the research cohort.

The conditions arising from burnout may develop from the coping behaviors used to navigate life with chronic stress. Men and women use a variety of coping behaviors to manage chronic stress although these behaviors are likely to differ based on gender. According to data from the American Psychological Association "women are more likely than men to report that they eat as a way of managing stress (31 percent vs. 21 percent) ... women also report having eaten too much or eaten unhealthy foods because of stress in the past month far more often than men (49 percent of women vs. 30 percent of men). Significantly more women (35 percent) than men (24 percent) exercise only once a week or less. When asked why they don't exercise more often, they are more likely than men to say they are just too tired (39 percent vs. 26 percent)" (American Psychological Association, 2012). The coping behaviors of relevance in this study include smoking, exercise, and eating habits. The current study analyzes the lives of middle-aged women (40-65 years) in an attempt to answer the question: do women who internalize traditional gender roles have higher rates of burnout and are they more likely to employ negative coping behaviors?

## **Burnout**

Research has defined burnout as a chronic stress syndrome caused by work-related overload and a lack of resources (Toppinen, 2005). Although it's likely that burnout differentiates from stress as it often precedes or accompanies the onset of chronic stress (Pruessner, 1999). While no biological markers of burnout have been found to date, burnout is

increasingly considered by medical professionals as a hypocortisolemic disorder (Bianchi, 2015). Hypo means low and cortisolemic relates to cortisol levels (stress hormone), meaning individuals experiencing chronic stress may have a lowered cortisol level and thus become more susceptible to developing conditions like burnout and depression. A study examining the relationship between chronic stress, Post-Traumatic Stress Disorder (PTSD) and burnout found serious family problems, physical illness, divorce or separation, the death of a child, and being emotionally abused or neglected to be significantly associated with burnout (Mather, 2014). These situations cause a great chronic stress response supported by physical and mental symptoms which many are unable to cope with. Symptoms include headaches, disturbed sleep patterns, exhaustion, fatigue, nonspecific pain, reduced attention span, feelings of meaninglessness, apathy, or detachment (Pruessner, 1999).

A number of measures have been developed to assess burnout. The Maslach Burnout Inventory (MBI) was published in 1981 to define parameters for determining the level of burnout in groups of employed individuals. The inventory assesses three components of burnout; emotional exhaustion, depersonalization, and reduced personal accomplishment. The MBI only involves work-related stressors, and while women are now entering the workforce in greater numbers not all women hold stereotypical jobs and some are only involved in domestic work. The current study uses the Copenhagen Burnout Inventory (CBI) to analyze how traditional gender norms impact burnout rates in middle age women. The CBI goes further than the MBI in the investigation of burnout by asking questions about personal burnout, work-related burnout, and client-related burnout. As the definition of burnout has expanded to reflect experiences of people beyond the stereotypical workplace alternative measures are needed to adequately capture all experiences. The three parts involved in the CBI are designed to include all people, regardless of work status. Questions on personal burnout are related to an individual's personal degree of physical and psychological fatigue and exhaustion, while work-related burnout refers to those who work and client-related burnout is specific to those involved in any type of human service profession (Kristensen, 2005). The core of all these investigations into burnout is a focus on physical and psychological fatigue and exhaustion.

Burnout symptoms may vary during different stages of life and between genders. A particular study examining burnout in Canadian workers within 63 different workplaces found differences in the relationship to burnout with age and gender. This report noted a negative relationship between burnout and age in men (an increase in age was associated with a reduced burnout level) while burnout symptoms followed a wave pattern in women. In women aged 20-35 years burnout increased then there was a slight decline until age 55 where symptoms again rose in some women (Marchand, 2018). With the knowledge that burnout symptoms may increase in women at certain age marks it was noted that an investigation into burnout in middle age women (40-65) years would be key. Through middle age women often become caught up with an increased workload between roles in caring for their children, aging parents, and working. Including an analysis of western traditional gender roles in the current study will help to understand the causes of burnout in women and if societal norms play a role in the difference between the development of burnout/burnout rates in men and women.

## **Gender Roles and Burnout**

Traditionally women have been involved in more unpaid domestic work than men. According to the United Nations Department of Economic and Social Affairs data on the world's women in 2020 “on an average day, women spend about three times as many hours on unpaid domestic work and care work as men — 4.2 hours per day for women compared to 1.7 hours per day for men” (Time, 2020). More in-depth work focusing on developed nations during the COVID-19 pandemic found that women still spent about 2 hours longer than men on unpaid domestic care. Research indicates this difference in time spent on domestic work may play a vital role in creating a differential experience of life events.

