Finding Bias: Impact of Professional Attire and Occupation Status on Compliance with Medical Advice from Female Health Care Providers

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Abstract
This study was conducted to expand upon previous findings from research that suggested a provocative self-presentation harms women in high-, but not low-, status jobs. In previous research, the target was presented in explicitly sexy and inappropriate clothing for a work environment, compared to more conservative clothing. In the current study, only minor changes in clothing were utilized to classify the outfit as provocative or conservative. This produced a more covert provocative target as the differences were minimal. Participants were randomly assigned to four different groups and were presented with an image of a women in either provocative or conservative professional attire. Each image was assigned as either: high status (i.e., “Doctor”) or low status position (i.e., “Medical Assistant”). Findings from this research study indicated that when a low status professional (Medical Assistant) dresses more provocatively they are trusted by patients significantly more than when dressed conservatively. Whereas perceptions of the high-status professional (Doctor) were not influenced by conservative or provocative clothing. Conducting this study with consideration of a healthcare context is valuable as physician-patient trust has been linked with medication compliance which directly influences health outcomes (Kerse, 2004; Schneider, Kaplan, Greenfield, & Wilson, 2004)
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Introduction

Women’s presence in the workforce has changed drastically over time as women have expanded their presence into traditionally male-dominated occupations. Historically, many high-status and well-respected careers, such as being a physician or a CEO, were inaccessible to women. Some of the job’s women were permitted to perform often involved serving others or functioning as a caretaker. For example, permissible professions were secretary work, waitressing, nursing, and teaching occupations. During World War II, the demands of a wartime economy necessitated women’s entrance into positions normally occupied by men. This not only allowed women opportunities to obtain employment with higher wages, but also opened access to professions that were, at the time, associated with traditionally masculine qualities. The increasing trend of women in the labor force have continued and are highlighted in the statistics representing women’s participation in the work force. For example, data indicates that in 1950 approximately 30% of the labor force was women, conversely, by the mid-1990s approximately 46% of the American workforce was female (Stephenson & Burge, 1997). Not only has there been an increase in the number of women in the labor force in general, but their numbers have also been rising in fields typically seen as appropriate employment for men. This is specifically true for women perusing medical and surgical careers. In 1950 women typically accounted for less than 6% of medical schools in the United States and Canada, however, in 2017 Women
were the majority as they represented more than 50% of the new enrollees in medical school (Association of American Medical Colleges, 2017).

Although there has been a near doubling of women in the labor force and masculine typed occupations, women continue to experience gender-based limitations (Garcia-Retamero & Lopez-ZafraZafra, 2006). These limitations are often driven by stereotypes and negative perceptions of women working in male-dominated fields. Furthermore, there is consistent empirical evidence demonstrating that emphasizing sexuality is not beneficial for women, especially those in leadership roles (Glick et al., 2005; Gurung & Chrouser, 2007; Smith et al., 2018; Wookey, 2009). It has been found that provocative clothing shifts observers’ attention to a woman’s appearance rather than competency (Gurung & Chrouser, 2007). In turn, this information is utilized to develop assumptions about the individual’s personality, rather than on the crucial components required of the position, such as competency and trust (Gurung & Chrouser, 2007). In addition, research has indicated that women in high status occupations who dress provocatively receive lower competency and trust ratings than their conservative counterparts (Glick, 2005; Howlett et al., 2015; Wookey, 2009). These findings demonstrate that the clothing choices of women can influence the amount of respect and confidence others have in them when in the workforce, regardless of how effective they actually are at the job.

Although there have been numerous studies evaluating perceptions of women in managerial roles, the research regarding perceptions of women in health
professions is limited. The studies that do exist evaluate perceptions of male and female physicians with generalized changes in clothing (e.g., casual, formal, scrubs, white coat). However, these studies do not address objectification or gender stereotypes. The implications of utilizing previous research regarding women in managerial positions to formulate a study in the context of health care holds potentially significant impact. The significance of this research is important because physician-patient trust has been linked with medication compliance (Schneider, Kaplan, Greenfield, & Wilson, 2004), which directly influences health outcomes (Kerse, 2004). Therefore, if physician appearance elicits negative ratings of trust and competency, treatment compliance and subsequently health outcomes may become compromised. The aim of this study is to investigate how professional clothing in health care can affect the judgements of competence by patients and to examine whether the effects differ with occupational status.

**Review of the Literature**

**Gender Bias and Stereotypes**

Stereotypes represent a set of behaviors or traits that are assigned to a specific subgroup. These attributes are observed as dominant characteristics and often affect individuals’ perceptions, beliefs, and actions towards these specific subgroups (Agthe, Spörrle & Maner, 2010; Heilman & Stopeck, 1985). Although stereotypes may create an efficient way to categorize people, they are often over-generalizations and taint groups with traits that may not only be negative, but also inaccurate (Allen, 1995). For example, women are often stereotyped as
incompetent (Eagly, Ashmore, Makhijani & Longo, 1991) which demonstrates how these generalizations can be both detrimental and false. Social Role Theory postulates that gender stereotypes arose from the division of labor. Historically, women have primarily held homemaking roles while men held jobs to financially provide for their families (Stephenson & Burge, 1997). Thus, many jobs have become gender-typed, meaning that they are categorized as either a typically male or a typically female occupation, often depending on which sex typically dominates the occupation (Cejka & Eagly, 1999).

Research has shown that children’s knowledge of such stereotypes is evident in those as young as two years-old. This knowledge and awareness begins with male stereotypes and increases to include female stereotypes as children age (Williams, Bennett, & Best, 1975). Children also identify jobs typically held by women as lower status and with less prestige when compared to jobs typically held by men (Liben, Bigler & Krogh, 2001). Researchers have identified that by five or six-years-old, knowledge of gender stereotypes is extensive (Signorella, Bigler, & Liben, 1993). Research has also identified a high correlation between a parent’s expectations for their children to pursue gender congruent occupations and their children’s actual career choices (Jacobs, Chhin, & Bleeker, 2006). These findings suggest exposing children to limited attitudes and beliefs about what is considered appropriate or gender stereotypical can actually influence what professions children think they are capable of pursuing.

Research has also shown that young children understand stereotyping of
occupations and even aspire to work in fields consistent with their own
gender (Signorella, Bigler, & Liben, 1993). For example, boys report a higher
interest in traditionally masculine jobs, such as police officers, mechanics, and
surgeons, while girls report a higher interest in traditionally feminine occupations
such as nursing, teaching, or dental hygiene (Siegel, 1973). The early exposure to
gender role induction and stereotypes occurring as young as age two may explain
why the majority of vocational aspirations in children as young as first grade reflect
stereotypical gender roles.

**Gender vs Sex Roles**

Research about stereotypes has included the terms “gender roles” and “sex
roles” interchangeably when referring to the gender-linked attributes or dominant
sex in different occupations. However, when discussing stereotypes, it is important
to clarify the difference between the terms *sex* and *gender*. Sex is defined as the
physical biological indicators, such as reproductive organs and related genetic
differences (e.g., chromosomal distinctions), whereas gender refers to the roles or
attributes one takes on in society. This is often referred to as a “gender role”.
Gender or gender identity are also terms used to refer to an individual’s concept or
desired perception of himself or herself. Some individual’s gender identity does not
align with their genetically assigned sex at birth. Individuals that experience this
incongruence may identify as transgender, non-binary, or gender nonconforming.
This information helps to clarify that gender is a complex social construct, while
sex is biological. For the purposes of this study, gender and sex will not be used
interchangeably when discussing stereotypes. Instead, sex will refer to the biological indicators assigned at birth, whereas gender will refer to the attributes and roles an individual identifies with.

Research has identified that children’s understanding of gender roles has an impact on their development of self-concept, as well as judgements about their occupational competencies (Levy, Sadowky, & Troseth, 2000). Thus, children’s extensive knowledge of gender roles and stereotypes at such a young age may result in young girls developing diminished feelings of self-worth and confidence (Patterson, 2012). Furthermore, females are typically stereotyped by appearance (e.g., wearing makeup, having long hair), while boys are typically stereotyped by what they do (e.g., riding bikes, playing sports; Miller et al., 2009). Stereotypes and gender roles reliance on a female’s appearance rather than her accomplishments can impact girls as they develop into young women. Specifically, when girls deviate from typical gender stereotypes in self-presentation or vocational aspirations, they may experience peer rejection and disadvantages when applying for male dominated jobs (Eagly & Karau 2002; Miller et al., 2009).

Furthermore, the impact of gender stereotypes persists into adulthood and impacts women’s perceptions of themselves. Although men perceive women as deficient in attributes necessary for success in male dominated fields, women’s self-perception has been found to be even more negative. Research indicates that women actually perceived themselves as more deficient in leadership competence and assertiveness than men do. (Hentschel, Heilman & Peus, 2019). Additionally,
Garcia-Retamero & Lopez-Zafra, (2006), found that women perceive other women who hold leadership roles as less capable and less likely to be promoted than men. Thus, women’s career advancement is limited by biases perpetuated by gender stereotypes that also impact women’s limiting beliefs of themselves and their fellow woman (Garcia-Retamero & Lopez-Zafra, 2006; Hentschel et al., 2019).

