

THE ASSOCIATIONS BETWEEN GENDER ROLE STRESS, MEDIA USAGE,
AND METACOGNITION IN EMERGING ADULTS

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ABSTRACT

This research explores the relationship between electronic media consumption and gender role stress and whether these relationships are dependent upon metacognitive abilities. Student participants (n = 238) between the ages of 18 and 25 from the University of Tennessee at Chattanooga were recruited and completed self-report measures of both frequency and types of media usage, gender role stress, and metacognitive abilities. Results demonstrated that though there was no direct relationship between amount of media consumed and gender role stress, an interaction effect occurred between metacognitive abilities and amount of media consumed. Results indicated that individuals with lower metacognitive abilities who consumed more media had higher gender role stress. Findings from this study can inform future research directions, as well as policy and practice.

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LIST OF ABBREVIATIONS

CSR, Cognitive self-regulation

GRS, Gender role stress

FGRSS, Feminine Gender Role Stress Scale

MGRSS, Masculine Gender Role Stress Scale

MTUAS, Media and Technology Usage and Attitudes Scale

MTNSUM, Motivations of SNS [social network sites] Use Measure

GMAC, Generalized Measure of Adaptive Cognition

CHAPTER I

INTRODUCTION

Emerging adulthood is a developmental period that focuses on 18- to 25- year-olds' transition from adolescence into adulthood and encompasses the possibility and exploration experienced by modern young adults (Arnett, 1999; Arnett, Ramos, & Jensen, 2001). Independence increases during adolescence and leading up to emerging adulthood, where individuals experience a time of comprehensive personal exploration (Arnett et al., 2001; Rosen, 2016). American emerging adults experience this transition in an individualistic culture, meaning that the explorations undertaken during this period of their lives are closely related to an individual's identity development (Arnett et al., 2001).

Identity development or formation is the process by which a young person forms an understanding of themselves based on their past, present, and possible future contexts (Rosen, 2016). The development of personal identity is protracted, starting in adolescence (see Erikson, 1968) and continuing into late adolescence and emerging adulthood (Arnett, 1999; Levy-Warren, 1999). When forming an identity, adolescents and emerging adults use self-evaluations and an evolving understanding of their self to make decisions about aspects of their identity (Rosen, 2016). While certain facets of identity may be socially assigned (i.e. ethnic identity), other aspects of identity are decided upon by the individual (i.e. vocational, relational, and ideological aspects) (Arnett et al., 2001; Rosen, 2016). As independence increases throughout adolescence and into emerging adulthood, individuals are more freely able to negotiate and explore various

aspects of identity than perhaps previously available (Arnett, 1995; Rosen, 2016). Throughout the process of identity development, the social transactions between an individual and their interpersonal context as well as society and culture shape their identity (Erikson, 1968; Rosen, 2016).

Gender Roles

Gender is an important component of one's personal identity and larger social role within one's culture (Dotti Sani & Quaranta, 2017; Rosen, 2016). Academic movements have characterized gender as a social marker and as separate from biological sex (American Psychological Association Task Force on Gender Identity and Gender Variance, 2008). Rather than gender being something one is born with, gender is viewed as a socially constructed identity that shapes an individual's experience within their culture (West & Zimmerman, 1987). This perspective emphasizes the behaviors, roles, and attributes of a gender and how those facets function in society (Moradi & Parent, 2013). West and Zimmerman (1987) posit that there is no one set version of gender, but instead, gender is learned and expressed differently based on the history, culture, and contexts surrounding an individual's life experiences.

Contemporary progressive social movements are in unison with this perspective set forth by scholars (see American Psychological Association Task Force on Gender Identity and Gender Variance, 2008). However, gender is oftentimes considered synonymous with biological sex and comes with distinct social expectations that then become an assigned aspect of identity (Rosen, 2016). Gender roles are traditional, stereotypical traits attributed to a person solely because of their male or female biological sex and are often related to social role, sexuality, emotionality,

and appearance (Emmerink et al., 2016; West & Zimmerman, 1987). For example, feminine gender roles could be the expectation for a woman to act as a mother or caregiver, be in touch with her feelings, be sexual only in the context of her male partner, as well as maintain a traditionally feminine appearance. Examples of masculine gender roles would be the expectation for men to act as providers for the family and have a successful career, be emotionally reserved or stoic, possess sexual prowess, and maintain a traditionally masculine appearance. Though gender acts as a social marker and a means for self-identification within society (Dotti Sani & Quaranta, 2017; Rosen, 2016), a stronger adherence to traditional gender roles has been associated with negative outcomes (Emmerink et al., 2016).

The strong endorsement of traditional gender roles has frequently been associated with a variety of potential negative mental health, sexual health, and interpersonal outcomes. An individual's endorsement of the sexual double standard—the traditional gender roles surrounding sexual activity that encourage sexual chastity in women but encourage sexual enterprise in men—has been associated with negative outcomes in sexual health, such as a higher instance of sexually transmitted infections (STIs) as a result of risky sexual behavior (Emmerink et al., 2016; Giaccardi, Ward, Seabrook, Manago, & Lippman, 2017). The sexual double standard has also been connected to negative interpersonal interactions such as relationship violence and lower relationship satisfaction among young adults, both of which demonstrated stronger negative impacts on women (Sanchez et al., 2012). The sexual double standard among other traditional gender roles has been associated with negative psychological symptoms such as higher externalizing and internalizing symptoms (Emmerink et al., 2016; Giaccardi et al., 2017; Sanchez et al., 2012). Moreover, stronger support of traditional gender roles has been connected to the endorsement of highly sexualized behaviors that can oftentimes border on sexual

harassment or assault (e.g., catcalling, groping, non-consensual flirting) (Jewell & Brown, 2013; Sanchez et al., 2012). As Emmerink and colleagues (2016) note, there are multiple factors (e.g., self-esteem, sex education, positive/negative affect related to relationships) that could influence, mediate, or moderate the relationship between the endorsement of and/or engagement in traditional gender roles. However, these potential influences could also be related to traditional gender roles (e.g., poor sex education may communicate sexual gender roles such as the sexual double standard). Moreover, these findings suggest that endorsement of gender roles is associated with various negative personal and psychological outcomes and potentially dysfunctional social behavior.

The association between belief in traditional gender roles and maladaptive outcomes can be explained through the concept of gender role stress. Gender role stress refers to the anxiety or fear that results from an individual's perceived failure to uphold the demands of his or her gender role (Miller & Levy, 1996; van Well & Arrindell, 2005). For example, if a man perceives himself as less competent than his coworkers, he may find this experience distressing due to the feeling he is failing to meet the expectation that men should achieve career success; that is, he may be experiencing gender role stress. Further, if a woman is unable to have children, she may experience distress due to the feeling that she is unable to meet the expectation that women should be mothers.

Gender role stress holds implications for emerging adults. Given the significance of personal identity exploration during the transition from adolescence to adulthood (Arnett, 2000; Rosen, 2016), differences in one's view of gender and pressures to conform to traditional gender roles may lead to gender role stress during emerging adulthood (Miller & Levy, 1996). Further, research has suggested that a stronger belief in traditional gender roles is associated with

negative individual psychological outcomes and dysfunctional social behaviors that affect personal relationships (Emmerink et al., 2016). For emerging adults, gender role stress may impede identity exploration and possibly contribute to maladaptive outcomes that may further impact the transition into adulthood.