One study analyzing the gender differences in stress and coping with a sample of 2,816 people between 18-65 years found women scored significantly higher than men in terms of chronic and minor daily stressors even though each group had experienced what researchers qualified as the same number of life experiences / changes. The study also indicated that one particular reason for this difference may be that women are more involved in social and family networks and thus more likely to be affected by the stress of those around them (Matud, 2004). Women spending more time involved in navigating the family/relational structure may be more affected by stressors because they have spent more time in this navigational role than men. The western view of traditional gender norms prescribing the role of a nurturing figure to the female sex has the potential to create a person full of constant concern for others. This constant concern for others may also be a contributor to higher rates of mental health disorders in women. In the United States women are more likely than men to be diagnosed with anxiety and depression, developing in childhood and progressing through adulthood (Richmond, 2015). It's possible that this diagnosis could progress to symptoms of burnout.

## **How Burnout is Associated with Health Behaviors**

The present study examines health behaviors in middle age women to determine if their behaviors may be associated with burnout. In addition, the project examines whether a high prevalence of feminine traits or the endorsement of traditional gender role ideology is associated with burnout and health behaviors. Prior studies examining health behaviors and burnout have found correlation between behavior-related health risk factors (sedentary lifestyle, overweight, smoking, heavy alcohol use) and work-related burnout (Ahola, 2012). The current study examines health behaviors of middle age women to understand how their behaviors may be related to burnout. From a general understanding to date no research has focused specifically on the health behaviors of middle age women as they relate to burnout in connection with traditional gender roles. Burnout has only been previously thought of as a work-related condition. While women are continuing to enter the workforce not all women work, so expanding the definition of burnout while examining the connection between burnout and health-related behaviors will give better insight into behavioral changes in a wider group. The specific behaviors analyzed include intuitive eating, frequency of cigarette smoking, exercise frequency, and the average weekly number of alcoholic beverages consumed.

Time and time again exercise and physical activity have been viewed as positive health behaviors with the potential to mitigate poor health and the development of mental health

disorders. In a study of 51% men and 49% women (mean age 39.2 years) cardiorespiratory fitness was found to be negatively associated with rates of burnout and clinical depression. In other words, a high activity level is associated with lower rates of burnout and depression. Researchers examined levels of burnout and clinical depression within low activity level, moderate activity level, and high activity level groups. While 38% of the low activity level group reported high burnout and 11% reported symptoms of clinical depression; 23% in the high activity level group reported high burnout with no participants reporting symptoms of clinical depression (Gerber, 2013). This research indicates that exercise has positive effects on decreasing burnout and alleviating the symptoms of clinical depression.

Research has also found that stress is negatively associated with the practicing of good health behaviors. A study analyzing the effects of stress on exercise adherence in 82 women (mean age 34 years) found stress impacted exercise. The women noted their exercise behavior in a journal over the course of 5-8 weeks and the self-reports were then analyzed by researchers. This study found that during weeks with a high frequency of stressful events women exercised for less time and reported lower self-efficacy towards meeting exercise goals. In weeks of high perceived stress the women omitted more planned exercise sessions, exercised significantly fewer days, and had low self-efficacy towards meeting exercise goals (Stetson, 1997). These findings indicate that motivation and the ability to manage stress are key components in living a healthy life. A lack of motivation and high stress levels are related to greater symptoms of burnout, and burnout may impair a woman's ability to be physically active or engage in exercise.

Research examining gender differences in smoking prevalence indicates that stress may impact smoking rates in women. In one study of 76 individuals (average age 29 years) women were found to report more stress and higher cravings after smoking cues than men (Wray, 2015). Smoking cues can be explained as anything that might remind someone of smoking (i.e. smoking-related materials, holding/handling a cigarette without smoking it, and the smoking of a cigarette) (Kang, 2009). The use of different coping skills and stress management or cognitive behavioral strategies may help some women to change their behavior after experiencing smoking cues. However the differential experience of stressful life events in men and women may mean that successful interventions to alleviate stress and decrease smoking rates in women are more difficult to implement. Another study analyzing cortisol levels in blood and saliva samples from males and females found sex differences in hormonal responses to be critical in understanding early relapse. Lower cortisol levels and craving predicted relapse only for men whereas higher cortisol levels predicted relapse for women (Al'absi, 2015). The research is still conflicted on whether craving impacts smoking relapse in women however stress does have a stronger impact on smoking rates in women than men. The awareness of a relationship between stress and smoking will be important when analyzing behavior in our current study.