**Lack of Fit and Stereotyping Women in the Workforce**

Men and women are now working in professions that were historically considered incongruent with their gender and this shift is occurring at increasing rates; however, people’s perceptions of these fields remain strongly gender-focused. This means that although there may be more women working as engineers or in executive positions, these occupations are still perceived as masculine fields that require masculine traits. Despite women breaking into traditionally masculine fields, they still remain underrepresented in high-status occupations when compared to men (Liben, Bigler & Krogh, 2002). Additionally, although there have been many legislative changes put in place to prevent sex discrimination and sexual harassment, research has continued to document the disadvantages and discrimination women face in the workforce, especially in the context of male dominated occupations (Glick, Zion & Nelson, 1988). It has recently become less common for women to experience “old-fashioned sexism” which is often considered to be more overt negative actions and beliefs. Today, women are typically exposed to “modern sexism” which is often characterized by more subtle innuendos or inequalities. Research has not only been able to identify individuals
who exhibit “modern sexism”, but findings have also linked this trait with the
tendency to overestimate the percentage of women in male-dominated jobs. This
means that individuals who exhibit “modern sexism” tend to assume women are
able to access the same positions as men with ease. The connection between this
overestimation and sexism can likely be attributed to these individuals failing to
perceive women as victims of discrimination (Swim et al., 1995). Although not
overt sexism, these beliefs highlight the fact that women’s difficulties ascending to
high-status positions are often overlooked.

Discrimination is further seen in the perceived lack of fit between women
and male dominated occupations. This lack of fit refers to the perceived
incongruence between a woman’s stereotyped attributes or personality traits and
those that are believed to be necessary for success in traditionally male
occupations. Male-typed jobs are often high-status occupations or leadership and
managerial positions (Glick, 1991). Not only are women perceived to be less
capable and incongruent in these high-status positions, they also receive more
negative evaluations than their male counterparts when working these jobs (Eagly
& Johannesen-Schmidt, 2001; Eagly & Karau, 2002; Garcia-Retamero & Lopez-Zafra, 2006; Glick, et al., 1988; Wessel et al., 2014). Women’s perceived fit for
these positions continues to decrease when verbalizing communal or typically
feminine personality characteristics (e.g., being sensitive, nurturing, and kind), as
well as when applying for jobs that are considered more challenging and
demanding (Heilman et al., 2004; Rosen & Jerdee, 1974). These findings add to
research highlighting the negative influence of gender role stereotypes and negative judgements of women, specifically as it serves as a barrier to women’s success in male dominated occupations (Heilman et al., 2004). The invisible, yet ever-present, obstacle preventing women from moving forward in such careers is often referred to as the “glass ceiling”. These unequal opportunities in the workforce make advancing in careers difficult for women and slows their advancement into high-status positions, which in turn lowers their earning potential when compared to men. This phenomenon has been found to increase as a woman’s career progresses and is not fully explained by lack of job competency or other related factors (Cotter et al., 2011; Weinberger, 2011).

Rosen (1974) found that women who apply for managerial positions are likely to be perceived by others as less suitable or qualified than male applicants despite having near identical resumes. Contrary to the lack of fit model, which only refers to the perceptions of women, women’s actual leadership style has been found to be more transformational than that of their male counterparts (Eagly & Johannesen-Schmidt, 2001). These findings, which reflected women’s actual leadership abilities, directly contradicts how others perceive their abilities. Thus, women’s perceived, but not actual traits, are what clash with qualities associated with leadership positions. Furthermore, these findings further support the concept that gender stereotypes perpetuate women’s barriers to success. Although statistics have indicated that men and women leaders are seen as equally capable of managing resources, male leaders are perceived to be more competitive and more
likely to optimize these resources than women (García-Ael et al., 2018). Thus, women’s performance expectations in leadership positions are notably lower, overall (Garcia-Retamero & Lopez-Zafra, 2006).

**Gender Congruence**

Glick et al., (1988) found that applicants who highlight information congruent with the gender type of the job are seen as more favorable. That is, they may still be considered secondary to an individual whose gender is congruent with the gender-type of the position. An observed strategy to combat these biases during the hiring process has founded that some women tend to emphasize their stereotypically masculine personal traits to increase perceived compatibility (Glick et al., 1988). Research has further supported this trend, finding that women who dress in a more masculine style for interviews or verbally highlight their agentic traits, such as decisiveness and dominance, are evaluated more positively for the male-dominated position they are applying for (Glick et al., 1988). Thus, when emphasizing agentic traits, it increases their perceived fit in male fields (Glick et al., 1988; Wessel et al., 2014).

These findings clash with the “backlash effect” which has suggested that women who present with assertive or agentic behaviors may experience negative outcomes compared to their male counterparts who display similar attributes (Rudman, 1998; Rudman & Glick 2001; Rudman, Moss-Racusin, Phelan, & Nauts, 2012). A meta-analysis by Williams and Tiedens (2016) suggested that when female leaders express dominance they receive lower likability ratings than their
male peers who utilize the same dominant behaviors. These findings built upon previous research. Rudman (1998) found that although self-promotion was necessary to be perceived as competent, when women engaged in these behaviors their likability ratings and chances of being hired decreased significantly. However, men who self-promoted were perceived as both competent and likeable (Rudman, 1998).

These findings are significant as research has determined that being liked is associated with more promotions and salary increases, while being disliked has been linked with detrimental effects limiting women’s upward progression within the company or in her career as a whole (Heliman et al., 2004). Additional research that examined women who exhibit leadership qualities such as assertiveness found that women are often criticized for lacking the feminine qualities that were originally seen as inappropriate for such roles (Eagly & Karau, 2002). These findings suggest that women are stuck in a double standard. Thus, women must choose if they want to attempt to fit the stereotypes demanded of them in male dominated occupations or risk the negative consequences associated with “manning up”. It is no surprise that research has found women are more concerned than men that they will receive negative judgements from others if they utilize aggressive or dominant behaviors in negotiations. As a result, women typically negotiate less aggressively even in a context where this behavior is beneficial. These concerns may help explain why women may not perform as well in such situations (Amanatullah & Morris, 2010).
Elaborating on this concept, Glick (1988) suggested that women are not limited solely because feminine traits are seen as undesirable, but also because women are perceived to lack the masculine traits considered necessary for the job. The author also suggested that even if stereotypes about women change, sex discrimination will persist if occupations continue to be deemed either male or female. Women may continue to be seen as unfit for a job, not just because of the traits they possess or the clothes they wear, but also because so few women exist in such occupations.

Further research about discrimination against women in the workplace indicates that even if women manage to break through the “glass-ceiling” and become successful in male dominated fields, they suffer negative consequences, such as social rejection and being disliked. As discussed above, likability is a vital factor in hiring and promotion decisions (Heilman et al., 2004). Although the glass-ceiling concept is generally accepted, findings from one research study indicated that there are lower rates of upward mobility for women from bottom-level positions to middle-level positions, but not in the middle-level to top-level. Zeng (2011) further suggested that these findings counter the glass-ceiling hypothesis, as they have not found the barriers at upper levels to be so significantly limiting, as the glass-ceiling theorists have purposed. However, lower rates of upward mobility for women are observed and support the idea that some restriction exists, even if it occurs more exclusively at the lower to mid-level positions.
Pay Discrepancy

Extensive research has been conducted on the pay gap between men and women. Bishu and Alkadry (2017) conducted a systematic review of ninety-eight peer-reviewed journal articles investigating the gender pay gap in the United States and other European countries. They examined workplace authority, hiring and promotion, and, gender representation as it relates to the pay gap. These findings suggested that women who are equally as qualified as their male peers (Alkadry & Tower, 2011) have limited access positions of authority, due to non-work-related attributes such as gender and race. Although all countries evaluated in this review exhibit limiting access to positions of authority for women, the magnitude of the disparity differs by country (Rosenfeld, Buren, & Kalleberg, 1998). While women appear to lack access to positions of authority, findings also suggested they may not exercise as much of their authority once in these positions. This lack of use of authority may in turn limit their pay (Alkadry & Tower 2011; Baxter & Wright, 2000). Another potential explanation for pay differentiation is that generally male managers have been found to be more interested in power and achievement than female managers (Adams & Funk, 2012). Thus, this interest could impact manager’s work-related success and subsequently their earnings.

Although findings from this analysis consistently identified that the pay gap was persistent, it was found to be less prominent in the public sector. Some researchers suggest that this may be due to the objective methods of assessing employees (e.g., qualification exams, performance appraisals, etc.) in that setting.
Objective measures utilized in these employment settings may encourage emphasis on the individual’s actual abilities and performance rather than using subjective evaluations that could be tainted by bias (Byron, 2010). Lewis (1986) found that women who work in the public sector have access to equal or even better performance ratings than men. He suggested this might indicate that women have similar chances of promotion. These findings, however, are dismantled when a woman has a family or children (Guthrie & Roth 1999; Peterson & Saporta, 2004). Although conditions for women have improved, gender-based segregation is persistent and contributes to wage gap (Sneed, 2007). Even studies that did not find gender predictive of promotion access, did find a significant gender pay gap (45%) at the management level. This means that the men in this sample were paid nearly double than that of their female counterparts.

When attempting to find further explanation for the pay gap, Arulampalam, Booth, and Bryan (2007) as well as Xiu and Gunderson (2014) suggested occupation and position segregation are to blame. This refers to the concentration of women in lower-status positions. Studies examining this segregation have identified that many women have become ambivalent about striving towards high-status positions because of the anticipated interpersonal strain these positions may elicit (Lips, 2001). Anticipation of gender stereotypes and discrimination in the workplace has held women back from achievement before they even experienced explicit oppression in that workplace. This anticipation may be related to previous experiences or limiting stereotypes that were previously discussed. Although this
research contributes to understanding the impact of occupational segregation, it does not explain why men and women holding the same positions also have a wage gap. Furthermore, research has identified that even when women are able to successfully transition into traditionally male-dominated careers, they still are unable to close the wage gap (Bishu, & Alkadry, 2017). Additionally, gender has been found to be a significant predictor of the pay gap and differences in personality, knowledge, and ability to perform work responsibilities is unable to fully explain these aforementioned gender gaps (Jaffee, 1989). While the reasons for position segregation and wage gap are unclear, evidence of their existence is not. Research shows that a woman’s personality, knowledge, competency, or capabilities do not fully explain the observed gaps in gender roles within the workplace and stereotypes and discrimination are viable alternative, supplemental explanations.