Media and Representations of Gender

Emerging adults are the largest consumers of electronic media (e.g., television and streaming services, internet, video games) (Jang, 2018; Smith & Anderson, 2018). Over half of emerging adults report owning a smartphone, using the internet daily, and regular use of social media (Jang, 2018; Smith & Anderson, 2018). As media continues to increase in availability and diversity, research on media's effects on consumers explores the interactions between individuals and the media they consume (see Daalmans, Kleemans, & Sadza, 2017).

One focus of media research is the representation of gender roles in fictional electronic media such as television, movies, and video games. These platforms have been criticized for their reinforcement of traditional gender roles and behavioral expectations of gender roles that confine men and women to limiting tropes (Daalmans et al., 2017). For instance, a content analysis of popular prime-time television programs by Lauzen and colleagues in 2008 found frequent instances of stereotypical masculine and feminine gender roles, specifically regarding social and sexual role expectations. In both the roles characters played in the show and the attributes (e.g., personality, occupation) of the characters themselves, men were disproportionately shown more often as the main characters and as those who initiated their own personal development (Lauzen et al., 2008). In contrast, there were fewer women characters than

men characters, and women were often depicted in less agentic roles than their male counterparts (Lauzen et al., 2008). Moreover, some television networks propagate stereotypical gender roles by promoting entire channels specifically targeted to appeal exclusively to either men or women (Daalmans et al., 2017). Daalmans and colleagues (2017) found that these channels often feature gender-stereotypical programming (e.g., home decorating shows on channels aimed at women and programs featuring action and violence on channels marketed toward men) that reinforced gender roles and expectations.

Video games also uphold exaggerated depictions of gender roles. Similar to the findings from television, many popular video games are designed so that males are more likely to be the protagonists or main catalysts for plot advancement, and both playable and non-playable characters are more likely to be men than women (Blackburn & Scharrer, 2019). Visual appearances of both men and women in video games—in particular, playable avatars—have been found to be stereotypical and exaggerated, depicting men with hyper-masculine features (e.g., large muscles, tall frame, rugged appearance) and women as overly feminine (e.g., large breasts, elaborate hair, non-functional but sexual costumes) (Blackburn & Scharrer, 2019). However, in contrast to television, video games require active participation from the consumer, meaning that players themselves engage with the characters and narrative of a game. Since video games often feature traditional, stereotypical representations of both men and women, players often interact with and experience these depictions during gameplay. Studies connect video game consumption to stronger traditional views of gender. Blackburn and Scharrer (2019) found that both men and women video game players were more likely to endorse traditional masculine gender roles than non-video game players. However, no research to date has explored the

association between gender role endorsement and consumption of electronic media content that reinforces gender roles.

Literature on social media often focuses on the objectification of women and its effects on young girls (Feltman & Szymanski, 2018). Objectification theory (Fredrickson & Roberts, 1997) posits that a woman's body and her sexuality are often evaluated separately from her entire being, reducing her to an object rather than an autonomous individual. Objectification can occur through direct interaction or through media (Feltman & Szymanski, 2018). Though women are more frequently objectified in media, evidence suggests that the sexualization of both men and women in media can lead to objectification (Fasoli, Durante, Mari, Zogmaister, & Volpato, 2018). In a study examining emerging adult women users of the popular, image-based social media platform Instagram, it was found that body image comparison and the internalization of social expectations regarding gender roles were indicative of greater self-objectification in users, suggesting that young adult women who experience greater gender role expectations may, in turn, propagate these beliefs online (Feltman & Szymanski, 2018). Furthermore, these results suggest that one's belief in or adherence to gender roles may be related to self-objectification on social media which can further reinforce gender role expectations.

Taken together, these results imply a strong association between the consumption of media content that reinforces gender roles and an individual's beliefs about those gender roles. As Giaccardi and colleagues (2016) articulate, this association holds societal implications for beliefs about gender as well as individual implications regarding men and women's personal beliefs on about gender. However, little research has explored the nature and causality of the relationship between belief in gender roles and the consumption of gender role-reinforcing media.

Metacognition and Stress

The increasing variety of media presents a large volume of information for consumers to make sense of; being able to adapt one's thinking in light of new, and possibly conflicting, information requires an individual to actively reevaluate how one processes information. Cognitive self-regulation, the volitional control of thoughts, contributes to situationally appropriate behavior and the setting and attainment of goals (Friedman et al., 2016). One's cognitive self-regulatory abilities can also aid in switching between cognitive strategies to accommodate change and make appropriate decisions within context. This capacity is referred to as cognitive flexibility (Kaufman & Jensen, 2017; Soares et al., 2012) and is critical to take on complicated projects, complete complex tasks, or find new solutions to problems (Kaufman & Jensen, 2017). Relatedly, the degree to which one can monitor and regulate one's own thinking, collectively referred to as metacognition, allows for a greater reflection on one's choices or actions, which can contribute to strategic planning and future thought (Best & Miller, 2010; Kaufman & Jensen, 2017; Roebers & Feurer, 2015).

Metacognitive abilities, as with other cognitive self-regulatory skills, demonstrate a protracted development across the first several decades of life and notably exhibit considerable growth through adolescence and into emerging adulthood as neural capacity expands and social learning interactions increase (Best & Miller, 2010; Roebers & Feurer, 2015). Metacognition, the monitoring and regulating of cognitive processes, can enhance performance and keep track of how information is processed (Roebers & Feurer, 2015). When appropriate, such as when solving a problematic situation, these self-reflective abilities allow for the evaluation of thoughts and actions to determine if an adjustment needs to be made to attain a specific goal (Roebers & Feurer, 2015). However, the ability to reflect on and adjust one's own thinking can be negatively

impaired by stress, possibly resulting in a reduced decision-making ability (Han et al., 2011; Kaufman & Jensen, 2017). Moreover, stress can compromise capacities for introspection by causing a preoccupation with external factors (e.g., tasks, conflict, work) (Farb et al., 2007), which can reduce how new information is assimilated and accommodated with current knowledge. Further, distressed individuals may altogether oppose the prospect of any change, leading to a stalled decision-making process (see Chung, Su, & Su, 2012).

When considering new ideas or information, metacognitive abilities should allow for the evaluative incorporation of this information, even if that information may contradict an individual's pre-existing perspective (Chung et al., 2012). However, if an individual experiences stress because of these differing ideas, they may resist new information, possibly leading to impacted introspection abilities. This suggests that when faced with potentially distressing information, metacognitive abilities may become impaired. However, many studies on stress and metacognition use experimental methods in laboratory environments (e.g., Han et al., 2011); further research is needed on the relationship between metacognition and naturally occurring stressors such as gender role stress.