While alcohol is a central nervous system depressant people may be motivated to use it as a way to reduce fatigue and regain lost energy, in turn increasing energy and motivation. The work stress exposures of workload and work pace have been found to be positively associated with heavy alcohol use in women average age 41 years (Frone, 2016). An increased workload and lack of time to complete tasks drains an individual of energy and motivation, these effects might also be seen outside of stereotypical workplaces (ex. domestic care). Alcohol use disorder

in women has increased 84% when comparing data from 2001-2002 to 2012-2013 (Grant et.al, 2017). Between 2006-2014, women aged 55-64 set the highest increases in frequency of visits to the emergency department after acute alcohol consumption (Walker, 2019). Other research supports the earlier sentiments that a leading cause for increased alcohol consumption in middle-aged women is the belief alcohol will alleviate stress and result in improved relaxation (Kendler et.al, 2015). Addressing stress and burnout in women will be important in changing alcohol consumption behaviors.

Stress and the subsequent release of cortisol also has an impact on an individual's food intake and eating behavior. According to research on the connection between stress, eating, and the reward system a low but chronic level of stress can cause an individual's regulation of appetite and food intake to become disrupted and only loosely associated with true calorie need (Adam, 2007). The stress-induced food reward dependence that occurs from chronic stressors and repeated bouts of stress can also create an overdrive in food consumption (Tryon et.al, 2013). Stress-induced food reward dependence is seen when a stressed individual uses food to distract from their current situation as they find reward with chemicals (ex. dopamine) released from food consumption.

The current study uses the intuitive eating scale to investigate how intuitive eating may change with burnout. Intuitive eating is defined by three central components “(1) unconditional permission to eat when hungry and what food is desired, (2) eating for physical rather than emotional reasons, and (3) reliance on internal hunger and satiety cues to determine when and how much to eat” (Herbert et. al, 2013). This model takes the focus off body image and can be used to help people in recovery from an eating disorder. The ability of individuals who practice intuitive eating to recognize their own inner signs of hunger and fullness suggests a relationship between the individual and their interoceptive sensitivity. Interoceptive sensitivity describes an individual's ability to process and perceive their own body signals, and is associated with emotion processing and behavior regulation. Research has shown that higher chronic stress levels increase high calorie ‘comfort food’ consumption by altering the neural pathways which create a stronger positive reaction to the consumption of high calorie foods (Tryon et.al, 2013). In other words chronic stress alters the brain's response to food consumption and may lead individuals to poor eating habits.

In a study of 120 female college students who completed the Intuitive Eating Scale (IES) researchers found a significant positive correlation between interoceptive sensitivity and total IES score (Herbert et. al, 2013). This means that the stronger interoceptive sensitivity the stronger intuitive eating behaviors exhibited. Intuitive eating provides many benefits including improved emotional well-being, less preoccupation with food choices, and being less likely to overindulge in foods. While there is a significant lack of research on interoception in chronically stressed individuals some researchers have concluded (after in-depth literature review) that “taken together, acute stress, the release of stress hormones and chronic stress may affect the processing of visceral-afferent neural signals at different brain levels, which are important for interoception” (Schulz and Voge, 2015). This may mean individuals with burnout are significantly less likely to exhibit intuitive eating behaviors.

Western traditional gender norms have created an environment where women are



differently impacted by relational stressors than men. Most women are more involved in social and family networks than men and thus more likely to be affected by the stress of those around them. Higher chronic stress in women could be associated with the development of burnout and explain why women's eating behavior is impacted when burned-out.

### **Research questions**

The specific research questions analyzed in this study are as follows.

1. Are feminine traits or traditional feminine gender roles associated with burnout?
2. Are gender roles and burnout associated with health behaviors including intuitive eating (interoceptive awareness), exercise frequency, smoking behavior, or alcohol consumption?

Traditional feminine traits and the endorsement of traditional gender role ideology are hypothesized to be associated with greater levels of burnout. In addition, burnout is hypothesized to be strongly associated with a greater occurrence of the health behaviors studied, including increased smoking rates, decreased exercise frequency, and lower ability for intuitive eating.