While perceived fit and gender pay gaps are important factors when discussing women in the workplace, it should be understood that stereotyping complexity extends beyond just that of male-female categories. Research findings suggest that all women are not stereotyped the same and thus may have very different experiences in the workplace. In fact, women are separated into subtypes, each of which is associated with specific and stereotypical attributes that are perceived to align with the identified subtype. One study began collecting data by prompting participants to list as many attributes as possible to characterize people in various subgroups. These open-ended prompts resulted in descriptions of women regarding
their attributes. These descriptions were impacted by women’s traits, role behaviors, sexual behavior, and physical appearances. Research has repeatedly identified three main categories including, nontraditional (i.e., businesswoman), traditional (i.e., housewife), and sexy (i.e., provocatively dressed woman; Altermatt, Dewall, & Leskinen (2003); Deaux et al., 1985; Six & Eckes, 1991).

The term sexy, in reference to attire, has been used by various research articles to refer to the specific suggestibility of an individual’s (in this case, a female employee’s) clothing type. The word sexy is often implicative of seduction, temptation, and potentially sexual behavior, which is not congruent with the intended connotation throughout this paper. Thus, for the purposes of this study (and for the remainder of the literature review), the attire of this nature will be better referred to as provocative unless reporting findings from a study that utilized the term sexy. Provocative is defined as female’s attire that stimulates an increased emphasis on her body (e.g., fitted clothing rather than loose clothing or heels). Of note, provocativeness of clothing is not a binary category, meaning that clothing does not simply fall into to two categories of either strictly provocative or not. What is perceived as provocative clothing varies greatly and may also be influenced by context and observer (e.g., what is considered provocative at church or work may be different than what is considered provocative at dinner or while out at a bar). Although some research has utilized overtly sexualized or provocative clothing, other studies have operationalized provocative to refer to extremely minimal changes to conservative clothing (i.e., an inch hemline difference or one
extra button undone on a blouse; Howlett et al. (2015), which in some contexts could be referred to as conservative clothing. Thus, readers should caution themselves against over sexualizing the term provocative. In order to reduce confusion, this paper will specify when minimal levels of provocativeness are used to facilitate a more comprehensive understanding of the variables examined.

**Subtypes of Women in the Workforce**

**Nontraditional Career Women.** Previous researchers have identified that women fall into a nontraditional woman subtype when they have careers that are contrary to stereotypical gender roles. Working women, specifically chief executive officers (CEOs) and managers, fall into this subcategory. Research has concluded that women who have been identified to fall into a nontraditional stereotype are more likely to be perceived as having masculine traits and low levels of warmth. These findings, coupled with their high levels of perceived competence (Cuddy, Fiske, Glick & Xu, 2002), may explain why research has identified that people typically identify these women as a good fit with high-status or traditionally male dominated occupations (Deaux et al., 1985). Thus, perceivers typically interpret nontraditional women as less likely to have feminine traits or hold feminine roles. Furthermore, this is evidenced by research participant’s typical tendency to describe businesswomen as unmarried (Deaux et al., 1985).

**Traditional Women.** Conversely, a housewife or homemaker is considered the traditional subtype as this social role is considered in line with typical gender stereotypes. Women who fall into the traditional subtype are perceived to be
associated with low levels of competence (Cuddy, Fiske, Glick, & Xu, 2002) and high levels of feminine traits, (Deaux et al., 1985) such as warmth (Fiske, et al., 2002). This exhibits an incongruence with traditionally masculine or high-status positions (Deaux et al., 1985). Traditional women have been most typically described by research participants as someone who cleans, cooks, takes care of kids, and is motherly (Deaux et al., 1985).

This proposed concept is further supported by research that examined women who transitioned from career women to a new subtype: traditional homemaker. When a female manager became a mother, she was no longer identified as a “career woman” and her perceived competence significantly decreased. Although the women in this research technically belonged to two stereotype categories, her categorization as a mother trumps her other affiliation as a professional (Deutsch & Saxon 1998). Conversely, when a male counterpart became a father his perceived competence did not change (Cuddy, et al., 2004). Deaux et al. (1985), suggested that this difference may be due to the greater diversity in subtypes and variation of activities of women when compared to the relatively homogeneous nature of male stereotypes. Additionally, bias against pregnant employees and new mothers may contribute to the decrease in competency rating. Many employers and employees feel negatively about the inconvenience or impact maternity leave has on a company. While most women utilize at least some of their maternity leave, paternity leave is much less common in the United States. This may explain why the woman received lower ratings of competency when compared to the men.
Overall, literature concluded that when women provide evidence of being a mother, they experience additional disadvantages and discrimination in the workplace (Cuddy et al., 2004; Masser, Grass & Nesic, 2007). When women become a parent, they shift from being the subcategory of non-traditional businesswoman to traditional homemaker. Furthermore, they also transition from being viewed as a competent professional to being viewed as a warm, but incompetent mother (Cuddy et al., 2004).

**Sexy Women.** The sexy woman subtype, although generally based off the operationalized definitions previously discussed, refers to more than just a woman’s appearance. Sexy subtype and sexy stereotype refer to not only the sexy appearance, but also specified characteristics that accompany the female’s appearance. Thus, a sexy appearance can elicit others to categorize her as fitting within the sexy subtype and therefore may assign stereotypical traits associated with this appearance. Research participants generally described these women with comments relating to her appearance. They used phrases such as, “pretty face” and “good figure” (Deaux et al., 1985).

When women are characterized as fitting into the sexy subtype, they are often assumed to lack stereotypical masculine traits that are viewed as necessary to achieve competency in traditionally masculine high-status occupations. Conversely, the sexy subtype of women is typically seen as compatible with lower-status occupations (Deaux et al., 1985; Glick et al., 2005; Howlett et al., 2015; Wookey, 2009). Previous research, such as Glick et al. (2005), postulated that this
incongruence between feminine traits and masculine occupations may account for the negative evaluations of sexy women in high status positions. In comparison, sexiness in low-status jobs may be considered appropriate (Glick et al., 2005). At times, sex appeal is even deemed an asset. The concept that “sex sells” has for a long time been frequently utilized to sell services and advertise (Earp & Jhally, 2010). Occupations that often use this method of marketing are flight attendants, restaurant servers, and receptionists. These findings depict how the sexy stereotype can have a negative impact on a woman’s perceived capabilities and qualities.

**Objectification**

When women’s bodies are used to sell services or products they are often *objectified*. This is considered the process of viewing the body, or parts of the body as an object rather than part of a whole person. Objectification can have detrimental effects as it can lead perceivers to infer negative information about the objectified person. When women are objectified, they are dehumanized and are perceived to have low levels of warmth, morality, intelligence, and competence (Gurung & Chrouser, 2007; Heflick & Golenberg, 2009). It has not only been found to diminish the aforementioned traits, but also their “Human essence” (i.e., qualities that are perceived as essential to be human; Heflick & Goldenberg, 2009). Thus, women who are objectified are seen as being less human than their non-objectified counterparts. Research using fMRI technology found that people have decreased empathetic responses to women who are objectified (Cogoni, Carnaghi, & Salini, 2018). Objectification has emotional, as well as practical, repercussions. Research
has concluded that as a result of objectification, women not only receive decreased empathetic responses, but their ability to succeed in their career is also limited (Heflick & Goldenberg, 2009). Objectification does not exclusively occur when a woman is wearing provocative clothing, it can also occur in conservative clothing (Rudman & Borgida, 1995). This indicates that experiencing the negative consequences of objectification cannot be solely explained by a woman’s attire. However, clothing is often a pivotal aspect and controlled variable regarding objectification.

**Clothing**

Perceptions of an individual is impacted by self-presentation choices including grooming and clothing selection (Ruetzler et al., 2012). People use clothing to make judgments about others and can cue observers to assume significant information about one’s character or personality (Howlett et al., 2015). A person’s clothing choices can even influence perceptions of their own trustworthiness, competence, and performance (Peluchette & Karl, 2007). Research supporting the idea that clothing is used to infer personality traits suggests that people who wear formal attire are perceived to be more competent, professional, intelligent, responsible, and reliable (Ruetzler et al., 2012). These assumptions have been found to occur within five seconds of an interaction. In this brief timeframe, perceivers have already judged the individual’s competence, confidence, and credibility (Howlett, et. al., 2013).

As previously discussed, perceptions of an individual can drastically change
when they are objectified. Clothing choices can intensify this process as women who present themselves in provocative clothing are often seen as objects (Abbey et al., 1987). This phenomenon occurs in various contexts including professional and athletic settings (Glick et al., 2005; Gurung & Chrouser, 2007; Harrison & Secarea, 2010; Wookey et al., 2009). Studies have discovered that the more clothing focuses on the body the more perceived competence plummets. It is important to note that men are not solely to blame for the objectification of women. Research has identified that both men and women objectify women (Gervais, Holland & Dodd, 2013; Gray et al., 2011) and often in similar ways (Smith et al., 2018). Women’s negative judgements of other working females occurs, even when clothing has a minor emphasis on female sexuality. Additionally, Gray et al. (2011), found that women who wear clothes that emphasize their body and display more skin receive lower rankings of their perceived mental capacities. However, findings also suggested that by drawing attention or emphasizing a woman’s competence, women are able to mediate this objectification.