The Present Study

Adherence to traditional gender roles has been associated with highly sexualized behavior, decreased interpersonal relationship satisfaction, and increased risk-taking (Emmerink et al., 2016; Giaccardi et al., 2017; Jewell & Brown, 2013; Sanchez et al., 2012). Jewell and Brown (2013) postulate that sexually stereotypical behaviors become further normalized through

pervasive representation of such exaggerated behaviors in media. Moreover, stereotypical beliefs about gender roles may be reinforced through continued consumption of gendered media (e.g., Blackburn & Scharrer, 2019; Giaccardi et al., 2016, 2017). Arnett (1995) suggests that consumers seek out content with values congruent to those personally held, which in turn can often strengthen pre-existing individual beliefs. However, a more frequent consumption of media would lead to the consumption of more information and may possibly present conflicting messages regarding gender role beliefs. As a result, individuals may encounter media content that contradicts their perspective on gender role beliefs. Katz, Blumler, and Gurevitch (1973) articulate how media may be used as feedback to evaluate one's performance of a social role, which could include gender. Moreover, if exposure to a contradictory perspective causes an individual to perceive a disparity between his or her gender role and the societal expectations of that gender role, gender role stress may result.

The current study aimed to investigate how emerging adults' media consumption choices and gender role beliefs may influence gender role stress and cognitive self-regulatory abilities. By further investigating the connections between media consumption and gender role stress, this research aimed to contribute to knowledge on the impact of media consumption.

This study sought to answer three specific research questions. First, I aimed to examine the association between the frequency of electronic media usage and gender role stress of emerging adults. I hypothesized more frequent use of media would predict greater gender role stress as more frequent interactions with content depicting traditional gender roles may result in greater gender role stress (Chung et al., 2012; Roebbers & Feurer, 2015). Further, the present study sought to examine the relationship between the reported gender role stress in an emerging adult sample and the types of electronic media (television, social media, video games, internet)

they consume. Additionally, this study aimed to assess whether the association between the type of electronic media consumed and gender role stress was dependent upon one's gender. I hypothesized that more frequent use of social media or social networking sites would be associated with greater gender role stress, specifically in women, given research suggesting that women experience greater objectification on these platforms (Feltman & Szymanski, 2018). Last, I examined whether the association between the frequency of media consumption and gender role stress was dependent upon one's metacognitive abilities. Individuals who display higher levels of metacognitive abilities may be more adept at incorporating new information regarding gender roles and thus may not experience as much gender roles stress; conversely, individuals with lower metacognitive abilities may be more likely to experience greater gender role stress (Chung et al., 2012). I hypothesized metacognitive abilities would moderate the relationship between frequency of media use and gender role stress.

CHAPTER II

METHODOLOGY

Participants

Men and women ($n = 238$) were recruited from the University of Tennessee at Chattanooga through the Department of Psychology's SONA participant management system. Participants were all ages 18 to 25 and had an average age of 19.93 ($SD = 5.82$). Participants were predominantly white (79.1%) and were women (87%). No participants indicated a non-conforming gender identity. Most participants (68.1%) indicated a Christian religious affiliation, and the mean score of religious importance was 4.29 ($SD = 2.31$; 1 = not important at all, 5 = very important).

Materials

Data was collected using a battery of online questionnaires assessing gender role stress, media usage, and cognitive self-regulatory abilities. See Appendix A for a list of measure items and instructions.

Demographics. Demographic information collected included participant gender, age, Hispanic/Latino origin, ethnicity, religion, and religious importance.

Gender role stress. Based on their self-identified gender, participants completed either the Masculine Gender Role Stress Scale (MGRSS; Eisler & Skidmore, 1987) or the Feminine

Gender Role Stress Scale (FGRS; Gillespie & Eisler, 1992), which assessed stress related to gender role expectations.

The MGRSS is a 40-item measure rated on a 7-point Likert scale (1 = not stressful at all, 7 = extremely stressful). The MGRSS provided information on five concepts: physical inadequacy, emotional inexpressiveness, subordination to women, intellectual inferiority, and performance failure. All factors were included in assessments. Men show higher scores on the MGRSS than women, which demonstrates construct validity, and there is excellent reported internal consistency for the scale ($\alpha = .90$) (Eisler & Skidmore, 1987). Responses to the MGRSS in this study also demonstrated excellent reliability ($\alpha = .91$).

The FGRSS is a 39-item measure rated on a 6-point Likert scale (0 = not at all stressful, 5 = extremely stressful). Prior research has supported a 5-factor structure of the FGRS: fear of unemotional relationships, fear of unattractiveness, fear of victimization, fear of being assertive, and fear of being non-nurturant. All factors were included in participant assessments. Women score higher on the FGRS than men, which demonstrates construct validity evidence that there are meaningful differences in the stressors related to feminine (and masculine) gender roles. The FGRS has reported good internal consistency ($\alpha = .80$) (Gillespie & Eisler, 1992), and demonstrated excellent reliability in this study ($\alpha = .94$).

Media usage. To assess the variety and frequency of media usage, participants completed the Media and Technology Usage and Attitudes Scale (MTUAS; Rosen et al., 2013) and the Motivations of SNS [social network sites] Use Measure (MSNSUM; Choi, 2016).

The MTUAS is a 60-item measure of the frequency of digital media use and attitudes towards technology. Items assessing frequency of media use were rated on a 10-point frequency response scale (1 = Never, 10 = All the time). Items were adapted to assess frequency of digital

media usage of four types of electronic media focused on in the present study: television, internet, video games, and social media. Items from this measure were also used as attention check items; if a participant responded with all 10s to all media types, their responses were filtered out from the data. There was also a free-response “other” option for participants to indicate additional forms of electronic media they consumed, resulting in five items total assessing frequency of media use. Responses to these items were taken as a sum total of media use frequency. Greater sum scores indicate a greater frequency of media use.

The 12 items assessing media attitudes were rated on a 5-point Likert scale (1 = not like me at all, 5 = very much like me), and there were three subscales: positive attitudes towards technology, anxiety about being without technology or technology dependence, and negative attitudes towards technology. The attitudes scale of the MTUAS reported good reliability on all subscales ($\alpha \geq .80$) (Rosen et al., 2013). In this study, the positive attitudes and anxiety/dependence subscales had acceptable reliability ($\alpha = .74$, $\alpha = .71$), but the negative attitude subscale had low reliability ($\alpha = .56$).

Participants were then asked to indicate which form of media (television, internet, video games, social media, or other) they used most often. After their response, they were directed to answer the MSUSUM measure regarding their most frequently used form of media. The MSNSUM assesses an individual’s motivations for using social media. For this study, the wording of items was adapted to reflect digital media in general rather than just social media. Additionally, the socializing subscale was given to participants who indicated using social media most frequently. Higher scores on this measure are indicative of highly motivated use of media. The 14-item measure yield scores for four constructs related to motivations of media usage: surveillance (4 items), socializing (2 items), getting recognition (4 items), and entertainment (4

items). All items are rated on a 5-point Likert scale (0 = not like me at all, 4 = very much like me) and the scale has reported good internal consistency ($\alpha > .85$). In this study, the two items from the socializing subscale demonstrated reliability below the acceptability threshold ($\alpha = .62$); however, this subscale was comprised of two items, and their removal from the overall measure would have only marginally improved overall reliability ($\alpha = .81$), so these items were kept.

