THE OCCUPATIONAL REINFORCEMENT PATTERNS AND WORK VALUES OF MALE AND FEMALE NURSES

by

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ABSTRACT

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ABPP

Despite evidence suggesting that men and women in the same profession may endorse different occupational reinforcer patterns (ORPs), widely used career interest inventories, such as the Work Importance Profiler (WIP-C) provided by the U.S. Department of Labor's O*NET, continue to utilize Occupational Scale norms that disregard gender differences. This study employed career psychology's theory of work adjustment (TWA) to inferentially measure and compare the ORPs and work values of satisfied male and female registered nurses (RNs). Additionally, gender role conflict (GRC) theory was employed to analyze the findings further by comparing total and subscale scores on the short form of the Gender Role Conflict Scale (GRCS-SF) between satisfied and dissatisfied male RNs.

This study addressed three key research questions. First, it compared the ORPs of satisfied male RNs to those of satisfied female RNs. Second, it evaluated these groups across six work value domains on the WIP-C: Achievement, Altruism, Autonomy, Comfort, Safety, and Status. Third, it examined how dissatisfaction among male RNs relates to their scores on the GRCS-SF by comparing the responses of dissatisfied and satisfied male RNs.

Results revealed that satisfied female RNs endorsed significantly higher scores in one of the 21 ORPs, doing for others, a component of the Altruism work value domain on the WIP-C.

Furthermore, compared to satisfied male RNs, dissatisfied male RNs reported significantly higher scores on one of the four GRCS-SF subscales, conflict between work and family relationships (CBWFR), which measures the extent to which men experience challenges balancing work, school, and family responsibilities. Finally, this study offers clinical, theoretical, and methodological insights to better support men pursuing nontraditional career paths, such as nursing, by addressing the interplay between gender-specific ORPs, work values, and GRCs.

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Chapter 1

Statement of the Problem

The U.S. is facing a critical shortage of registered nurses, driven in part by an aging population that requires more age-related healthcare (U.S. Census Bureau, 2019). Following the COVID-19 pandemic, it was estimated that the country lacked 1.2 million registered nurses (RNs; U.S. Department of Health and Human Services, 2020). Despite decades of well-funded federal campaigns aimed at encouraging men to pursue nursing careers, they remain a minority in the profession. In 1970, only about 2% of nurses were men; today, that figure has risen to just 12.6% (U.S. Bureau of Labor Statistics, 2020). This small representation categorizes male nurses as working in a non-traditional career, defined as one where either gender constitutes less than 25% of the workforce (U.S. Department of Labor, 2019).

Recruiting more men into nursing could help address this shortage. There is a substantial pool of men who could fill critical nursing roles. However, it is essential that they find satisfaction in this choice, as job satisfaction is linked to longer tenure (Brown & Lent, 2020).

Person-Environment Fit

Person-environment fit (hereafter referred to as fit) refers to how well an individual's traits align with their work environment (Rounds, Dawis, & Lofquist, 1987). A better match between a person's characteristics and the organizational culture typically leads to improved success and satisfaction in the workplace. This suggests that individuals may choose to enter and stay in nursing because it aligns well with their abilities, interests, and values (Juventun & Even, 2012)

Occupational reinforcement patterns (ORPs)

Occupational reinforcement patterns (ORPs), as noted by McCloy et. al. (1999), are profiles of scores on need statements that characterize the content of work (e.g., authority, creativity) and conditions of the work environment (e.g., compensation, advancement potential) in occupations. ORPs are based on ratings of the presence or absence of the need reinforcers in specific occupations. In other words, ORPs are a set of mathematically derived scores that describe how a worker's needs, or a group of workers' needs, are fulfilled, or not fulfilled, by a work environment. When the reinforcement patterns of an individual worker are congruent with a specific job's occupational environment, the worker is predicted to be satisfied.

Traditionally, career development research has treated men as "universal representatives of all humans" (Heppner & Heppner, 2014). However, this perspective raises important concerns when considering if men and women share the same characteristics when predicting satisfying occupations. A century of research on occupational interests has shown that men and women, in general, have different interests, leading them to pursue different activities. Furthermore, existing literature on career psychology suggests that men and women are socialized in ways that influence their motivations and reinforcements at work. Given that interests reflect preferences for activities while needs represent preferences for reinforcers (Lofquist & Dawis, 1975), it is crucial to empirically investigate whether men and women differ in their ORPs.