**Attractive Appearance**

Perceptions are largely driven by physical appearance, specifically for women. As previously mentioned, young girls and women are often judged based on their physical appearance. This tendency persists as women present in professional contexts (Heilman & Stopeck, 1985; Miller et al., 2009). Attractiveness has been largely studied and research has repeatedly shown favoritism for attractive individuals when compared to their less attractive
counterparts (Eagly et al., 1991; Hosoda, Stone-Romero & Coats, 2003, Langlois et al., 2000). Eagly et al., (1991) presented the “what is beautiful is good” effect, which implies that attractiveness is indicative of positive personality traits such as extraversion and competence. However, some research has identified negative impacts of an attractive appearance. One study found that when attractive female managers were successful, their advances were less frequently attributed to ability, and they were consistently judged to be less capable than their less attractive counterparts. These findings suggested that attractive women are often judged by their appearance and others may believe they utilized their looks to progress rather than their skill or ability (Heilman & Stopeck, 1985).

**Provocative Appearance**

Attractiveness has even been indicative of greater job-related success and financial success for both sexes (Frieze, Olson & Russel, 2006). Research regarding perceptions of sexiness, however, shows contrary results. Research has identified multiple negative consequences of emphasizing sexuality, especially for women in leadership roles, as it can lead people to perceive her as incompetent (Glick et al, 2005; Gurung & Chrouser, 2007 Smith et. al., 2018; Wookey, 2009). Research has identified that the more clothing emphasizes a woman’s body, the lower competency rating she receives by perceivers. Even minor emphasis of sexuality, can change the way women are perceived (Howlett, 2013; Howlett, 2015). This may be attributed to the change of focus that occurs when women are sexualized. Further, the results of this study indicate that their appearance shifts to
the forefront of evaluations and less attention was paid to her competency (Gurung & Chrouser, 2007). Furthermore, her physical appearance was then used to develop assumptions about her personality and behaviors (Gurung & Chrouser, 2007). For example, in another research study examining nonverbal cues and their impact on perceived sexual intent, men used women’s provocative clothing as a cue to infer that they may be flirtatious, seductive, and possibly promiscuous (Koukounas & Letch 2001).

In another study by Rudman and Borgida (1995) eighty undergraduate male participants were randomly assigned to one of two priming conditions. After exposure to the stimuli, they were asked to interview an attractive female confederate who was pretending to be an applicant for an office manager job. The first group of men were primed to view the woman sexually (by watching a commercial with women whose appearances were sexualized) while the second group of men were not primed to view the woman sexually (by watching a commercial where women’s appearances were neutral) before the interview. Men who were primed to view the women sexually rated the interviewee as less competent than those who viewed a neutral commercial. These results indicated that simply perceiving women in terms of their sexuality can evoke the sexy woman stereotype. This not only can result in detrimental effects on perceived competence, but also can lead even nonsexist men to present sexist questions and increase sexualized behavior in an interview setting (Rudman & Borgida, 1995).
Impact of Provocativeness

Provocativeness not only impacts how men view women, but also how women view other women. In a study by Vaillancourt and Sharma (2011), found that women tend to criticize other women who emphasize their sexuality. In the research study, women were more likely to roll their eyes at a confederate, look her up and down, stare at her without conveying any emotion, and show anger while she was in the room if she was dressed in a sexualized manner. Upon leaving the room, the provocative confederate was ridiculed by the participants. When this same confederate was dressed conservatively, she was greeted in a friendly manner and she was not discussed after leaving the room. This research suggests that clothing not only increase men’s negative perceptions of provocative women, but also women’s perceptions of other women (Vaillancourt & Sharma, 2011).

Furthermore, Glick et al. (2005) argued that sexiness is distinctly different from attractiveness. They suggested that sexiness has more negative impact on perceivers due to the self-presentation nature of sexiness. While an individual’s natural attractiveness is not easily manipulated, sexiness of clothing is a variable that women are able to utilize to adapt their appearance. Thus, these clothing choices may be perceived as representing a woman’s personality and values. Conversely, attractiveness is considered more of a static trait, rather than a fluid trait, that is not easily manipulated. Glick et al. (2005), differs from earlier studies as they held physical attractiveness constant while modifying the target’s sexiness. In order to hold physical attractiveness constant, the same model was used in each
condition. This allowed researchers to examine sexiness as a separate variable from attractiveness.

Glick et al. (2005) recruited 66 undergraduate students (28 male and 38 female) who were informed the study was examining “perceptions of non-collegiate individuals”. Participants were randomly assigned to four different groups to view a videotape of a woman. The four categories were determined by career manipulations and career manipulations. The four groups were: sexy manager, neutral manager, sexy receptionist, and neutral receptionist. The woman in the video was either presented in a way that emphasized her sexuality, or in a more neutral way that did not emphasize her sexuality. In the neutral condition, the woman wore light makeup, slacks, a turtleneck, a business jacket, and closed toe flat shoes. The same woman was presented in a sexy condition, but with added makeup, tousled hair, a form-fitting knee-length skirt, a low-cut shirt with a cardigan, and high-heeled shoes. The content of the videos remained controlled for, other than the described changes. The participants were informed that the woman in the video was either a manager or a receptionist. After watching the video participants completed a questionnaire assessing emotional reactions and perceptions of the target’s competence and intelligence. Results revealed that the woman in the high-status occupation who presented as sexy, received lower perceived competency and intelligence ratings. Sexiness had no effect on the perceptions of the same female target when she was said to be a receptionist. Thus, it was perceived that sexy self-presentation only appeared to negatively affect the
woman in the seemingly high-status job, but had little to no perceived impact on the competence of the seemingly low-status job.

Research examining perceptions of a sexualized female candidate running for student government also found that she was perceived as less trustworthy, less competent, and less electable than her conservative counterpart candidate wearing conservative attire (Smith et al., 2018). Through the use of eye tracking technology, the researchers were able to identify where the participants focused their glance. Thus, participants were more likely to objectify the woman when she was wearing revealing clothing. Findings suggested that both men and women participants objectified the sexy female candidate in similar ways as they spent more time looking at the candidate’s hemline and chest than the text detailing her qualifications. Consequently, the participants then provided lower ratings of honesty, trust, and competence for the targets (Smith et al., 2018). These findings suggest that sexy clothing can draw both men and women’s focus away from a woman’s credentials and result in negative evaluations of her personality. This continues to support previous research that suggests both men and women utilize and subscribed to similar conceptualizations of the sexy subtype (Deaux et al., 1985; Six & Eckes, 1991) as they tend to associate sexiness with a lack of competence (Deaux et al., 1985). Smith et al. (2018), used this research to postulate that the study likely activated the sexy woman stereotype. Activation of this stereotype led to low ratings in competence, further supporting the existing literature (Glick et al., 2005; Howlett, 2015; Wookey, 2009).
As described above, research has indicated that female attractiveness generally results in favorable bias and higher competence ratings (Eagly et al., 1991; Hosoda et al., 2003, Langlois et al., 2000), while female sexiness results in lower perceived intelligence and competency ratings in a high-status job. These findings imply that there is a distinct difference between attractiveness and sexiness (Glick et al., 2005). A replication study also found that high-status, sexy women receive lower competence and intelligence ratings than sexy, low-status counterparts (Wookey, 2009). These research findings indicate that women who are subtyped as sexy are perceived to be a poor fit for high-status careers (Glick, 2005; Wookey, 2009).

**Limitations of the Variable: Sexiness**

As Carrizales (2012) notes, studies by Glick et al. (2005), and Wookey (2009), manipulated appearance in a way that may have influenced variables beyond sexiness. Glick et al. (2005), not only dressed the sexy target in clothing that was considered inappropriate and unprofessional, but she was also given a tousled hairstyle. Comparatively, Wookey (2009) dressed the sexy target in a “low-buttoned blouse” without a jacket. In an independent sample the sexy target was found to be equally as attractive as the conservative counterpart, but significantly sexier. As Carrizales (2012) suggested, when comparing these sexy targets with their conservative counterparts who wore slacks, a jacket, and a professional hairstyle, they were likely also perceived to be disorganized, less formal, and subsequently less competent.
Competence is considered a component of the larger personality trait conscientiousness (Costa et al., 1991), which is inferred primarily from visual cues (Borkenau & Liebler, 1992). Naumann et al., (2009) found that neatness and formality are common physical cues that observers use to predict conscientiousness. Additionally, zero acquaintance research\(^1\) found that even when having no information about the targets, there was a large correlation with perceived conscientiousness and formality and neatness of appearance (Albright, Kenny, & Malloy, 1988). Additional research on perceptions found that students who dressed formally for a presentation received higher reviews from their peers (Gurung, et al., 2014).

These details are important because different components of appearance are associated with different personality traits. Thus, modification of a target’s sexiness, formality, and neatness make it difficult to distinguish if the low ratings of competency found in Glick et al., (2005) and Wookey, (2009) studies, were truly due to sexiness rather than a messy, informal and unprofessional appearance. Carrizales, (2012) attempted to expand upon Glick et al.’s, (2005) research by examining differences within the subtype of sexy. In this study, three targets were presented representing: conservative, unsophisticated sexy, and a sophisticated sexy appearance. Findings indicated that differences of attire did not result in significant effect on ratings of emotion towards the target. However, significant results were

\(^1\) When first impressions are made in everyday contexts, there is typically some interaction between perceiver and target. The term zero-acquaintance indicates that the perceiver has not received information about or previously interacted with the target prior to making judgments.
found for intelligence and competence ratings. The unsophisticated sexy was seen as the least intelligent, while the sophisticated sexy was perceived as the most intelligent, surpassing even the conservative condition. Although some findings were comparative to previous research, Carrizales, (2012) is in the minority as it is one of the only studies that did not find a difference between high and low-status occupations when modifying sexiness.