Metacognition. To assess individuals' metacognitive abilities, participants completed the Generalized Measure of Adaptive Cognition (GMAC; Haynie & Shepherd, 2009). The measure consists of 36 items rated on an 11-point, semantic differential scale (far left = not very much like me, far right = very much like me) that assess an individual's ability to adaptively self-regulate their cognitions in dynamic environments. The GMAC demonstrates a 5-factor structure: metacognitive experience, metacognitive knowledge, monitoring, metacognitive choice, and goal orientation. The overall measure has reported high internal consistency ($\alpha = .89$) and demonstrated excellent overall reliability in this study ($\alpha = .90$). Higher scores on this measure would indicate greater metacognitive abilities.

Procedure

Participants accessed the study through the SONA participant management system. After obtaining informed consent, participants progressed to the measures assessing participant perceptions of stress associated with their gender, their motivations for and usage of sources of media, and their self-regulatory abilities on the QuestionPro online survey platform. A unique, non-personally identifiable participant ID was used to link participant survey responses to their demographic data obtained as part of a prescreen measure through the SONA system. Based on

this, men and women participants were directed to the appropriate measure of gender role stress. To reduce any potential order effects, the order in which the MSNSUM and GMAC were administered was randomized; however, measures assessing gender role stress were completed last. Dependent on gender, the assessment battery contained either 119-120 items and took approximately 20 minutes to complete.

CHAPTER III

RESULTS

IBM SPSS Statistics (version 25) statistical software and the PROCESS macro (Hayes, 2013) were used to analyze the data. After participants completed the surveys, responses were downloaded from QuestionPro. A unique, non-personally identifiable participant ID was used to link participant survey responses to their demographic data obtained as part of a prescreen measure through the SONA system. Eight cases registered as duplicates; six cases did not link to SONA IDs; and 12 participants did not meet the age criteria, and thus these cases were excluded from analyses. Further, two participants failed attention check items and were also excluded. In total, data from 238 participants were used in the present analyses.

Correlation analyses demonstrated significant associations between demographic variables and scale responses (see Table 1). Gender significantly correlated with both the sum total of media use ($r = .21, p < .001$) and media attitudes ($r = .15, p = .02$), and these relationships were significant for women. Age significantly correlated with religious importance ($r = -.13, p = .05$). Also, both age ($r = -.28, p < .001$) and ethnicity ($r = .17, p = .02$) were significantly correlated with the FGRSS. Further, correlations were found between responses to measure. Responses to the GMAC were significantly correlated with the sum total of media use ($r = .13, p = .05$), media attitudes ($r = .29, p < .001$), and the FGRSS ($r = .15, p = .04$). The media use scale was significantly correlated to the sum of media use ($r = .39, p < .001$), media attitudes ($r = .52, p < .001$), and FGRSS ($r = .18, p = .01$).

Because the sample was unequal in terms of gender and because both gender role stress measures used different response metrics, responses to gender role stress measures were descriptively compared. On the FGRSS, when scores ranged from 0 to 5, the mean score was 4.26 and the standard deviation was .81. On the MGRSS, when scores ranged from 1 to 7, the mean score was 3.00 and the standard deviation was .90. Figure 1 shows a comparison of FGRSS and MGRSS z-scores, demonstrating that women generally reported more gender role stress than men. Responses to both measures were also standardized for analyses.

Figure 1 Distribution of gender role stress z-scores

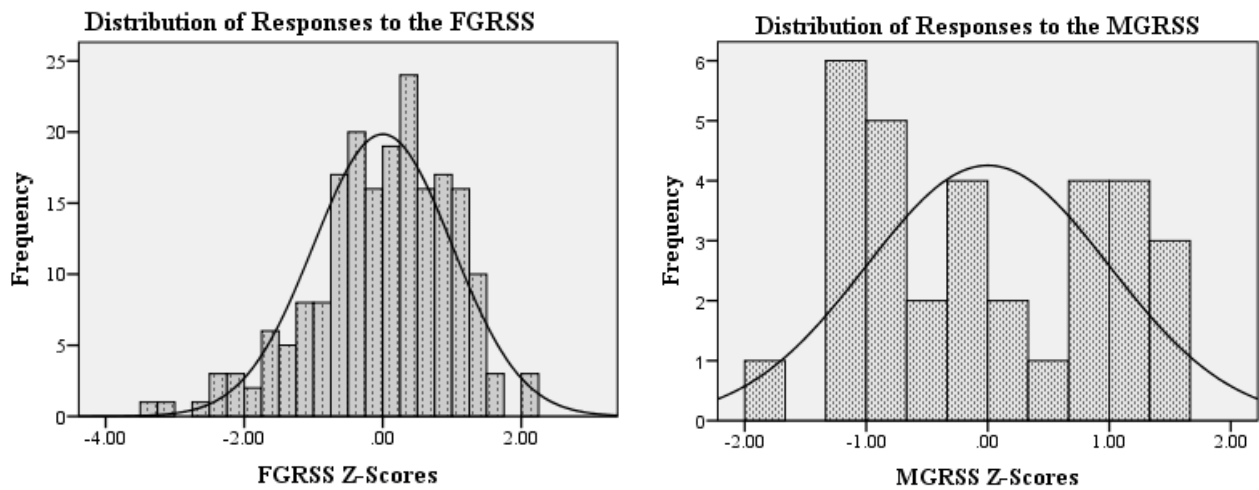


Table 1 Descriptive statistics and correlations

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Gender	-	-	1.00									
2. Age	19.93	5.82	.12	1.00								
3. Hispanic/Latino	-	-	-.92	.01	1.00							
4. Ethnicity	-	-	.00	-.05	-.18	1.00						
5. Religious importance	4.29	2.31	-.72	-.13*	-.05	-.01	1.00					
6. Generalized Measure of Adaptive Cognition	7.80	1.60	-.04	.06	.03	.08	-.01	1.00				
7. Media Use Scale	3.11	.51	.08	-.08	.00	-.07	.24	.24	1.00			
8. Media Use Sum	25.56	5.82	.21**	-.04	-.26	.01	.08	.13**	.39**	1.00		
9. Media Attitudes	3.50	.48	.15**	.07	.10	.01	-.05	.29**	.52**	.36**	1.00	
10. Feminine Gender Role Stress Scale	4.26	.81	-	-.28**	-.09	.17*	.01	.15*	.25	.12	.18**	1.00
11. Masculine Gender Role Stress Scale	3.00	.90	-	.19	-	.25	-.08	-.21	.11	-.03	-.27	-

Due to the unequal distribution of gender in this sample, regression analyses comparing gender would have been unreliable, so hypotheses tests were conducted using data from women only. As such, the following results should be considered as pertaining to women only. Because of this, the moderation portion of my second research question concerning gender as a moderator of the relationship between the type of electronic media used most frequently consumed and gender role stress was unable to be addressed.

RQ1: Is there an association between frequency of electronic media use and gender role stress of emerging adults?

To address my first research question, I used a multiple regression to examine the predictive relationship between amount of media consumed and FGRS. I used age and ethnicity as controls for FGRS. Results showed that amount of media consumed was not a significant predictor of feminine gender role stress, ($B = .87, t(197) = 1.67, p = .10$).