### **Method**

#### **Participants and Procedure**

Data was collected from 301 women ages 40 to 65 who were recruited from the United States and United Kingdom in 2018. The online survey data was collected through a survey platform called Prolific Academic. The survey respondents were mostly White ( $n = 227$ ; 95.0%) followed by others ( $n=6$ ; 2.5%), then Asian ( $n=3$ ; 1.3%), Black ( $n=2$ ; 0.8%), and Hispanic ( $n=1$ ; 0.4%). Employment status and the individuals' highest level of education were assessed by the questions "would you describe your current employment as" and "please tell us about your highest level of education" individuals then marked their response from a list of options. The majority of women work part time, ( $n= 94$ ; 39.3%) followed by those working full time ( $n=91$ ; 38.1%) those retired and working part time are also accounted for ( $n=12$ ; 5.0%). The organization of women who don't work was broken into those looking for work ( $n=3$ ; 1.3%), retired not working ( $n=10$ ; 4.2%), and homemakers ( $n=26$ ; 10.9%). There were also a few disabled respondents in the study ( $n=3$ ; 1.3%) although it's unclear whether disability was a limiting factor in employment status which prevented these women from working. Most respondents had received a graduate or professional level degree ( $n=99$ ; 41.4%), followed by those who received a high school diploma or equivalent ( $n=47$ ; 19.7%), then those who graduated from college ( $n=43$ ; 18.0%), and those who completed some college ( $n=39$ ; 16.3%). A few noted their highest level of education as less than a high school diploma ( $n=11$ ; 4.6%). The participants' total household yearly income was assessed with the statement "your total yearly household income" and answered by choosing from a series of options ranging from \$0-14,999 to over \$250,000. The majority of respondents were in the bracket \$15,000-29,999 ( $n=63$ ; 26.4%), with one respondent in the bracket \$200,000-249,999 ( $n=1$ ; 0.4%).

4 relationship questions relating to the participants current and past relationships were asked and answered in a series of yes/no responses. These relationship questions were "have you

ever been married or lived with a partner”, “have you ever been divorced or had a live-in relationship end”, “have you ever been widowed or had a live-in partner die”, and “do you now live with a partner or spouse”. Most respondents answered yes to “have you ever been divorced or had a live-in relationship end” ( $n=126$ ; 52.7%). A lower frequency were married or co-habitants, answering yes to the questions “have you ever been married or lived with a partner”, and “do you now live with a partner or spouse” ( $n=101$ ; 42.3%). The least number of participants answered yes to “have you ever been widowed or had a live-in partner die” ( $n=12$ ; 5.0%). Participants were also asked if they had any children (biological or adopted), or extended family living with them, and answered in a yes/no response. The majority answered yes ( $n=181$ ; 75.7%) and some answered no ( $n=58$ ; 24.3%). Health conditions of the participants were assessed by the question “do you have any particular physical or health problem, or chronic health condition (eg. diabetes, migraines, depression)” and the response was given in a yes/no answer. Most answered no ( $n=127$ ; 53.1%) with a few less responding yes ( $n=112$ ; 46.9%).

### Traditional Gender Traits and Ideology

#### *Internalized Sexism*

The Feminist Identity Development Scale (FIDS; Bargad and Hyde 1991) developed by Bargad and Hyde is a 39-item questionnaire developed to assess feminist identity development in women enrolled in women’s studies courses. Feminist identity development is an individual’s concept of feminism and/or the self as a feminist. The scale used in this study was a subscale of the Feminist Identity Development Scale focusing on an assessment of internalized sexism. Participants were asked to read a range of 12 statements including things like “I do not want to have equal status with men ” and respond on a scale from 1 to 5 with 1 being strongly disagree and 5 being strongly agree.

#### *Bem Sex Role Inventory Short Form*

The Bem Sex Role Inventory (BSRI; Bem, 1974) was developed to examine the social constructs of masculinity and femininity while exploring the construct validity of androgyny. In this original inventory 100 male and female college students rated the desirability of 200 personality traits for a man and woman in American society. The inventory was adapted for the current study as only the feminine traits subscale was reported (Choi et al. 2008). Participants were asked to rank themselves on a series of 10 personality traits noting how often they displayed a particular personality trait. The scale for ranking ranged from 1 to 7, with 1 being never or almost never true and 7 being almost always true.