**Minor Changes in Clothing**

In Glick et al., (2005), the negative effects on perceptions of female managers did not occur because provocative attire was viewed as especially incongruent and inappropriate for a managerial, as opposed to a receptionist job, but also because participants viewed the overtly provocative attire as equally inappropriate for both jobs. This suggests that such attire is generally considered unprofessional. Overtly provocative attire is not the only instance when a woman’s competence ratings plummet in high-status positions. Other research has identified that even minor manipulations in a woman’s clothing can result in similar findings (Howlett et al., 2015; Carrizales 2012; Glick et al., 2005; Wookey, 2009).

Instead of examining only explicit and inappropriate work place attire for the provocative target, Howlett et al., (2015) utilized minor manipulations of the target’s conservative clothing. Thus, this study sought to find the threshold where clothing changes elicit negative stereotyping, specifically by other females. Based on the findings of both Howlett (2013) and Howlett (2015), it is evident that even slight changes to clothing can have significant impacts on perceptions of an
individual (Howlett, 2013). This research looked at the interaction between clothing (provocative or non-provocative) and occupation status, using either high-status (senior manager) or low-status (receptionist) positions. The non-provocative targets were dressed in a blouse with one button undone, and a skirt that reached just below the knee. The provocative targets had two buttons undone, and a skirt that reached just above the knee. Both targets wore black flat shoes and a blazer.

In further support of Glick et al., (2005) and Wookey’s (2009) findings, Howlett et al., (2015) showed that women in high-status positions receive poorer reviews when dressed in a provocative manner compared to a more conservative manner, while no changes were seen after modifying sexiness in the low(er)-status position. Results indicated that even minor changes in conservative clothing had a significant impact on competence ratings. In contrast with findings from Glick et al., (2005) and Johnson and Gurung (2011), there was no interaction between status and clothing for perceived intelligence. Howlet et al., (2015) suggested that this may be due to the more overtly sexualized and inappropriate appearance of the sexy target used in Glick et al., (2005). In sum, research identified that even when women are dressed appropriately for work, minor changes can dramatically impact observer’s perceptions of these women.

**Bridging the Gap to Health**

As discussed, there appears to be extensive research about perceptions of women in high-status business or managerial occupations, however, the same cannot be said when it comes to the health professions. Many studies examining
health professional’s appearance do not address the varying perceptions of women as health care providers. Thus, the current research seeks to bridge the gap between research on women working in business careers and on women working in health careers. Previous research has concluded that for surgeons, similar to business managers, their image can represent their competence, trust, expertise, and compassion (Rowland, Coe, Burchard & Pricolo, 2005). However, current research regarding preferred appearances of women seem to limit their studies to more general variables in clothing such as scrubs, white coat, formal, and casual attire. The findings of these studies are inconsistent and appear to vary by specialty and treatment setting.

Although attire of a doctor has generally been considered to play a role in first impressions and subsequent positive physician-patient relationships, review of the literature provides conflicting findings (Hochberg, 2007; McKinstry & Wang, 1991). While some studies have suggested physician attire is an important variable in building trust and confidence with patients, others have found that patient satisfaction is unaffected by the way in which doctors’ dress (Hennessy, Harrison, & Aitkenhead, 1993; Kurihara, Maeno, & Maeno, 2014; Mckenna, Lillywhite, 2007; Shah & Ogden, 2006). While the results of such studies have indicated that perception is unaffected by physician clothing are important, research of the contrary is much more prevalent. One study in Brazil found that clothing influenced patient’s perceived competence, responsibility, and trust in the diagnosis and treatment provided by physicians (Yonekura et al., 2013). Additional research
found that 70% of the participants in their study reported that physicians’ attire influenced their confidence in physicians and another study found that over one-third of the patients in the survey indicated that physician attire influenced their satisfaction with care (Car, Starostanko & Wendling, 2017; Yamada et al., 2010).

Much of the most recent research has examined both male and female physicians in various settings. These studies have sought to understand patient perceptions as many physicians now wear a variety of styles of clothing and often do not adorn the white coat. This change has occurred partly due to health concerns regarding physicians wearing a white coat that extends to their wrists. Due to high infection rates in hospitals, physicians have been encouraged to be ‘bare below the elbow’ (Bond, Clamp, Gray & Van Dam, 2010). In support of this concept, previous research has identified that 70% of the sampled doctors believed white coats to be a health hazard and increase risk for infections and only 13% of the physicians in this sample wore white coats (Douse, Derrett-Smith, Dheda & Dilworth, 2014).

Although our study will not be examining the impact of the white coat on perceptions of women, it is important to note that research regarding white coats is inconsistent. Patients often associate the white coat with a professional attitude, physicians who are better prepared, more concerned with patients, and more hygienic (Douse, Derrett-Smith, Dheda & Dilworth, 20014). This often results in increased perceived trust and patient-physician relationships (Thiers, 2006). For example, research has found that patients are more willing to discuss more personal information with their doctor and hold higher hopes that their surgery will go well
if their surgeon wears a white coat or scrubs (Leopold, 2016). Contrary to these findings, an outpatient obstetrics study found that patients are equally satisfied with physicians who wear scrubs, casual clothing, or business attire (Shulman, 2008). Additionally, in the pediatric and psychiatric settings, patients perceive white coats as a symbol of authority, which interferes with the development of a strong patient-physician relationship (Cha, Hecht, Nelson & Hopkins, 2004; Dancer & Duerden, 2014). These findings suggest that physicians are valued for their medical skills and ability to relate to patients, rather than their attire (Shulman, 2008). As described, it is clear that there is variation in preferences for physician’s appearance relating to the white coat.

In addition to physician clothing influencing perception, research has found that preferences for physician attire varies by context. For example, white coats have been found to be preferable in emergency care (Welch, 1992), while formal dress is preferable in general practice (McKinstry & Wang, 1991). In family practice settings, patients typically prefer the physician to wear a nametag, white coat, and visible stethoscope (Keenum et al., 2003). These findings demonstrate that the setting in which a provider is working influences the patient’s perception of the physician’s attire.

Although research by (Keenum et al., 2003) found that patients expressed no preference for sex of provider, research by Menahem (1998), found that patients preferred female physicians to have short hair, loose clothes, a closed white coat and no prominent feminine features. Furthermore, researchers have found that
when physicians wear informal attire patients give more negative ratings for the male doctors compared to the female doctor (Gherardi, Cameron, West & Crossley, 2009). Although not discussed in previous research, this difference may be related to the woman’s clothing. During the “informal” condition, the female target was presented in a fitted blouse and a loose skirt that touched her knees. These clothing manipulations may have elicited a sexy stereotype due to the fit of her blouse and exposed legs.

**Treatment Compliance**

Medication compliance and adherence to medical advice has been found to be a barrier to positive health outcomes (Kerse, 2004). Research examining noncompliance in a primary care setting found that medication noncompliance and nonattendance were independently linked to increased mortality rates (Currie, et al., 2012). Patients’ behaviors may not align with medical advice for a variety of reasons (e.g., finances, denial, or lack of motivation). However, trust and perceived competence of providers are important variables; medication compliance has been linked with high levels of physician-patient trust (Schneider, Kaplan, Greenfield, & Wilson, 2004). Furthermore, trust ratings and physician-patient relationships have been found to directly impact medication compliance and primary care outcomes (Kerse, 2004). Due to doctors spending decreasing amounts of time with patients, appearance may be increasingly utilized by patients to make judgments about their providers. Therefore, if physician appearance elicits negative ratings of trust and competency, health outcomes may become compromised.
Rational for Study

Research has indicated that provocative women in high-status occupations receive low ratings in trustworthiness and competence by both sexes (Glick et al., 2005; Glick & Fiske, 2001; Howlett et al., 2015; Smith et al., 2018; Villancourt & Sharma, 2011; Wookey et al., 2009). However, research in this area has often utilized oversexualized provocative targets in clothing that was deemed inappropriate for the workplace (Glick, 2005), or included confounding variables, making it difficult to determine if provocative appearance is the cause for poor ratings (Glick, 2005 & Wookey et al., 2009). Although Howlett et al. (2015), amended many of these aforementioned faults, the research is limited to women in managerial or business-like occupations.

After reviewing literature related to the health professions, there is a lack of studies and related literature examining perceptions of women in the health profession. Although existing studies included women, they were restricted to evaluations of very general clothing changes (e.g. causal, formal, scrubs, white coat). The findings were generally inconclusive and lacked mention of gender stereotypes and objectification of women. Given the connection between trust and perceived competence with treatment compliance and health outcomes, it is important to investigate perceptions of women’s appearance in health care professions.

This study aimed to close the gap between research in management and health professions. Instead of utilizing overtly provocative, unprofessional, and
messy appearances as many aforementioned studies did, the current research intended to examine more subtle changes in the way women dress while maintaining a neat and professional appearance. These small changes in clothing were postulated to have larger impacts on health outcomes than previously considered. Thus, seeking to identify the threshold at which a female health care professional can modify their appearance without being perceived as incompetent and untrustworthy. Through the use of a covertly provocative target, we believed that these minor changes in clothing would produce negative perceptions and inferences about the female health providers’ competency, trust and reduced patient compliance.

Method and Procedure

Materials

Photographs were created for the purposes of this study, utilizing a female confederate. The same female confederate was utilized across all photos. However, her face was pixilated to further control for extraneous variables (e.g., attractiveness). The same photographer took all photos in the same location with the same background. The status of the target presented was indicated by a statement that appeared above the image.