Development of the Theory of Work Adjustment

The theory of work adjustment (TWA) was developed to enhance our understanding of the relationship between individuals and their work environments, ultimately aiming to improve job performance and satisfaction. Originating in the 1960s through the efforts of University of Minnesota psychologists René Dawis and Lloyd Lofquist (McCloy et. al., 1999), TWA emerged

in response to the need for a deeper comprehension of how individuals interact with their workplaces and how these interactions influence job satisfaction and performance. The early development of the theory was funded by the Rehabilitation Services Administration, Social and Rehabilitation Service, U.S. Department of Health, Education, and Welfare (Dawis & Lofquist, 1984). TWA remains a valuable framework in vocational settings, providing support for individuals facing career challenges due to disabilities while also offering useful insights for counselors and career researchers working with able-bodied individuals.

While the TWA is applicable in various contexts, it does not adequately address how the intersection of identities—such as race, ethnicity, culture, religion, sex, and gender—affect fit. This study will focus specifically on the role of gender in predicting fit among RNs.

Although vocational psychology has made strides in understanding how gender influences career choices, both TWA and related online counseling tools, like the computer-administered Work Importance Profile (WIP-C), assume that satisfied male and female workers within the same profession share identical ORPs.

Sex and Gender

Early vocational psychologists often used the terms *sex* and *gender* interchangeably. However, for the purposes of this study, *sex* was defined as the physical and physiological characteristics that distinguish males from females (APA, 2023). Currently, in the U.S., a person's sex is typically categorized as male, female, or intersex—a condition in which someone is born with physical sex characteristics that do not fit typical definitions of male or female. Some key markers of biological sex include chromosomes (with males typically having XY chromosomes and females XX chromosomes), reproductive organs (such as testes for males and ovaries for females), and secondary sexual characteristics (like body hair and breast

development). In addition, testosterone is usually more prevalent in males, while females commonly have more estrogen (APA, 2023).

Gender, on the other hand, refers to the socially constructed roles, behaviors, identities, and expectations that cultures and societies create around the concepts of masculinity and femininity (APA, 2023). It encompasses the social, cultural, and psychological aspects of being male, female, or something else entirely. Unlike sex, which is typically biologically determined, gender is not tied to one's biological sex. In other words, people may experience a gender identity that aligns with or differs from their biological sex (APA, 2023).

Gender identity reflects one's understanding of cultural roles, behaviors, activities, and attributes considered appropriate by both the individual and the broader society (Bergman & Barker, 2017). Terms like nonbinary and genderqueer serve as umbrella identities for those who do not fit strictly within the traditional male-female binary, often challenging the majority culture's perceptions of gender (Bergman & Barker, 2017). A person may outwardly express their gender identity through appearance, behavior, clothing, voice, and other forms of self-presentation.

Societal norms and expectations, shaped predominantly by the majority culture, often define what behaviors are considered socially appropriate for males, females, and non-binary individuals. For instance, masculinity norms can be constructed within a football team based on factors such as players' school, class year, and playing position (Steinfeldt et al., 2012). However, gender norms are not universal and may vary significantly across different cultural and contextual settings.

Unlike sex, which is often considered biologically fixed, gender is fluid and can vary significantly across cultures and over time (APA, 2023). Many societies recognize a spectrum of

gender identities beyond male and female, allowing individuals to change their gender identity or expression throughout their lives. For example, Nanda (2011) highlighted that while 15th and 16th-century European settlers adhered to strict dichotomies of masculinity and femininity, North American Indigenous cultures embraced diverse expressions of gender, sex, and sexuality. Another example illustrating the contextual nature of gender norms is the evolution of high-heeled footwear. Originally designed for Persian horse riders in the 10th century, high heels became symbols of masculinity and social status in 17th-century Europe. However, by the late 17th century, high heels transitioned into women's fashion and were ultimately abandoned by men (Google Arts & Culture, 2017).

Sex, Gender, and Psychometrics

In 1943, Strong advocated for the use of separate "sex" scales in his publication *Vocational Interests of Men and Women,* highlighting significant differences in the experiences of male and female lawyers within the profession. About three decades later, Campbell (1974) proposed the adoption of unisex, or nonbinary, scales, arguing that they offered greater predictive validity. This argument was further supported by Campbell's 1976 study of male and female law students, which challenged the necessity of occupational interest norms based on sex.