#### Burnout

The Copenhagen Burnout Inventory (CBI; Kristensen 2005) was used to analyze burnout in the present study. This inventory is the most comprehensive in analyzing burnout as it contains a variety of questions related to personal burnout, work-related burnout, and client-related burnout. The present study included questions relating to personal burnout and work-related burnout. Client-related burnout questions were not included because this was a community-based study and not all participants worked in human service professions. There were 6 personal burnout

questions and 7 work-related burnout questions. Personal burnout questions included things like “how often are you emotionally exhausted” while work-related burnout questions were worded as “are you exhausted in the morning at the thought of another day at work”. Responses are given on a scale of 1 to 5 with 1 being never/almost never, and 5 being always a rating of 6 was given to questions on work-related burnout if the individual did not work.

### Intuitive Eating

The Intuitive Eating Scale 2 (Tylka & Diest 2013) is an adaptation of the original intuitive eating scale used to assess individual eating patterns and behaviors. The scale measures an individual's tendency to follow their physical hunger and fullness cues while investigating the attitudes surrounding foods. In the present study participants are asked to rate their agreement to a series of 23 statements on a scale of 1-5 with 1 being strongly disagree and 5 being strongly agree. Statements included in the intuitive eating scale include things such as “I trust my body to tell me when to eat.”

### Health Behaviors

Smoking, drinking alcohol, and exercise were assessed in the participant demographics. Smoking was assessed with the question “how often do you smoke cigarettes” and exercise was assessed by the question “how often do you exercise”, responses for these questions were given by participants choosing from a list of options. Options for cigarette smoking include 1 (never), 2 (rarely), 3 (1 pack per week), 4 (½ pack per day), 5 (1 pack per day), 6 (2 packs per day), 7 (more than 2 packs per day). Options for frequency of exercise included 1 (rarely or never), 2 (less than once a week), 3 (about once a week), 4 (twice a week), 5 (3 or more times a week). Drinking alcohol was assessed by the question “how many alcoholic beverages do you drink (includes wine, beer and hard liquor)” response was given by a series of options. Options for drinking alcohol include none, less than once a week, 1-3 drinks per week, 4-6 drinks per week, 1 drink daily, 2 drinks daily, 3 drinks daily, more than 3 drinks daily.

## Results

We carefully screened our data before beginning the analyses. First, we examined the percentage of missing data in the overall sample. Two hundred and thirty-nine participants had complete data for all measures, representing a completion rate of 78%. This was primarily due to participants missing data on the work-related burnout questionnaire (86.9% complete), which reflects that not all participants were currently working outside the home (23.86% were unemployed, unable to work, or identified as homemakers). Skew and kurtosis for all continuous variables were within the recommended limits of less than 3.00 for skew and less than 10.00 for kurtosis (Kline, 2010). Thus, the regression analyses were based on 239 cases with complete data on all measures. Because the measures of work-related burnout and personal burnout were so highly correlated within the sample, we took the average of these to represent overall burnout in the regression analysis so as to reduce multicollinearity. Given that key demographic factors (age, relationship status, employment status, ethnic group, education, and chronic health problems) were correlated with study variables, these were included as control variables in all analyses.

Means, standard deviations, and partial correlations for the study variables are shown in Table 1. The hypothesis that passive acceptance of traditional gender roles and the feminine traits are associated with greater levels of burnout was not supported. Passive acceptance of traditional gender roles was not significantly associated with either measure of burnout (personal or work). However, feminine traits were significantly negatively correlated with both measures of burnout, indicating that more feminine traits were associated with lower levels of burnout. There was mixed support for the hypothesis that burnout would be correlated with health behaviors. The results showed that both personal and work-related burnout were associated with lower intuitive eating mean scores. Personal burnout was associated with lower exercise consistency and higher alcoholic beverage consumption. Work related burnout was not associated with either exercise consistency or alcoholic beverage consumption. Last, neither measure of burnout was associated with smoking behavior. Overall, there were no significant associations between measures of femininity and health behaviors, except that interestingly, greater passive acceptance of traditional gender roles was associated with lower exercise consistency.

In order to test the first research question, are feminine traits or traditional feminine roles associated with burnout, we ran a linear regression (see Table 2). Because personal burnout and work-related burnout were highly correlated ( $r = .73, p < .001$ ), these were averaged to be entered into the model together. The results showed that feminine traits were the only significant predictor of burnout, and overall the model accounted for approximately 22% of the variance in burnout.