Career Manipulation

The manipulation of the career variable was utilized in this research in order to differentiate high and low-status occupations. This study adapted the career variables from, Glick et al. (2005), for whom created two career manipulations, one being a low-status receptionist and the other was a high-status management
position. In this study, we also utilized two levels of occupations: a Medical Assistant and a Doctor. Both occupations were presented an ambiguous to avoid bias from the participant. The low-status occupation was identified by stating, “This woman is a Medical Assistant”. The high-status occupation was identified by stating, “This woman is a Doctor”.

**Appearance Manipulation**

Participants were randomly assigned to view an image. The same female confederate was utilized for each condition in order to minimize differences. Additionally, her face was pixilated in order to reduce any confounding variables and to keep attractiveness constant. The women in each condition was dressed in professional office wear. In the non-provocative condition, the woman wore a blouse with no buttons undone (see figure 1). This was paired with black work pants and black closed-toe flat shoes. The provocative target was dressed in the same blouse, but with the button undone (see Figure 2). Additionally, she wore a black skirt that fell just above the knee and black closed toe heels. Her hair was styled was tied back, in a bun for all photographs. The images included the woman’s entire body and depicted her standing with the same amount of background above her head and below her feet in each photo.

**Survey**

Participants were presented with prompts and were asked to rate the items on a Likert type scale from 1-10. Notations were placed at 1 = “strongly disagree”, 3 = “disagree”, 5 = “somewhat disagree”, 6 = “somewhat agree”, 8 = “agree”, 10 =
“strongly agree”. The following measures were modeled after Glick et al. (2005) as well as Carrizales (2012). Some item content overlaps with these studies as similar constructs are being measured.

*Emotional reactions.* Participants were prompted to rate their negative and positive emotional reactions in response to the image of the target. The Likert type scale ranges from 1-10 with one being strongly disagree and ten being strongly agree. The scale utilized six items, four of which loaded onto positive emotional reactions “happy”, “admiration”, “supportive”, and “respect”, while two loaded onto negative emotional reactions “annoyed” and “disappointed”.

*Competence.* Participants also responded to questions relating to perceived competence of the target. This scale was comprised of four items, three of which were used by Glick et al. (2005) “capable”, “intelligent”, and “smart”. A new item, “experienced”, was also added.

*Trustworthiness.* Ten items were used to assess participants’ perceived trustworthiness of the target as a health provider. The ten items included statements such as "I trust her judgement about my medical care" and "She is a medical expert", etc. Three items were reverse scored, “She is manipulative”, “she doesn’t know what she is talking about”, and “I don’t trust her”.

*Treatment Compliance.* Five items were utilized to assess participant’s treatment compliance. The items included suggested action statements from the target such as: “make suggested dietary changes”, “Increase physical activity”, and “attend a referral to a psychologist”. The participants responded on a scale of 1-10
rating the likelihood they would follow through with the treatment suggested.

*Professionalism.* Perceived professionalism of the target was assessed using three items “professional”, “put together”, and “inexperienced”. “inexperienced” was reverse scored.

*Work ethic.* The participants also responded to three items that assess work ethic “responsible”, “hardworking”, and “irresponsible”. “irresponsible” was reverse scored.

*Femininity.* The participants responded to two items, “womanly” and “feminine” that assessed femininity.

*Sexiness.* Participants rated the target’s perceived sexiness by responding to three items “sexy”, “revealing”, and “provocative”.

*Attractiveness.* Two items “attractive” and “good looking” were utilized to assess the overall attractiveness of the target.

*Appropriateness.* Was measured by one item “appropriate for the job”.

*Sexism of the participant.* A 16-item sexism measure utilized by Carrizales (2012) was compiled from scales developed by Glick and Fiske (1996) and Swim, Aikin, Hall and Hunter (1995). The items included statements such as "most women interpret innocent remarks as sexist" and "once a man commits, she puts him on a tight leash".

*Demographics.* Lastly, participants responded to prompts about their age, gender, race, occupation, health status, and political identification.
Setting and Procedure

The survey was administered using Qualtrics, an online survey platform. Participants were given a consent form that includes a brief description of the study. Participants were prompted to read over the consent form and were given opportunities to contact the principle investigator. After consent was obtained, participants were presented with instructions to complete the survey. This online survey could be accessed at any location where internet is available for use. Therefore, participants were not limited by location but required access to the internet.

Data Analysis

The study utilized a correlational research design to examine the interaction between women’s clothing and their occupation status on perceived competence and subsequent willingness to adhere to medical advice. Descriptive statistics described characteristics of the participants who complete the questionnaire including age and sex. Results were analyzed with a 2 X 2 Analyses of variance (ANOVA); Appearance: Conservative vs. Provocative, and Occupation: Doctor vs. Medical Assistant. The participants were split into four groups. This analysis determined potential differences of perceived competency and willingness to receive and adhere to medical advice from the presented confederate. The participants were randomly assigned to either version A: a depiction of a woman in non-provocative attire labeled as a doctor; version B, a depiction of a woman in a non-provocative attire labeled as a Medical Assistant; version C, a depiction of a
woman in provocative attire labeled as a physician; or version D, a depiction of a woman in provocative attire labeled as a Medical Assistant. When significant differences were revealed, post hoc tests were utilized to draw additional conclusions about the statistical relationships. Upon completion of the survey the participants were debriefed and thanked for their participation. The data collected from the questionnaires was analyzed using SPSS software.

Results

Participants

Participants for this study were adults above the age of eighteen. 313 participants were recruited through the internet, including social media and listserv email distributions. Participants were limited to one survey completion per user and were excluded from the study if they did not complete the survey, were under eighteen, or did not accept the informed consent. After checking for completeness 90 responses were removed from the data analysis leaving a total of ($N = 223$). With regard for the Provocative Medical Assistant (low status) target and the Provocative Doctor (high status) target, 53 and 58 participants completed each survey, respectively. 56 individuals completed the survey for the Conservative Medical Assistant (low status) target and 56 individuals completed the survey for the Conservative Doctor (high status) target. 76.7% of respondents were female, 22.9% were male, and .4% identified as other. 87% of respondents were enrolled in college or completed a college degree or higher, 45.7 % were enrolled in or completed a graduate or professional degree. 23.3% identified as students and
13.9% identified as retired or unemployed. 6.7% of respondents identified as Hispanic or Latina/o. 57.8% of respondents were under the age of 30, and 6.4% were over the age of 65.

Statistical Analyses

**Trust.** Results were analyzed with a 2 X 2 ANOVA; Appearance: Conservative vs. Provocative, and Occupation: Doctor vs. Medical Assistant. This two-way factorial ANOVA examined the effects of clothing and status on trust. Levene’s test suggested that the homogeneity of variances assumption was not fulfilled, $F(3,219) = 2.70, p = .047$. Although the assumption of homogeneity of variances was not fulfilled it only marginally surpasses the threshold. No further bootstrapping or alternative analyses were completed, as it would further distort the findings. Readers should be mindful of the results that are reported for the Trust variable. There was a significant main effect for clothing, $F(1, 219) = 5.24, p < .05$, partial $\eta^2 = .023$; trust was significantly higher when the target was dressed provocatively ($M = 77.13$) than when dressed conservatively ($M = 73.18$). Job Status also had a significant main effect, $F(1, 219) = 16.60, p < .001$, partial $\eta^2 = .070$. Trust was significantly higher for the Doctor (high status position; $M = 78.67$) than for the Medical Assistant (low status position; $M = 71.64$). The interaction between clothing and job status was significant, $F(1, 219) = 4.45, p < .05$, partial $\eta^2 = .020$. Simple effects were calculated at each level of job status. People have higher levels of trust for Medical Assistants (low status positions) when the low status individual is dressed provocatively ($M = 75.43$) than when
dressed conservatively ($M = 67.84), p < .05; for Doctors (high status positions),
clothing had no effect on levels of trust. This statistically significant difference is
also supported by the medium effect size of ($D = .59). This medium effect size
between low status Medical Assistants who dressed conservative and low status
Medical Assistants who dressed provocatively, confirms a meaningful difference.
Thus, despite the slight violation of Levine’s test the findings are significant and
meaningful.

**Competency.** The effects of task clothing and job status on perceived
competence were also examined. Levene’s test suggested that the homogeneity of
variances assumption was fulfilled, $F (3,219) = 2.39, p > .05$. However, the main
effect for clothing was not significant, $F (1, 219) = 1.11, p > .05$, partial $\eta^2 = .005$;
those who dressed provocatively ($M = 31.49$) did not differ from those who dressed
conservatively ($M = 32.31$) when examining competence. The main effect for job
status was significant, $F (1, 219) = 5.21, p < .05$, partial $\eta^2 = .023$. Perceived
competence was significantly higher for Doctors (high status positions; $M = 32.79$)
than for Medical Assistants (low status positions; $M = 31.01$). The interaction
between clothing and job status when examining competence was not significant, $F
(1, 219) = .50, p > .05$, partial $\eta^2 = .002$.

**Compliance.** The effects of clothing and job status on patient compliance
with medical advice was also evaluated. Levene’s test suggests that the
homogeneity of variances assumption was fulfilled, $F (3,219) = 0.31, p > .05$. Main
effect for clothing were not significant, $F (1, 219) = .18, p > .05$, partial $\eta^2 = .01$;
compliance with medical advice was not significantly higher when the provider was dressed provocatively ($M = 39.01$) when compared to conservative dress ($M = 27.56$).