Although research on sex and gender differences in the workplace has produced mixed results, recent surveys and meta-analyses indicate small but significant effect sizes in domains such as relationships and altruism (Brown & Lent, 2020). These differences are particularly evident in gender-dominated fields like nursing, where approximately 83% of the workforce is female (U.S. Bureau of Labor Statistics, 2020). Nevertheless, the persistent reliance on a one-size-fits-all approach to gender testing overlooks these nuanced distinctions

The Challenge of Developing ORPs

The difficulty in creating valid and reliable ORPs can be summarized by Borgen et al. (1968). Borgen et al. outlined three methods for developing ORPs: (1) *direct observation* of workers by researchers; (2) *estimation* of ORPs by experienced judges (such as managers or supervisors); and (3) *inference*, which involves surveying individual workers, or incumbents, in their respective fields.

Developing ORPs via direct observation was deemed impractical due to the extensive training required for researchers to observe nurses effectively in their workplaces. Multiple observers would need to agree on data collection methods, complicating the process of fitting data into distinct theoretical categories. Consequently, Borgen et al. (1968) recommended estimation by a select group of experienced judges as the most practical method for identifying reinforcement patterns. They considered inferential methods the least favorable due to their requirement for large, balanced samples of each gender in each occupation, which could be both costly and time-consuming.

In the following decades, vocational researchers accepted the ORPs for nurses without questioning the gendered characteristics that define the profession. Male nurses' ORPs were not assessed inferentially until the 1980s, and to my knowledge, another inferential measurement has not occurred since. The most notable attempt to inferentially measure male nurses ORPs last occurred with Flint (1980) at the University of Minnesota. In his dissertation, Flint (1980) sampled 16 male and 15 female nurse participants. Although Flint reported "significant sex differences" among the sampled nurses in the domain of altruism/relationships, TWA researchers seemed to abandon the topic of unisex scales. Instead, TWA researchers focused on efficiently operationalizing TWA (Flint, 1980). Norming career tests based on gender using inferential methods would have been too labor-intensive and costly (Flint, 1980), especially given the fewer

number of male nurses at that time . This may help partially explain why, over the past century, more women than men have been directed toward nursing, as their work abilities, reinforcement patterns, and values align more closely with the estimated, not inferentially measured, work characteristics that came to define a satisfied nurse.

Unfortunately, this process may have created a feedback loop. Vocational tests were initially normed on female nurses, leading to more women being directed into nursing. Some of these women found satisfaction in the profession and remained, further shaping the occupational profiles. Over time, occupational analysts and estimators—often university graduate students—relied on outdated subjective estimates to maintain the descriptions, characteristics, and occupational reinforcement patterns (ORPs) for nurses, leaving them largely unchanged for decades. This cycle reinforced existing societal expectations and gender roles within the nursing profession. O*NET last reviewed the work values for registered nurses based on subjective analyst/estimator scores in 2008 (U.S. Department of Labor, 2024).

Flint (1980), after comparing studies like Strong (1943) and Campbell (1976) and completing his own research, noted that "the need for same-sex scales may change or diminish with time, perhaps differentially across occupations." Yet, today, widely used interest inventories, such as those offered online by the U.S. Department of Labor's O*NET, continue to rely on nonbinary gender norms.

Sexism in Research

Around the same time that male vocational researchers began codifying unisex ORPs, Leona Tyler (1977) characterized career development as "the vocational development of middle-class males." Later, Fitzgerald and Crites (1980) urged researchers to focus more intently on the career development of women. Since then, attitudes among vocational psychologists toward

women's careers have shifted significantly. Numerous studies have revealed the systematic exclusion of women from science, technology, engineering, and mathematics (STEM) fields (Fouad et al., 2010), highlighting how institutionalized sexism has restricted women's equal employment opportunities (Kantamneni, 2013).

In the past decade, some vocational psychologists have argued that the study of men's careers lags that of women's (Fouad, Whiston, & Feldwisch, 2016). There has been a renewed focus on researching nontraditional careers for men and women. The academic zeitgeist has transitioned to the discussion of issues of occupational segregation, gender role socialization, and how gender conformity affects perceptions of career choices and men's work adjustment (Brown & Lent, 2013). Despite advancements in understanding how gender impacts career choice, most TWA researchers and publishers of related online counseling tools, such as the WIP-C, assume that satisfied male and female workers in the same profession share identical ORPs.