RQ2: Is there an association between the reported gender role stress in an emerging adult sample and the types of electronic media (television, social media, video games, internet) they consume?

I used an ANOVA to compare the mean differences in FGRS across the four forms of media. Again, I used age and ethnicity as controls for FGRS. No women indicated video games as their most-used form of media. Results showed that no form of media was associated with a significantly different FGRS score ($F(2, 199) = 1.45, p = .24$).

RQ3: Is the relationship between the frequency of media consumption and gender role stress is dependent upon one's metacognitive abilities?

I used the PROCESS macro to assess moderating effects. PROCESS Model 1 (simple moderation) was used with media usage sum as the predictor, FGRS as the outcome, and scores

on the GMAC as the moderator. Age and ethnicity were entered as covariates. Scale scores for all measures were standardized. Results of the moderation analyses can be found in Table 2. Results showed that the interaction was significant ($\beta = -.10, p = .05$). Examination of simple slopes revealed that the relationship between media usage and metacognition was significant for women with metacognition levels one standard deviation below the mean ($\beta = .21, p = .02, CI = [.03, .39]$); however, this relationship was not significant for women with metacognition levels at or above the mean ($\beta = .12, p = .13, CI = [.03, .39]$; $\beta = .01, p = .13, CI = [.03, .39]$, respectively). See Figure 2 for a visualization of simple slopes. Results of the Johnson-Newman test showed that this significant interaction between media use and feminine gender role stress occurred for women who had a metacognition score $.37 SD$ units below average (i.e., 34.6% of current sample).

Table 2 Regression results for the moderation effect of frequency of media consumption on gender role stress by metacognitive abilities (RQ3)

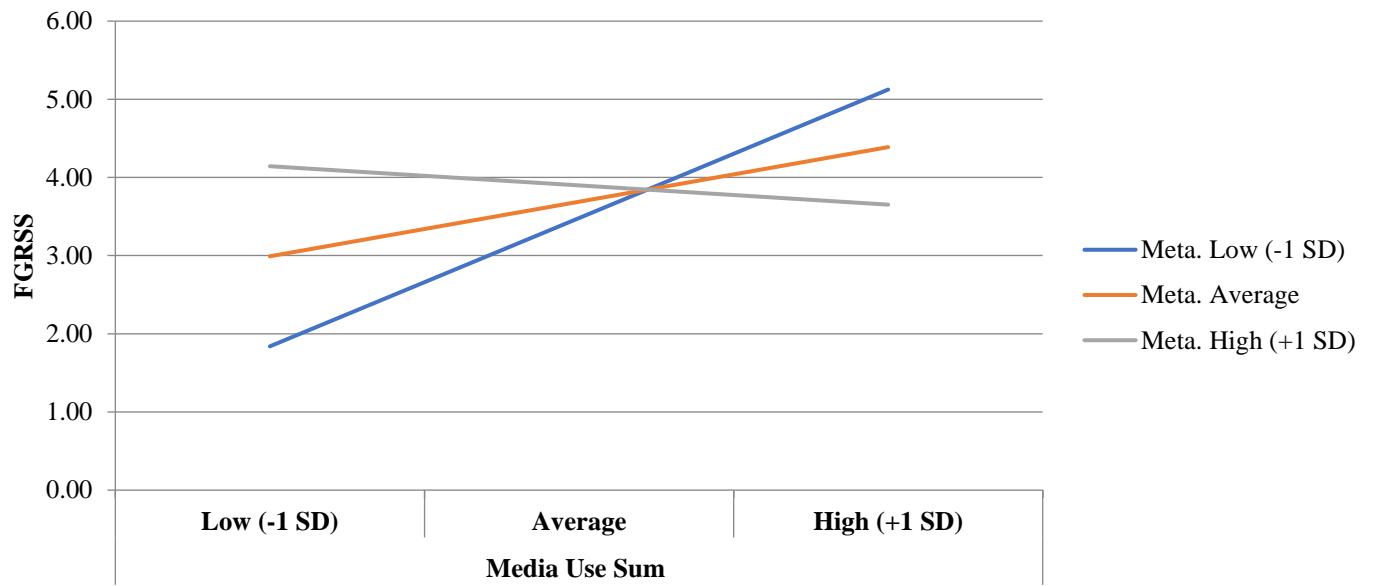
	β	<i>SE</i>	<i>t</i>	<i>p</i>
Intercept	3.68	.93	3.95	< .001
Media Use (<i>X'</i>)	.11	.07	1.55	.12
GMAC (<i>M'</i>)	.13	.07	1.88	.06
Interaction (<i>XM'</i>)	-.10	.05	-1.96	.05

$$R^2 = .14, MSE = .88$$

$$F(5, 193) = 6.38, p < .001$$

Note: X' = predictor variable; M' = moderator variable; XM' = interaction term. Media = Media Use sum score; GMAC = Generalized Measure of Adaptive Cognition; Reported coefficients can be interpreted as standardized regression weights.

Figure 2 Visualization of simple slopes for the interaction between metacognition and FGRSS



CHAPTER IV

DISCUSSION

This study sought to elucidate potential associations between emerging adults' consumption of electronic media and gender role stress. Electronic media often depicts traditional gender role messages (e.g., Daalmans et al., 2017), and a stronger belief in and support of traditional gender roles has been connected to several negative psychological outcomes (e.g., higher externalizing/internalizing symptoms, higher instance of STIs, lower interpersonal relationship satisfaction, highly sexualized behaviors) (Emmerink et al., 2016; Jewell & Brown, 2013; Sanchez et al., 2012). Gender role stress may be related to negative cognitive outcomes—such as impaired introspective and decision-making abilities (see Han et al., 2011) and an opposition to accommodating potentially conflicting information (see Chung et al., 2012). I sought to investigate in the current study if an individual's metacognitive abilities—a facet of cognitive self-regulation—would be related to perceptions of gender role stress. Through the evaluation of self-report data gathered from majority feminine emerging adult sample, I tested several hypotheses regarding the possible predictive relationships between media use, metacognitive abilities, and feminine gender role stress.

RQ1: Is there an association between electronic media usage rates and gender role stress of emerging adults?

I hypothesized that more frequent use of media would predict greater gender role stress as more frequent interactions with content depicting traditional gender roles may result in greater

gender role stress. No significant predictive relationships between frequency of media usage and feminine gender role stress was established when using a simple regression. Further, there was no correlation between the two variables.

Though higher rates of media consumption may expose an individual to more content depicting traditional gender roles, media consumption alone was not a significant predictor of gender role stress. The theory of gender role stress considers social interactions with others as the catalysts for gender role stress (Eisler & Skidmore, 1987; Gillespie & Eisler, 1992). Although engagement with media is often viewed as a method of self-socialization, particularly for emerging adults and adolescents (e.g., Arnett, 1995), the motivations and interpretation of media are widely varied; thus the amount of media one consumes may not alone contribute to consistent outcomes in gender role stress in women.