Job Status also did not have a significant main effect, $F(1, 219) = .00, p > .05$, partial $\eta^2 = .00$. Patient compliance with medical advice was not significantly higher for Doctors (high status positions; $M = 5$) when compared to Medical Assistants (low status positions; $M = 2$). The interaction between clothing and job status was not significant, $F(1, 219) = .00, p > .05$, partial $\eta^2 = .00$.

**Discussion**

**Impact of Study**

This study sought to examine the effects of female medical professional’s attire on patient’s perceived trust and competence of the provider as well as compliance with medical advice. Previous literature has examined how sexiness and sophistication of women’s clothing impacts perceptions of women, however, many of the previous studies utilized an overtly sexy image when presenting the “sexy” target. This study utilized a more subtle approach to present the provocative target as professional and only slightly more revealing than the conservative professional outfit. The provocative target wore heels instead of flats, a skirt instead of pants, and her blouse had two buttons undone compared to the one button on the conservative target. Findings from this research study indicated that when a (low status) Medical Assistant dresses more provocatively she is trusted by perceivers significantly more than when dressed conservatively. Whereas
perceptions of the high status (Doctor) were not influenced by conservative or provocative clothing. This does not align with previous research by Howlett et al., (2015) which found that women in high-status positions are viewed more negatively when dressed in a provocative manner compared to women in high-status positions that are dressed in a more conservative manner. Additionally, Howlett et al., (2015) found no significant impact on modifying sexiness in the low(er)-status position. One possible reason that findings differ from Howlett et al., (2015) is due to statistical design differences (i.e., repeated measures vs. ANOVA).

These findings may also be explained by Carrizales (2012) who suggested that it may not be sexiness alone that results in negative perceptions, but that it may instead be the type of sexiness. Carrizales (2012) determined that a woman’s provocative appearance might not be detrimental if it is “put together” or “sophisticated”. That study was formulated in response to research produced by Glick et al., (2005), which depicted a sexy target with a messy appearance and tousled hair. The utilization of a formal and “put together” provocative target in the Carrizales (2012) research may explain why there were no significant findings for competence and compliance. Furthermore, the small changes utilized to create a provocative target (e.g. heels and skirt) may not have been enough to evoke the sexy stereotype that was previously mentioned. Negative ratings of trust for the woman was only present for the low status target, indicating that larger changes in appearance may need to be made for the higher status positions in order to evoke the same negative stereotypes and lack of fit associated with a sexy woman in a
high-status position. Future research may investigate this concept by presenting varied levels of sexiness for each job to determine if there is a different threshold for high and low-status positions.

The findings from the current study may be further explained by previous research regarding stereotyping. When women are characterized as fitting into the sexy subtype, they are often assumed to lack stereotypical masculine traits that are viewed as necessary to achieve competency in traditionally masculine, high-status occupations. Conversely, the sexy subtype of women is typically seen as compatible with lower-status occupations (e.g. waitressing and flight attending; Deaux et al., 1985; Glick et al., 2005; Howlett et al., 2015; Wookey, 2009). Drawing upon the lack of fit principle it is possible that the participants perceived the provocative appearance as being congruent or being best suited for the low status position. Conversely, the conservative appearance as incongruent with a low-status position. This results in higher ratings of trust for the provocative condition in the low status position.

The current research study is of value as it fills a gap in the literature by examining perceptions of female physicians while addressing objectification, gender stereotypes, and clothing. Although previous research has examined high and low status jobs there is lacking research about the role of stereotypes and medical providers. These studies identified high and low status by utilizing titles such as “Manager” and “Secretary”, while the current research selected the titles of
“Medical Assistant” and “Doctor”. This allowed for exploration of the impact of clothing and status on patient perceptions of providers as well as compliance with medical advice. This expands the prior research from strictly business settings to medical settings in order to address and consider the impact of health care professionals on patient outcome data.

Medical research has concluded that trust and perceived competence of providers has a direct impact on medication compliance in primary care (Kerse, 2004). Thus, it is vital to examine areas such as appearance that may be utilized by patients to make judgments about their providers. Unlike previous studies evaluating perceptions of women in high and low status occupations this research considered a healthcare context and addressed the valuable concept of physician-patient trust which has been linked with medication compliance and health outcomes (Kerse, 2004; Schneider, Kaplan, Greenfield, & Wilson, 2004). Therefore, if physician appearance elicits negative ratings of trust and competency, treatment compliance and subsequently health outcomes may become compromised. Although this study was generally inconclusive for compliance, future studies should continue to refine these concepts and further investigate impact of professional clothing on patient perceptions of providers and compliance with medical advice.

In addition to assessing participant’s perceptions medical professionals rather than business women, the research also sought to collect additional
information about participant’s health status and perceptions of health care in
general. This data was collected to inform the researchers about concepts that need
to be further investigated. The information addressed below can also facilitate
development of future surveys to ensure researchers can determine rational for
noncompliance beyond appearance or perceived competency of the provider
presented. The data from the current study revealed that 67.3% of respondents
identified a need to make lifestyle changes to improve their health, and only 50.2%
of respondents stated that they typically comply with medical advice (which can
include health behavior changes) from health care professionals. Although this
study expanded upon literature regarding trust and compliance (Kerse, 2004), there
may be alternative reasons (e.g., lack of motivation) individuals do not follow
through with medical advice, which may explain the lack of significant findings for
the compliance variable (Schneider, Kaplan, Greenfield, & Wilson, 2004). Nearly
half of the participants reported they typically do not comply with medical advice
indicating this behavioral data should be considered when evaluating compliance
responses. This may provide more information about patient’s decision making
and offers an opportunity to also inquire about rational behind non-compliance
behaviors.

Additional data indicated 25.6% of people reported they feel overwhelmed
or frustrated after leaving their health care providers office, which may result in
feelings of skepticism at their appointment. 36.3% of respondents stated their
health care providers do not spend adequate time explaining treatment advice that is
given and 7.2% stated that do not understand what the medications they are taking are prescribed for. This last number is very important as it should be kept in mind that over 80% of the participants in this study have a have completed a college degree or are currently enrolled in college or a graduate program, yet still, 7.2% do not understand what the medications they are taking are prescribed for. This number would likely increase if the sample was more representative of the general population (e.g. lower education). This data indicates that future research should incorporate patient education regarding medical advice and prescriptions to determine if this may increase adherence and perceived competency and trust of providers.

These findings point to additional concerns that may impact treatment compliance. If a patient feels overwhelmed or believes that their provider does not spend enough time with them, they may be less likely to follow medical advice. Lastly, 54.7% reported they would like their health care provider to offer more assistance with nutrition and other holistic health options. This information indicates that future researchers may consider examining how to incorporate holistic health into treatment protocols from both the perspective of the patient and the provider. In turn, this may increase levels of trust in the provider and subsequently improve patient compliance and treatment outcomes. Overall, this data suggests that these aforementioned topics and concerns should be incorporated into future research that attempts to further understand the topic of compliance with medical advice. The data indicates that evaluating trust, perceived competency, and
compliance in a medical setting is a far more complex concept when compared to a business setting as previously evaluated.

**Limitations and Areas for Future Research**

This study has multiple limitations that should be acknowledged. First, many of the participants in this study were graduate students in the health profession or individuals with graduate degrees. There was limited data representing populations of college-aged, non-college students. Additionally, this study could be improved by recruiting more participants to increase the sample size, especially because this design required dividing participants into four separate groups. Collectively, these factors may have influenced the findings of this study and leaves room for improvement in future research.

Although this study sought to utilize an appearance that was appropriate for the work place, yet more provocative, it is likely the provocative condition may have not presented enough of a difference from the conservative target’s presentation. Future research should utilize multiple levels of sexiness to determine at what point the threshold where perceptions of the women change. Additionally, blurring the face of the target may have led many participants to assume the purpose of the study. In future research, utilizing the same target without a blurred face may help alleviate this problem. Additionally, the target presented in the current research was Caucasian and of a very slender build. These factors may have impacted the participant’s perceptions, specifically in regards to perceived sexiness.
A fuller figured target may have resulted in more significant findings. Thus, future studies should utilize targets of different ethnicities and body shapes to determine if this would impact findings.

Another limitation of this study is that individuals may not have adequate familiarity with medical roles, such as Medical Assistants, and may associate this title with a person who wears scrubs or has little contribution in the medical setting. Therefore, it may be difficult to examine the high and low status professions in the medical/health professions for aforementioned reasons. Another possible conclusion is that people may assume that instructions from a Medical Assistant are simply information from the doctor that is disseminated by this individual. Future research may provide a detailed vignette to facilitate the participants understanding of the qualifications of the presented target and clearly define roles. Overall, the subjectivity of attraction, sexiness, and clothing in general provided to be a difficult topic to operationally define and study. The silver lining has been the repetition of research in this area, which has led to a mostly consistent set of conclusions in an ever-changing world of gender stereotyping.