Traditionally, career development research has viewed men as "universal representatives of all humans" (Heppner & Heppner, 2014). However, it is problematic to conclude that men and women possess the same characteristics that predict job satisfaction. Afterall, a century of research indicates that men and women have different interests, leading them to pursue distinct activities.

While interests reflect preferences for activities, needs pertain to preferences for reinforcers (Lofquist & Dawis, 1975). Thus, it would be prudent to empirically investigate whether men and women differ in their ORPs. Fifty years of inquiry into gender psychology suggests that men and women are socialized differently, likely leading to different work reinforcement preferences.

Overall, research on gender differences has produced mixed findings. Recent surveys and meta-analyses indicate small but significant effect sizes across various domains, like relationships (altruism) and comfort (working conditions) (Brown & Lent, 2020). Ignoring these differences in psychometrics and career advising may perpetuate systemic sexism and the reinforcement of gendered occupations. As noted earlier, Borgen et al. (1968) proposed methods for developing ORPs, yet the practical limitations of direct observation led to reliance on estimation methods, instead of inferential methods, that often overlooked the complexities of gender. This oversight has implications not only for career development but also for how we understand and support diverse career paths in the modern workforce.

Male Nurses and Workforce Shortages

The United States is facing an unprecedented shortage of RNs, a situation exacerbated by an aging population and the lingering effects of the COVID-19 pandemic. As the population ages and requires more healthcare services, the U.S. is projected to be short of 1.2 million nurses by 2030 (U.S. Department of Health and Human Services, 2020). Despite decades of well-funded federal campaigns designed to encourage more men to enter the nursing profession, men remain a minority in the field.

In 1970, only about 2% of nurses were male. Today, that figure has increased, but men still represent only 12.6% of the nursing workforce (U.S. Bureau of Labor Statistics, 2020). This makes nursing a *non-traditional career* for men, defined by the U.S. Department of Labor as one where either gender comprises less than 25% of the workforce (2019). This underrepresentation presents a missed opportunity, especially in light of the critical nursing shortage.

One potential solution to this shortage is the recruitment of more men into nursing. With nearly half of the general labor force made up of men, there is a large pool of individuals who

could fill vital nursing roles. However, simply increasing the number of male nurses is not enough. To ensure that newly recruited males stay in the profession, it is crucial that they find satisfaction in their work. Research has shown that job satisfaction is closely linked to longer career tenure, making it essential that male nurses feel valued and fulfilled in their roles (Brown & Lent, 2020). fit is important. When there is a good match between an individual's traits, interests, and values and the demands of the job, the likelihood of job satisfaction and career success increases. This means that men—like nurses of any gender—are more likely to pursue and remain in nursing if they feel that the profession aligns with their abilities and values (Juventun & Even, 2012).

Gender Role Conflict and Nursing

In the context of nursing, societal gender expectations, as framed by gender role conflict (GRC) theory (O'Neil, 2008), can significantly discourage men from both entering and remaining in the profession. Nursing is frequently perceived as a caregiving role requiring empathy, compassion, and emotional connection—traits traditionally associated with femininity. These qualities are often in direct conflict with societal ideals of masculinity, which emphasize attributes such as strength, independence, and emotional restraint.

For men, the emotional demands of nursing, including providing care in emotionally charged environments or delivering comfort to patients and families, may create a sense of internal conflict. According to O'Neil's (2008) GRC theory, when individuals experience a mismatch between their behaviors and societal expectations of gender norms, it leads to significant psychological strain, otherwise known as gender role stress (GRS), a phenomenon initially described within the work of Eisler (1995; Eisler & Skidmore, 1987). In the case of male nurses, this conflict may manifest as internalized anxiety about appearing "weak" or "unmanly"

in a profession that is perceived as nurturing and emotionally expressive. As a result, men may avoid entering nursing altogether or may leave the profession after experiencing stressors that challenge their traditional gender identity.

Furthermore, GRS can lead to GRCs, which can create barriers to male nurses' long-term job satisfaction and retention in the field. As nursing workplaces continue to emphasize qualities like empathy, nurturing, and emotional intelligence—skills that are often gendered as feminine—male nurses may feel marginalized or disconnected from the prevailing professional culture. The lack of male role models and mentors in nursing can exacerbate this sense of isolation, making it more difficult for men to reconcile their professional identity with their personal sense of masculinity. This sense of not fitting in or the feeling of being "out of place" can lead to job dissatisfaction, burnout, and high turnover rates among male nurses, further contributing to the overall nursing workforce shortage. Research has shown that when men feel forced to adapt to a "feminine" caregiving role, it can lead to job disengagement, lower job satisfaction, and early career exits (Larkin, 2015; Walker et al., 2017). Moreover, GRC is significantly related to myriad mental health and interpersonal problems (O'Neil, 2008).