Second, we examined whether gender roles and burnout were associated with health behaviors. We ran a series of stepwise regression analyses, and presented the final step for each regression in Table 3. The predictors in each model included the demographic variables controlled for, passive acceptance of traditional gender roles, feminine traits, and burnout. For the first regression, intuitive eating was the dependent variable. Burnout was the only significant predictor, and higher burnout was associated with lower intuitive eating, and the model accounted for approximately 12% of the variance. In the second regression, exercise frequency was the dependent variable. Both passive acceptance of traditional gender roles and burnout were negatively associated with exercise frequency, indicating that greater endorsement of traditional gender roles was associated with less frequent exercise, and greater burnout was also associated with less frequent exercise. Overall, the model accounted for 11% of the variance. In the third regression (smoking behavior) and fourth regression (alcoholic beverage consumption) none of the predictors had a significant association with the dependent variable. The regression models account for 14% of the variance in smoking, and 6% of the variance in alcoholic beverage consumption.

## Discussion

The aim of this study was to analyze whether feminine traits or traditional feminine gender roles are associated with burnout, and also investigate how gender roles and burnout may be associated with the health behaviors of intuitive eating (interoceptive awareness), exercise frequency, smoking behavior, and alcohol consumption. The western concept of traditional gender roles and traits impacts men and women differently (Dicke, 2019). These traditional ideologies ascribe the role of nurturer and domestic care to women while men are encouraged to be leaders dominating the work world. Per the Centers for American Progress data collected on a 'normal' workday between 2011-2016 the combined total time spent on paid labor, unpaid household work, and family caregiving was 14.20 hours for women and 13.56 hours for men

(Glynn, 2018). As society changes and women continue to take on more ‘upper-level’ roles in the workforce it has become increasingly more important to understand how traditional views on gender roles impact women.

It was hypothesized that a strong association with traditional feminine traits and the endorsement of traditional feminine gender role ideology would be associated with higher levels of burnout in women. It was also hypothesized that burnout would be strongly associated with a greater occurrence of the health behaviors studied.

**Femininity and Burnout.** Contrary to the hypothesis, traditional feminine traits were negatively associated with burnout. In other words, as alignment with traditional feminine traits increases the likelihood of developing burnout decreases. Prior research supports this association, one particular neuroimaging study comparing men and women noted women who were stressed showed increased activation and connectivity in key interpersonal processing areas (O’Connor and Brown, 2016). These interpersonal processing areas are associated with the formation and strengthening of relationships. As stress levels in women increased relationships and connectivity strengthened. Certain traditional feminine traits such as nurturing, sympathetic, and affectionate are associated with relationships. Traditional feminine traits may be negatively associated with burnout as these traits enable women to form and maintain relationships through stressful situations. Disconnection often accompanies burnout; therefore strong relationships are especially important in controlling life stressors and mitigating the risk of developing burnout.

While women do work for a longer period of time than men when all tasks are combined research indicates the amount of time spent at work in relation to burnout is less significant than the type of work a woman is employed in. In one specific study on how burnout differs between men and women it was found that the main reason women develop burnout is due to a lack of upward mobility in the workplace, the women also saw a significant reduction in burnout when involved in domestic tasks (Beuregard et.al, 2018). This study noted many women are employed in jobs that lack upward mobility. Employed women who are under the control of others at work and see limited chances for building their own independence are at a greater risk of developing burnout. If the involvement of women in domestic tasks is not seen as endorsement of traditional feminine traits or feminine gender role ideology but rather a way to escape the consequences of a constricting workplace than it's understandable why women spend more time working in a variety of roles.

**Demographic Factors and Burnout.** An increased age was also associated with a decrease in burnout symptoms. Previous research has indicated that burnout levels continuously shift in women, being lowest at age 20 then increasing until age 30-35, decreasing until age 55, then increasing again (Marchand, 2018). These shifts in burnout symptoms could be due to a variety of factors including work-family conflict, a lack of upward mobility in the workforce, and menopausal symptoms. At a younger age a woman is just learning how to manage a variety of tasks in the workplace and in domestic care. These tasks can become complicated by stressors within the domestic realm. A lack of upward mobility and improvement in work conditions can also impact stress and burnout levels. Later on after age 35-55 women are better equipped to navigate life which may explain the decrease in burnout symptoms. Menopause tends to begin at age 51 and for some women the symptoms can overlap depression and burnout symptoms, which could explain why there’s a later increase in burnout (Cohen, 2006).