Conclusion

This study attempted to explore implications of appearance and status for female health care providers. These factors were thought to possibly influence levels of trust, compliance, and perceived competence, which in turn could influence patient outcomes. The study attempted to utilize more subtle forms of
sexiness for the provocative target. Future studies may need to utilize more overt sexiness to identify the related threshold. Understanding this threshold is an important aspect in educating the public as well as providers to improve patient outcomes. Women have increased their presence in medical school as well as in practice, which calls for an analysis of how traditional gender roles and stereotypes may follow women into their careers. This idea needs to be further developed and perused, as the implications may be quite impactful for health-related outcomes and for women’s professional aspirations.
References


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doi:10.1016/j.ramb.2013.04.005


doi:10.1016/j.ssresearch.2010.06.012
Table 1  
*Descriptive Frequencies*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender Identity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>51</td>
<td>22.9%</td>
</tr>
<tr>
<td>Female</td>
<td>171</td>
<td>76.7%</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0.4%</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>88</td>
<td>39.5%</td>
</tr>
<tr>
<td>Married</td>
<td>103</td>
<td>46.2%</td>
</tr>
<tr>
<td>Divorced</td>
<td>6</td>
<td>2.7%</td>
</tr>
<tr>
<td>Widow(er)</td>
<td>3</td>
<td>1.3%</td>
</tr>
<tr>
<td>Co-living with partner</td>
<td>23</td>
<td>10.3%</td>
</tr>
<tr>
<td><strong>Education Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some High School (did not graduate)</td>
<td>2</td>
<td>0.9%</td>
</tr>
<tr>
<td>Graduated High School</td>
<td>27</td>
<td>12.1%</td>
</tr>
<tr>
<td>In College or Finished College</td>
<td>102</td>
<td>45.7%</td>
</tr>
<tr>
<td>Currently enrolled or graduated graduate/professional school (e.g. Ph.D., Psy.D., PA, NP, MBA, JD)</td>
<td>92</td>
<td>41.3%</td>
</tr>
<tr>
<td><strong>Occupational Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>140</td>
<td>62.8%</td>
</tr>
<tr>
<td>Retired</td>
<td>20</td>
<td>9.0%</td>
</tr>
<tr>
<td>Student</td>
<td>52</td>
<td>23.3%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>11</td>
<td>4.9%</td>
</tr>
</tbody>
</table>
APPENDIX A: INFORMED CONSENT

Florida Institute of Technology

Please read this consent document carefully before you decide to participate in this study. The researcher will answer any questions before you sign this form.

Principal Investigator: Jordan Weber, M.S. jweber2016@my.fit.edu

INTRODUCTION
You are being invited to participate in a research study. You will qualify to take part in this research study if you are over the age of 18. This study should take about 15 minutes of your time to complete.

WHAT WILL I BE ASKED TO DO IF I PARTICIPATE?
If you decide to participate, you will complete a self-report electronic survey of questions including demographic data (e.g., age, gender, sexual orientation, ethnicity, relationship status, work setting, degree type, etc.) and questions about a woman in a medical setting. Her image will be presented in the survey. Your participation is voluntary, and you may withdraw from the survey at any point. All responses are completely confidential.

WHAT POSSIBLE RISKS OR BENEFITS CAN I EXPECT FROM TAKING PART IN THIS STUDY?
This is a minimal risk study, which means the harms or discomforts that you may experience are not greater than you would ordinarily encounter in daily life while taking routine physical or psychological examinations or tests. The principal investigator keeps your information confidential (all responses are entirely anonymous and not linked to any identifying information). There is no direct benefit to you for participating in this study. Participation may benefit the health psychologists in improving patient outcomes.

WHEN IS THE STUDY OVER? CAN I LEAVE THE STUDY BEFORE IT ENDS?
The study is over when you have completed the survey. However, you can leave the study at any time even if you haven’t finished.

HOW WILL THE RESULTS BE USED?
The results of this study may be published in journals and/or presented at academic conferences. Your name or any identifying information about you will not be published. This study is being conducted as part of the dissertation of the principal investigator.
IF I HAVE QUESTIONS WHO CAN I CONTACT?
If you have any questions about taking part in this research study, you should contact the principal investigator, Jordan Weber, at 727-417-1495 or at jweber2016@my.fit.edu. If you have questions or concerns about your rights as a research subject, you should contact the Institutional Review Board (IRB) (the human research ethics committee) at 212-678-4105 or email IRB@tc.edu. The IRB is the committee that oversees human research protection for Florida Institute of Technology.

Whom to contact about your rights as a research participant in the study:
Dr. Lisa Steelman, IRB Chairperson
150 West University Blvd.
Melbourne, FL 32901
Email: lsteelema@fit.edu Phone: 321.674.8104

PARTICIPANT’S RIGHTS

- I have read the informed consent with the researcher. I have had opportunity to inquire about the purposes, procedures, risks and benefits regarding this research study.
- My participation is voluntary and I may refuse to participate or withdraw participation at any time without penalty.
- The researcher may withdraw me from the research at his or her professional discretion, such as not meeting inclusion criteria or an incomplete survey.
- Any personal identifying information derived from the research will not be voluntarily released or disclosed without my separate consent, except as specifically required by law.

By clicking “I agree” below you are indicating that you are at least 18 years old, have read and understood this consent form, and agree to participate in this research study.
APPENDIX B: STIMULI

Figure 1:

- More provocative clothing with a low status occupation (This woman is a Medical Assistant) or
- More provocative clothing with high status occupation (This woman is a Doctor)
Figure 2:

- Less provocative clothing with low status occupation (This woman is a Medical Assistant)
  
or

- Less provocative clothing with high status occupation (This woman is a medical Doctor)
APPENDIX C: SURVEY

Please answer the following questions based on the options below:

If the woman in the photo was your coworker and you had to work together to what extent would you feel the following:

1=Strongly Disagree, 2, 3= Disagree, 4, 5=Somewhat Disagree, 6=Somewhat Agree, 7, 8 = Agree, 9, 10=Strongly Agree

1. Supportive
2. Respect
3. Annoyed

For each of the following words, please rate the extent to which you feel the woman in the photo fits the description

1=Strongly Disagree, 2, 3= Disagree, 4, 5=Somewhat Disagree, 6=Somewhat Agree, 7, 8 = Agree, 9, 10=Strongly Agree

1. Capable
2. Intelligent
3. Smart
4. Experienced
5. Dependable
6. Trustworthy
7. Manipulative
8. Authentic
9. Professional
10. Put together
11. Inexperienced
12. Responsible
13. Hardworking
14. Womanly
15. Feminine
16. Revealing
17. Provocative
18. Attractive
19. Good Looking

1=Strongly Disagree, 2, 3= Disagree, 4, 5=Somewhat Disagree, 6=Somewhat Agree, 7, 8 = Agree, 9, 10=Strongly Agree
1. I trust her and would take her medical advice
2. The information she says is true
3. I don’t trust her
4. I trust her judgement about my medical care
5. I believe she will be honest with me about my health
6. She doesn’t know what she is talking about

If the woman in the photo were to suggest the following how likely would you be to follow through with her suggestions?

1=Strongly Disagree, 2, 3= Disagree, 4, 5=Somewhat Disagree, 6=Somewhat Agree, 7, 8 = Agree, 9, 10=Strongly Agree

1. Fill prescriptions for suggested medication and take them as prescribed
2. Make suggested dietary changes
3. Increase physical activity
4. Attend a referral to a psychologist
5. Attend the follow up appointment with her

Would you say the attire of the woman in the photo is...

1=Strongly Disagree, 2, 3= Disagree, 4, 5=Somewhat Disagree, 6=Somewhat Agree, 7, 8 = Agree, 9, 10=Strongly Agree

1. Appropriate for the job

Please indicate your agreement with each of the following statements:

1=Strongly Disagree, 2, 3= Disagree, 4, 5=Somewhat Disagree, 6=Somewhat Agree, 7, 8 = Agree, 9, 10=Strongly Agree

1. Women exaggerate problems at work
2. Women are too easily offended
3. Most women interpret innocent remarks as sexist
4. When women lose fairly, they claim discrimination
5. Women seek special favors under guise of equality
6. Feminists are making reasonable demands
7. Feminists are not seeking more power than men
8. Women seek power by gaining control over men
9. Few women tease men sexually
10. Once a man commits, she puts him on a tight leash
11. Women fail to appreciate all men do for them

Demographics

1. What is your age? ____
2. What is your country of residence? ____
3. Are you Hispanic Latina or of Spanish origin? Yes___ No___
4. Which of these groups best describes your racial background?
   a. American Indian
   b. Asian or South Asian
   c. Native Hawaiian or other Pacific Islander
   d. Black or African American
   e. White
   f. Other: _______
5. What gender do you identify with?
   a. Male
   b. Female
   c. Transgender Women
   d. Transgender Man
   e. Genderfluid
   f. Gender Queer
   g. Two Sprit
   h. Other
6. What is your marital status
   a. Single
   b. Married
   c. Divorced
   d. Widow(er)
7. What is the highest level of education achieved?
   a. Elementary school (grades 1-8)
b. Some high school (did not graduate)
c. Graduated from high school (or GED)
d. Currently attending college
e. Graduated from college
f. Currently enrolled in graduate/professional school (MD, PHD, PsyD, JD, MBA)
g. Completed graduate degree

8. What is your current occupational status?
   a. Employed
   b. Retired
   c. Student
   d. Disability
   e. Unemployed

9. Select what medical conditions you have been diagnosed with or treated for
   a. Arthritis
   b. Diabetes
   c. High blood pressure
   d. Irritable bowel
   e. Cancer
   f. Stroke
   g. Depression/anxiety
   h. Heart problems
   i. Kidney disease
   j. Thyroid problems
   k. Substance abuse (and related ailments)
   l. High cholesterol
   m. Asthma
   n. Other
   o. None of the above

10. How frequently do you exercise?
    a. 1-2x/week
    b. 2-4x/week
    c. 4-6x/week
    d. More than 6x/week

11. Select the following that describes your lifestyle
    a. Sedentary
b. Moderately active
c. Active
d. Very active

12. Do you use tobacco
   a. Yes
   b. No

13. Do you work in the medical field?
   a. Yes
   b. No

14. Are you a doctor?
   a. Yes
   b. No

15. Where would you place yourself on each of the following two scales?
   a. Very Liberal
   b. Very Conservative
   c. Strong Democrat
   d. Strong Republican