TWA

To review, this study used TWA to compare the ORPs and mean work values of male and female nurses. TWA, developed by Dawis and Lofquist (1984), **s**uggest**s** that individuals engage with their work environments in ways that reflect their personal needs, abilities, and values. Like Holland's vocational typology, TWA is in earlier trait-and-factor counseling theories, which were influenced by Frank Parsons' social reforms in the early 1900s (Chartrand, 1991).

Betz (2008) referred to Parson's social reforms, Holland's typology, and TWA as "matching models," emphasizing the importance of aligning individual traits with work

environments to enhance career satisfaction and performance. According to TWA, achieving this alignment, person-environment fit, is essential for career success and overall well-being (Dawis & Lofquist, 1994).

Fit

According to Dawis and Lofquist (1984), job satisfaction arises when the environment meets an individual's values and needs (needs-supplies fit), while satisfactory performance results from the match between a person's abilities and the demands of the environment (demands-abilities fit). Job tenure—the length of time an individual remains in a job—often reflects the extent to which both satisfaction and performance aligns in the work environment (Swanson & Fouad, 2019). TWA, therefore, offers a useful framework for understanding how individuals make vocational choices and adjust to the work environments that align with their skills and values (Brown & Lent, 2015).

The present study **e**xtended TWA by examining how gender influenced RNs' job satisfaction, ORPs, and work values. It also investigated how male nurses' experiences with gender role conflicts GRCs might have contributed to the small number of men in nursing and their overall satisfaction in the profession.

To date, no study has used sufficiently large sample sizes to confidently identify gender-based ORPs within the nursing profession, nor has any research explored the relationship between male nurses' GRCs and their job satisfaction or fit in nursing. This gap in the literature contrasts with the extensive research on women in non-traditional careers, such as engineering, and the widespread use of nonbinary career assessments, such as those found on the U.S. Department of Labor's O*NET.

This study aimed to address these gaps in the literature by using a national sample of self-identified male and female nurses to test its hypotheses. The research contributed to the field of vocational psychology by providing a larger sample of male nurses than had been analyzed in previous studies using TWA constructs. Hopefully, the results of this study will contribute to our understanding of gendered dynamics in vocational development, particularly for men in non-traditional careers like nursing. The findings can potentially offer valuable insights for clinicians and organizations seeking to understand how gender and GRCs may impact job satisfaction and career longevity for men in nursing. Based on these objectives, the study had four goals, three research questions, and three hypotheses.

The Present Study

The aim of this study was to describe and compare the ORPs and work values of male and female nurses using the TWA framework to capture the real-life work values of male and female nurses.

There were three goals of the study:

Report the ORPs and mean work values endorsed by satisfied male RNs on the WIP-C.

Report the ORPs and mean work values endorsed by satisfied female RNs on the WIP-C.

Compare the ORPs and mean work values of satisfied male RNs to the mean work values of satisfied female RNs on the

WIP-C.

Compare the Gender Role Conflict Scale – Short Form (GRCS-SF) scores of male nurses who are satisfied with their work to the GRCS-SF scores of male nurses who are dissatisfied with their work.

Research Questions

1. Do satisfied male RNs endorse significantly different ORPs than satisfied female RNs?

2. If yes, do the ORPs differ significantly in the 3 work value domains of altruism/relationships, comfort/working condition, and autonomy/independence.

3. Can males' dissatisfaction with nursing be partially explained by their reported GRCS-SF scores?

Hypotheses of the Present Study

Hypothesis 1a – Satisfied male RNs, when compared to satisfied female RNs, will endorse statistically different work reinforcement patterns resulting in gender based ORPs.

Hypothesis 1b - The gendered differences in work reinforcement patterns will be strongest in three work value categories: altruism/relationships, comfort/working condition, and autonomy/independence.

Hypothesis 2 – Satisfied male RNs will have lower GRCS-SF scores than dissatisfied male RNs.