The association between chronic health conditions and burnout adds an interesting component to the analysis as these factors had a positive association. The positive association between chronic health conditions and burnout follows past research which notes burnout

increases the likelihood of developing type 2 diabetes, cardiovascular disease, and even sleep disorders (Bailey, 2006). Chronic stress creates burnout symptoms and may affect the ability to engage in healthy behaviors which increases the likelihood of developing chronic health conditions. In other words burnout may be a result of chronic stress while chronic stress is what increases the likelihood of developing chronic disease. People with chronic health conditions may be more likely to have chronic stress because they have decreased physical ability to withstand daily stressors.

**Health Behaviors and Burnout.** The analysis revealed that some but not all of the health behaviors studied are associated with gender roles and burnout. Burnout was found to be the only significant predictor for intuitive eating, with a negative association. Indicating that women with higher levels of burnout are less likely to engage in intuitive eating behaviors. This follows the path of past research which notes stress may impact the processing of visceral-afferent neural signals at different brain levels (Schulz and Vogege, 2015). These signals are important for interoception which is strongly associated with intuitive eating behaviors. Burnout results from chronic stress, which has the potential to impact the processing of visceral-afferent neural signals, thus those with burnout are more likely to lack strong intuitive eating behaviors.

Exercise frequency was found to be negatively associated with both the passive acceptance of traditional gender roles and burnout. In other words a greater endorsement of traditional gender roles and greater levels of burnout are both associated with less frequent exercise. The negative association between burnout and exercise frequency is consistent with past research on the benefits of exercise in decreasing burnout (Gerber, 2013). Little research has been conducted on the impact of gender roles on exercise frequency in middle-age women. Yet one specific study indicated that parenthood may be the biggest contributor to less frequent exercise in women compared to relationship and employment status (Verhoef, 1993). Women who strongly endorse traditional gender roles may find greater importance and gratification in life when their traditional roles are fulfilled than in taking care of themselves by engaging in health behaviors like exercise.

None of the predictors for smoking behavior or alcoholic beverage consumption had a significant association with the dependent variable. However, smoking behavior and alcoholic beverage consumption did have significant associations with a few of the demographic variables. Smoking behavior had a negative association with education. Social networks, future expectations, and school experiences have been shown to play a large role in why those with low education levels smoke more (Maralani, 2014). While this differs from our predictors the information is important in understanding how making certain changes and taking action in early childhood can help decrease smoking behavior later in life.

Alcoholic beverage consumption had a positive association with ethnic group and a negative association with chronic health problems. The data on these behaviors is in line with past research. Those who engage in heavy alcoholic beverage consumption are more likely to experience chronic health conditions like type 2 diabetes, obesity, and cardiovascular disease (Zhou, 2016). With more chronic health conditions women may be less likely to drink because they want to maintain health or change to improve their health condition if already diagnosed with a chronic health condition. Our study was mostly white middle-age women; however ethnicity still played a role in alcoholic beverage consumption. Past findings note that alcoholic beverage consumption is highest in American Indians, followed by Whites, then Hispanics, Native Hawaiian/Pacific Islanders, Blacks, and Asian Americans (Vaeth, 2016). Differences in

social and familial support may play a role in the association between ethnicity and alcoholic beverage consumption in middle-aged women.

**Limitations and Future Directions.** It is important to note the limitations of this study which will create avenues for future research. First, data was collected in a cross-sectional and correlational form therefore we cannot draw conclusions about causality or speak on true causality. This study lays the groundwork to conduct future longitudinal analyses using a variety of experimental methods/designs. Our sample of participants was also limited in being mostly white middle-aged women. This significantly impacts the scope of findings as femininity is experienced differently based on age and ethnicity. Future research can expand the scope of our findings by including different age groups and ethnicities. The present study is also limited in design as data was collected from an online survey site targeted towards those living around the United States and United Kingdom. This survey design could be altered through methods such as collecting data in person which would consequently enable the inclusion of a wider variety of participants.

**Conclusion.** The present study provides new findings which indicate a higher association with traditional feminine traits is associated with lower burnout, contrary to our original hypothesis. Interestingly the endorsement of traditional gender role ideology had no significant association with burnout. Contrary to our hypothesis burnout was only significantly associated with intuitive eating and exercise frequency. With the modern changes to traditional gender ideology women have taken on more roles, and as they do so their chronic stress levels are likely to rise. As we've discussed, chronic stress contributes to the development of burnout. Burnout also impacts health and the development of chronic diseases. By studying the specific factors which impact the development of burnout in middle aged women we have a better chance of stopping burnout and associated health behaviors, which has the potential to significantly improve the health of midlife women.