This conclusion aligns with past literature that identifies media consumers as active participants. The uses and gratifications theory posits that the audience of mass-media is an active one that consumes media in order to fulfil a goal (Katz et al., 1973). This approach suggests that individuals consume media to meet a specific need (i.e., surveillance, entertainment, comparison/validation of one's own beliefs, and socialization) and achieve gratification (Katz et al., 1973). However, this process is individualized, meaning that each person may consume media to meet different needs and thus may consume different forms of media in a variety of ways (Arnett, 1995; Katz et al., 1973; Rosengren, 1974). Uses and gratifications scholars posit that adolescents and young adults often use media as a form of cultural transmission or self-socialization (see Arnett, 1995). Since media is constantly increasing in diversity of content, individuals can seek out information to reinforce their own individual identity as it forms during adolescence and emerging adulthood (Arnett, 1995).

However, media and access to media is not without limits, suggesting that consumption of media as self-socialization can simultaneously strengthen the views of one's socio-cultural context; yet adolescents actively choose what media to consume, even if they do encounter normative beliefs (Arnett, 1995). Moreover, because uses and gratifications theory emphasizes that the origin of the needs for media use and the needs themselves are varied, and because every form of media can contain a variety of components, this leads to the notion that the possible motivations for using certain forms of media are endlessly varied. This theory offers an explanation as to why media use alone did not predict outcomes in feminine gender role stress.

A lack of support for the relationship between the sum of media use and gender role stress in women can be explained through the uses and gratifications theory. If the quantity of media consumption was related to different amounts of gender role stress, it would suggest that consuming more media could possibly be related to increases in gender role stress. Even though traditional gender role messages may often be present in electronic media (e.g., Giaccardi et al., 2016), this relationship cannot account for the motivations for using media. Since media may be consumed for specific reasons (Arnett, 1995; Katz et al., 1973; Rosengren, 1974), the notion that the consumption of more media may be related to more gender role stress decreases the emphasis on the various motivations for using media. Moreover, such a conclusion would further decrease the role individuals have in their own personal consumption habits. Additionally, a connection between the sheer volume of media consumed and subsequent gender role stress could possibly imply that messages concerning traditional gender roles are equally distributed across all media across all platforms and within each platform, which again limits the individual role of the consumer.

The absence of this relationship instead suggests that perhaps motivations for consuming media could be associated with gender role stress. For instance, one possible motivation for using media is self-comparison, a motivation often examined in social media studies and which has been connected to negative psychological outcomes such as self-objectification (see Feltman & Syzmanski, 2018). The motivation for self-comparison leads to the consumption of social media, and this consumption is associated with self-objectification, suggesting that it is the motivation of media consumption that could better predict outcomes like gender role stress. Though in this study I gathered data related to the motivations of media use, I did not have a specific research question related to this construct. However, exploratory analyses revealed that there was a significant correlation between the surveillance subscale of the media use motivations measure and the FGRSS ($r = .16, p = .02$), suggesting avenues for future research.

RQ2: Is there an association between the reported gender role stress in an emerging adult sample and the types of electronic media (television, movies, social media, video games, and internet) they consume?

I hypothesized that more frequent use of social media or social networking sites would be associated with greater gender role stress. No form of electronic media assessed (television, social media, or internet) was associated with significantly different rates of gender role stress in women. It should be noted that as no women in this sample indicated using video games most frequently, the relationship between outcomes in video game usage and feminine gender role stress was unable to be assessed. Nevertheless, regardless of platform assessed, frequency or amount of media consumption was not a significant contributor to outcomes in feminine gender role stress, which further suggests that a specific media platform that an individual interacts with most often may also not be related to outcomes in gender role stress.

Though electronic media frequently depicts instances of traditional gender roles, each platform may differ in the qualities of the messages they present. Fictional television often depicts men and women unequally in terms of individual agency with men frequently shown as more actively agentic and women as passive and less agentic (see Lauzen et al., 2008). Further, television programs and networks often emphasize traditional gender roles by hosting traditionally masculine (e.g., action-packed, violent, adventure) or feminine (e.g., domestic- or family-oriented, sentimental) content (see Daalmans et al., 2017). Video games frequently depict men and women in unequal narrative roles with men comprising the vast majority of playable characters (Blackburn & Scharrer, 2019). Moreover, the visual depictions of men and women in video games often reinforce traditional gender stereotypes in terms of physical appearance (Blackburn & Scharrer, 2019). Research on social media and internet platforms suggests that the objectification of women occurs frequently through online behavior and discourse (see Feltman & Syzmanski, 2018). Despite the differences in each platform's depiction of traditional gender roles, the depiction does not control the interpretation of the gendered content.

The uses and gratifications approach suggests that the individual's needs will motivate them to consume media to achieve a certain gratification (see Katz et al., 1973). Though each platform of houses similar forms of content (i.e., cable and television platforms host TV programs, social media platforms host multi-media communications between users), the variation within that content is vast. As Arnett (1995) notes, media users select their desired content from what is available, and the consumption of that media gratifies a need. Because the possible needs and subsequent motivations for consuming media are individualized and thus numerous (Arnett, 1995; Katz et al., 1973; Rosengren, 1974), there is likely massive variation in

the type of content consumed on a specific electronic media platform and thus high variance in outcomes like gender role stress.

These results suggest that frequent use of specific media platforms may not be related to gender role stress. However, electronic media platforms do consistently demonstrate the same types of gender role depictions on the platform over time (e.g., Lauzen et al., 2008). Yet, because we know that media consumers are selecting the form of media that they believe will best meet their needs, it may be the qualities of the content consumers select on certain platforms that predicts outcomes in gender roles stress rather than the platform itself. Though media platforms may be consistent in the types of gender role depictions they espouse, there are likely similarities and overlaps in types of gender role representations. The characteristics of such representations in content individuals frequently consume may be more closely related to outcomes like gender role stress.

RQ3: Is the relationship between the frequency of media consumption and gender role stress is dependent upon one's metacognitive abilities?

I hypothesized that metacognitive abilities would moderate the relationship between frequency of media use and gender role stress. There was an interaction between media use and feminine gender role stress; this relationship was significant for women whose metacognitive abilities were one standard deviation below the mean, which provides support for my hypothesis. Additionally, an examination of the Johnson-Newman test indicated that the conditional effect of media usage on gender role stress became more pronounced the lower one's metacognitive abilities. These results indicate that women who reported lower metacognitive abilities and more frequently consumed media perceived higher levels of gender role stress. This finding confirms

that the relationship between media consumption and gender role stress is conditioned by metacognitive abilities.

These results align with previous literature on metacognitive abilities, which posits that lower metacognitive abilities are related to stress, and stress can further impair metacognitive abilities (Chung et al., 2012; Farb et al., 2007). Metacognition allows for individual self-reflection on one's own cognitive processes, including the evaluation and incorporation of new information, regardless of if that information contradicts an individual's existing perspective (Chung et al., 2012; Roebbers & Feurer, 2015). However, these abilities can be compromised by stress, possibly then compromising decision-making abilities (Han et al., 2011; Kaufman & Jensen, 2017). If an individual experiences stress because of new information that contradicts their pre-existing views, this could potentially limit the ability to evaluate new information, thus impairing the decision-making process. Thus, encountering information that is perceived as stressful by an individual may lead to a disruption of metacognitive abilities.