Table 1. Correlations between personal burnout, work related burnout, and health behaviors, controlling for demographic variables

Variable	$\alpha$	M	SD	1	2	3	4	5	6	7	8
1. CBIPB	.91	2.95	.81	—	.73***	.05	-.14*	-.27***	-.05	-.16**	.13*
2. CBIWRB	.87	2.85	.86		—	.00	-.18**	-.27***	-.01	-.09	.13
3. PA	.87	2.28	.68			—	-.01	-.09	.06	-.21**	.03
4. BEMF	.95	5.53	1.09				—	.06	.11	.05	-.05
5. Intuitive Eating Scale Mean	.91	3.21	.62					—	.15	.11	.07
6. Cigarette Smoking		1.57	1.23						—	-.07	.06
7. Exercise consistency		3.51	1.50							—	-.05
8. Alcoholic beverages		2.72	1.52								—

Note. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ . CBIPB is Copenhagen Burnout Inventory Personal Burnout, CBIWRB is Copenhagen Burnout Inventory Work Related Burnout, PA is Passive Acceptance (traditional feminine ideology), and BEMF is Bem Sex Role Inventory.



**Table 2. Regression analysis summary for femininity variables predicting burnout.**

Variable	<i>B</i>	<i>SEB</i>	$\beta$	<i>p</i>
1. Constant	3.217	.61	--	.000
2. Age	-.03	.01	-.23	.000
3. Relationship status	-.11	.08	-.08	.168
4. Employment status	.02	.02	.07	.239
5. Ethnic group	.10	.08	.07	.217
6. Education	-.02	.04	-.04	.528
7. Chronic health problems	.62	.09	.28	.000
8. Feminine Traits	-.11	.04	-.14	.013
9. Passive Acceptance	.00	.07	.00	.995

*Note.* Dependent Variable is an average of the CBI work related burnout and CBI personal burnout.  $R^2 = .219^{***}$ .

**Table 3. Regression analysis summary for variables predicting health behaviors.**

Variable	<i>B</i>	<i>SEB</i>	$\beta$	<i>p</i>
<b>DV: Intuitive Eating (<math>R^2 = .119^{***}</math>)</b>				
1. Constant	3.86	.51	--	.000
2. Age	.00	.01	-.01	.845
3. Relationship status	.05	.06	.05	.451

4. Employment status	.02	.02	.08	.211
5. Ethnic group	.00	.06	.00	.963
6. Education	.03	.03	.06	.323
7. Chronic health problems	-.09	.08	-.07	.271
8. Feminine Traits	.01	.03	.02	.707
9. Passive Acceptance	-.09	.06	-.10	.114
10. Burnout	-.21	.05	-.28	.000

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**DV: Exercise Frequency ( $R^2 = .114^{***}$ )**

1. Constant	5.767	1.30	--	.000
2. Age	-.01	.01	-.05	.435
3. Relationship status	-.29	.16	-.11	.070
4. Employment status	-.04	.04	-.07	.266
5. Ethnic group	-.12	.16	-.01	.914
6. Education	.15	.08	.13	.050
7. Chronic health problems	-.06	.20	-.02	.765
8. Feminine Traits	.00	.09	.00	.991
9. Passive Acceptance	-.39	.141	-.17	.007
10. Burnout	-.32	.13	-.17	.013

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**DV: Smoking Frequency ( $R^2 = .138^{***}$ )**

1. Constant	1.46	1.09	--	.180
2. Age	-.02	.01	-.11	.062
3. Relationship status	.25	.14	.11	.066
4. Employment status	.02	.03	.05	.452
5. Ethnic group	.00	.13	.00	.983
6. Education	-.25	.06	-.25	.000
7. Chronic health problems	.17	.17	.07	.312
8. Feminine Traits	.11	.07	.09	.120
9. Passive Acceptance	.16	.12	.08	.188
10. Burnout	.03	.11	.02	.784

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**DV: Alcoholic Beverages Frequency ( $R^2 = .062$ )**

1. Constant	1.59	1.29	--	.219
2. Age	-.01	.01	-.04	.567
3. Relationship status	-.03	.16	-.01	.883
4. Employment status	-.03	.04	-.05	.414
5. Ethnic group	.38	.16	.15	.019
6. Education	.06	.08	.05	.420
7. Chronic health problems	-.49	.20	-.17	.014
8. Feminine Traits	-.08	.09	-.06	.375

9.Passive Acceptance	.03	.14	.02	.808
10. Burnout	.17	.13	.09	.185

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