These results demonstrate that women who more frequently consumed media and who also had lower than average metacognitive abilities had higher levels of gender role stress. The interaction suggests a relationship between metacognitive abilities and amount of media consumed. People who have lower metacognitive abilities may not be able to effectively evaluate and incorporate new information they encounter when consuming large volumes of media (Chung et al., 2012). Further, interacting with this new information may lead to stress, further compromising metacognitive abilities. Moreover, if the consumed media contains depictions of traditional gender roles, and these depictions present information perceived as stressful to an individual, the individual may in turn present higher levels of gender role stress.

The notion that the interaction was only significant for women with lower metacognition suggests that there may not be a relationship between individuals with higher metacognitive abilities and the amount of gender role stress they indicate. Initial correlations indicated a positive relationship between metacognitive abilities and feminine gender role stress. However, this relationship was not present in the moderation model ($\beta = .13, p = .06$). These results suggest that, when taking into account metacognitive abilities, there is a relationship between frequency of media consumption and gender role stress in women. Because metacognitive abilities should allow for the appraisal and assessment of new information (Roebbers & Feurer, 2015), these results indicate that people with average or high metacognitive abilities have varying rates of gender role stress when using media use as a predictor.

Limitations

There were multiple limitations to this study. First, the sample collected limited the extent to which I could assess my research questions. The sample gathered here was comprised mostly of women. Because of this, differences between men and women could not be confidently assessed. Further, no women indicated video games as their most frequently used form of media, meaning that the possible relationship between frequent video game usage and feminine gender role stress was unable to be addressed.

Secondly, the GMAC may have elicited participant bias in that the measure was very positively-worded. Since the measure is meant to gauge self-awareness, it may have been difficult for participants with low self-awareness to effectively reflect on their cognitive processes to accurately answer the items (Han et al., 2011; Kaufman & Jensen, 2017). Moreover,

individuals with low metacognitive abilities are likely to overinflate their own abilities (see Kruger & Dunning, 1999), which may have affected response to self-report measures.

Future Directions

Results from this study can inform future research directions as well as practice in applied settings.

To resolve issues of sample distribution experienced in this study, future work could include a longer data collection time to obtain equal distribution in gender.

For future research on the amount of media consumed, it may be beneficial to include a more objective measure of media usage. For instance, future studies that examine social media use could introduce the use of a smartphone application that tracks time spent on certain apps. Additionally, though some bodies of research on media suggest that more frequent use of media is associated with a higher instance of negative outcomes, further research may instead focus on the qualities of media being consumed rather than the quantity. Future research on the relationship between media consumption and negative psychological outcomes could utilize qualitative methodology to better assess characteristics of forms of electronic media that are associated with negative psychological outcomes. Moreover, research on the depiction of traditional gender roles in media should also focus on the characteristics of the media in which such depiction occur and the features of the depictions themselves. Future studies could also gauge participant's own views of traditional gender roles in media to better understand the perspectives of individuals who are consuming these forms of media. Additionally, the motivations for consumption of media may also be related to such outcomes.

To further evaluate the relationship between media consumption and cognitive abilities (such as metacognition), researchers could focus on the cognitive mechanisms behind the processing and incorporation of information consumed via electronic media in order to better understand how new information may result in stress and/or cognitive resistance. Future research can also focus on stress associated with media consumption and its possible interference with other self-regulatory abilities such as monitoring, task-switching, or other executive functioning abilities.

Further research on the connection between metacognitive abilities and naturally occurring stressors could better elucidate how metacognition could be impaired by stress. Future studies could use experience sampling methods to ask participants about reactions over a course of time, such as over the course of a day or several days or weeks. Additionally, because emerging adulthood is a period of exploration and self-evaluation, low metacognitive abilities may be particularly impactful for emerging adults during their process of identity formation. Strengthening metacognitive abilities may serve as a deterrent against stress, including gender role stress, which could further affect cognitive self-regulatory abilities. Further research could explore how intervention programs for older adolescents and emerging adults that focus on increasing self-awareness could decrease stress during the transition out of childhood, particularly for individuals planning to attend college. Metacognitive interventions may also aid in the process of identity development. Further, interventions to increase metacognitive abilities (such as cognitive behavioral therapy) may be viable treatments for decreasing stress related to traditional gender roles.

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APPENDIX A

IRB APPROVAL LETTER

Institutional Review Board

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TO: Leslie Robertson **IRB # 19-112**
Dr. David Ferrier

FROM: Lindsay Pardue, Director of Research Integrity
Dr. Amy Doolittle, IRB Committee Chair

DATE: 9/12/2019

SUBJECT: IRB #19-112: The Associations between Gender Role Stress, Media Usage, and Metacognition in Emerging Adults

Thank you for submitting your application for exemption to The University of Tennessee at Chattanooga Institutional Review Board. Your proposal was evaluated in light of the federal regulations that govern the protection of human subjects.

Specifically, 45 CFR 46.104(d) identifies studies that are exempt from IRB oversight. The UTC IRB Chairperson or his/her designee has determined that your proposed project falls within the category described in the following subsection of this policy:

46.104(d)(2)(i): Research only includes educational tests, surveys, interviews, public observation and recorded information cannot readily identify the subject (directly or indirectly/link)

Even though your project is exempt from further IRB review, the research must be conducted according to the proposal submitted to the UTC IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an Application for Changes, Annual Review, or Project Termination/Completion form to the UTC IRB. Please be aware that changes to the research protocol may prevent the research from qualifying for exempt review and require submission of a new IRB application or other materials to the UTC IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite our best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the UTC IRB as soon as possible. Once notified, we will ask for a complete explanation of the event and your response. Other actions also may be required depending on the nature of the event.

The University of Tennessee at Chattanooga is a comprehensive, community-engaged campus of the University of Tennessee System. 

Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval.

For additional information, please consult our web page <http://www.utc.edu/irb> or email instrb@utc.edu.

Best wishes for a successful research project.

APPENDIX B

MEASURES

Feminine Gender Role Stress Scale

6-point scale (0 = not at all stressful, 5 = extremely stressful)

Instructions: *For the following questions, rate each item in terms of how stressful you would find it if you were in that situation.*

- Feeling pressured to engage in sexual activity
- Having to deal with unwanted sexual advances
- Being taken for granted in a sexual relationship
- Being pressured for sex when seeking affection from your mate
- Having multiple sex partners
- Having an intimate relationship without any romance
- Not being able to meet family members' emotional needs
- Your mate will not discuss your relationship problems
- Being considered promiscuous
- Having others believe that you are emotionally cold
- Being perceived by others as overweight
- Finding out that you gained 10 pounds
- Feeling less attractive than you once were
- Being heavier than your mate
- Being unusually tall
- Being unable to change your appearance to please someone
- Turning middle-aged and being single
- Wearing a bathing suit in public
- Hearing a strange noise while you are home alone
- Hearing that a dangerous criminal has escaped nearby
- Having your car break down on the road
- Feeling that you are being followed by someone
- Having to move to a new city or town alone

Receiving an obscene phone call
Bargaining with a salesperson when buying a car
Negotiating the price of car repairs
Making sure you are not taken advantage of when buying a house or car
Supervising older and more experienced employees at work
Trying to be a good parent and excel at work
Having to “sell” yourself at a job interview
Talking with someone who is angry with you
Your mate is unemployed and cannot find a job
Your child is disliked by his or her peers
Having a weak or incompetent spouse
Having someone else raise your children
Returning to work soon after your child is born
Trying to get your spouse to take responsibility for child care
Losing custody of your children after divorce
A very close friend stops speaking to you

Masculine Gender Role Stress Scale

7-point scale ranging (1 = “not at all” stressful to 7 = “extremely” stressful)

Instructions: *For the following questions, rate each item in terms of how stressful you would find it if you were in that situation.*

Feeling that you are not in good physical condition
Not being able to find a sexual partner
Having your lover say that she/he is not satisfied
Being perceived by someone as “gay”
Losing in a sports competition

Being perceived as having feminine traits
Appearing less athletic than a friend
Being compared unfavorably to men
Knowing you cannot hold your liquor as well as others
Telling your spouse that you love her/him
Telling someone that you feel hurt by what she/he said
Admitting that you are afraid of something
Having your children see you cry
Talking with a woman who is crying
Comforting a male friend who is upset
Having a man put his arm around your shoulder
Being outperformed at work by a woman
Having a female boss
Letting a woman take control of the situation
Being married to someone who makes more money than you
Being with a woman who is more successful than you
Being outperformed in a game by a woman
Needing your spouse to work to help support the family
Admitting to your friends that you do housework
Being with a woman who is much taller than you
Having to ask for directions when you are lost
Working with people who seem more ambitious than you
Talking with a “feminist”
Having people say that you are indecisive
Having others say that you are too emotional
Working with people who are brighter than yourself
Staying home during the day with a sick child

Generalized Measure of Adaptive Cognition

11-point semantic differential scale (far right = “very much like me,” far left = “not very much like me”)

Instructions: *Please indicate how much the following statements apply to you.*

- I often define goals for myself.
- I understand how accomplishment of a task relates to my goals.
- I set specific goals before I begin a task.
- I ask myself how well I’ve accomplished my goals once I’ve finished.
- When performing a task, I frequently assess my progress against my objectives.
- I think of several ways to solve a problem and choose the best one.
- I challenge my own assumptions about a task before I begin.
- I think about how others may react to my actions.
- I find myself automatically employing strategies that have worked in the past.
- I perform best when I already have knowledge of the task.
- I create my own examples to make information more meaningful.
- I try to use strategies that have worked in the past.
- I ask myself questions about the task before I begin.
- I try to translate new information into my own words.
- I try to break problems down into smaller components.
- I focus on the meaning and significance of new information.
- I think about what I really need to accomplish before I begin a task.
- I use different strategies depending on the situation.
- I organize my time to best accomplish my goals.
- I am good at organizing information.
- I know what kind of information is most important to consider when faced with a problem.
- I consciously focus my attention on important information.
- My “gut” tells me when a given strategy I use will be most effective.
- I depend on my intuition to help me formulate strategies.
- I ask myself if I have considered all the options when solving a problem.
- I ask myself if there was an easier way to do things after I finish a task.
- I ask myself if I have considered all the options after I solve a problem.
- I re-evaluate my assumptions when I get confused.
- I ask myself if I have learned as much as I could have when I finished the task.
- I periodically review to help me understand important relationships.
- I stop and go back over information that is not clear.
- I am aware of what strategies I use when engaged in a given task.
- I find myself analyzing the usefulness of a given strategy while engaged in a given task.

I find myself pausing regularly to check my comprehension of the problem or situation at hand.

I ask myself questions about how well I am doing while I am performing a novel task.

I stop and reread when I get confused.

Motivations of SNS Use Measure

Participants will select which media source they consider themselves to engage with most often. An option for “Other” with a free-response section to specify will be provided. Based on their selection, participants will be routed to the appropriate items adapted from the Motivations of SNS Use Measure. If participants select social media, they will be given the full 14-item measure; if they indicate any other category, they will be given 9 items that are most applicable to non-social media platforms. Items are rated on a five-point Likert scale (1 = not like me, 5 = very much like me).

Instructions: *Please indicate which form of media you engage with the most.*

Television (including streaming platforms)

Internet (browsing the internet, not including social media)

Video games (console games, online games, mobile games)

Social media (e.g., Facebook, Instagram, Twitter, Reddit, Snapchat, LinkedIn, etc.)

Other (please indicate)

Instructions: *Think about the form of media you engage with most often. Please indicate which of following statements best reflect why you use that form of media.*

Find out first-hand information about important issues

Keep up with the latest issues and events

Acquire new ideas and perspectives

Learn something

Share my views, thoughts, and experiences

Compare my ideas to those of others

Enhance my personal reputation (social media only)

Promote or publicize my expertise (social media only)

Show others who I am (social media only)

Gain support and respect (social media only)

Pass the time when I don't feel like doing anything else

Entertain myself

Relax

Relieve boredom

Other (please indicate)

Media and Technology Uses and Attitudes Scale

Usage Subscale

10-point frequency scale for items:

Never (1), Once a month (2), Several times a month (3), Once a week (4), Several times a week (5), Once a day (6), Several times a day (7), Once an hour (8), Several times an hour (9), All the time (10)

Participants will rate their frequency of use of four categories of electronic media use: television (including streaming platforms), internet (browsing the internet, not including social media), video games (single-player, multiplayer, online, etc.), social media, and other (free-response).

Instructions: *Using the options below, please indicate how frequently you use the following forms of media.*

Television (including streaming platforms)

Internet (browsing the internet, not including social media)

Video games (console games, online games, mobile games)

Social media (e.g., Facebook, Instagram, Twitter, Reddit, Snapchat, LinkedIn, etc.)

Other (please indicate)

Attitudes Subscale

5-point Likert scale for all items:

Strongly agree (5), Agree (4), Neither agree nor disagree (3), Disagree (2), Strongly disagree (1)

Instructions: *Please indicate how much you agree with the following statements.*

I feel it is important to be able to find any information whenever I want online.

I feel it is important to be able to access the internet any time I want.

I think it is important to keep up with the latest trends in technology.

I get anxious when I don't have my cell phone.

I get anxious when I don't have the internet available to me.

I am dependent on technology.

Technology will provide solutions to many of our problems.

With technology, anything is possible.

I feel that I get more accomplished because of technology.

New technology makes people waste too much time.

New technology makes life more complicated.

New technology makes people more isolated.

VITA

Leslie Marie Robertson was born in Georgia and was raised by her mother, Linda Cheatham, and is an only child. She attended Little River Elementary, Dean Rusk Middle School, and Sequoyah High School in Canton, GA. After graduation, Leslie attended The University of West Georgia where she studied psychology and film studies. Leslie became drawn to the reading and writing of research and participated in research opportunities during her undergraduate education. She completed her Bachelor of Science degree in Psychology with a minor in Film Studies in three years, graduating in 2018. After completing her Bachelor's, Leslie accepted a graduate research assistantship at the University of Tennessee at Chattanooga in the Research Psychology program. Leslie graduated with her Master of Science degree in Psychology – Research Concentration in May 2020.