Definition of terms for the purpose of this study

"Sex" is usually determined by the biological attributes that distinguish male and female organisms, typically based on anatomy, reproductive systems, chromosomes, and hormone levels (APA, 2023). A person's sex is generally categorized as male, female, or intersex (a condition in which someone is born with physical sex characteristics that do not fit typical definitions of male or female). Chromosomes, anatomy, and hormones are components of one's sex. Males typically have XY chromosomes, and females typically have XX chromosomes. Males and females have distinct reproductive organs (e.g., testes vs. ovaries) and secondary sexual characteristics (e.g., body hair, breast development). Testosterone tends to be more prevalent in males, while estrogen is more common in females.

"Gender" usually refers to the social roles, behaviors, identities, and societal expectations that cultures and societies create around the concepts of masculinity and femininity. It encompasses the social, cultural, and psychological aspects of being male, female, or something else entirely. Unlike sex, which is biologically determined, gender is not strictly tied to one's biological sex. People may experience a gender identity that aligns with or differs from their biological sex (APA, 2023).

*"**Nurse"*** is defined as a registered nurse (RN) with either an Associate Degree in Nursing (ADN) or a Bachelor of Science in Nursing (BSN) followed by successful completion of the National Council Licensure Examination (NCLEX-RN) exam. The duties of the nurse, as defined by U.S. Bureau of Labor and Statistics (2021): "assess patient health problems and needs, develop and implement nursing care plans, and maintain medical records. Administer nursing care to ill, injured, convalescent, or disabled patients. May advise patients on health maintenance and disease prevention or provide case management. Licensing or registration required. Excludes Clinical Nurse Specialists. Nurse Anesthetists, Nurse Midwives, and Nurse Practitioners."

"***Non-traditional career"*** those in which either men or women make up less than 25 percent of the workforce. (U.S. Department of Labor, 2019)

"Conformity to Masculinity" degree of men's conformity to masculine norms (Mahalik et al., 2003)

"Work values" groupings of worker's needs, of which there are six: achievement, independence, recognition, relationships, support, working conditions (National Center for O*NET Development, March 15, 2021)

"Reinforcer patterns" patterns of rewards that motivate a worker to meet heir job's requirements and their personal needs (Dawis, 2005; Dawis & Lofquist, 1984)

"Job satisfaction" is an internal indicator of correspondence; worker's appraisal of the work environment that fulfils worker's requirements (Dawis & Lofquist, 1984, p. 55); job satisfaction arises when the environment meets an individual's values and needs (needs-supplies fit), while satisfactory performance results from the match between a person's abilities and the demands of the environment (demands-abilities fit). Job tenure—the length of time an individual remains in a job—often reflects the extent to which both satisfaction and performance aligns in the work environment (Swanson & Fouad, 2019).

Chapter 2

As noted earlier, while the bodies of research on TWA and person-environment fit are extensive and well-established, this study seeks to highlight that a career assessment tool associated with TWA—the Work Importance Profiler (WIP-C)—has not been normed to account for gender differences, particularly within nontraditional professions such as nursing. To contextualize this issue, the following sections will first outline the scope of the current nursing crisis and emphasize the need for increased male participation in the field. Next, I will summarize and critique publications that provide the theoretical foundation for this study, with special attention given to the role of gender differences in career research. Finally, I will review how these differences have been historically measured within vocational psychology and TWA research.

The U.S. Nursing Shortage

The United States is facing a critical shortage of RNs. Since 1960, the median age of the U.S. population has increased from 29 to 39 years, while record numbers of RNs are entering retirement (AACN, 2020). As previously mentioned, the U.S. may face a deficit of 1.2 million nurses by 2030 (U.S. Department of Health and Human Services, 2020). This shortage could have severe consequences for national healthcare, as studies have shown that higher nurse-to-patient ratios are linked to increased rates of nosocomial infections, hospital readmissions, and patient mortality (Aiken et al., 2014; Cimiotti et al., 2012; Tubbs-Cooley et al., 2013).

The COVID-19 pandemic intensified the already dire nursing crisis. With hospitals rationing care and millions of Americans sheltering in place, over 989,408 people in the United States had died from COVID-19 as of April 27, 2022 (CDC, 2022). By the spring of 2021, nurses began sharing heartbreaking stories of caring for their own sick and dying colleagues—

experiences likened to the emotional trauma faced by soldiers returning from combat or first responders after mass casualty events. In an interview with National Public Radio on September 19, 2021, Christopher Friese, a nursing professor and RN at the University of Michigan, described the harrowing reality for ICU nurses. These nurses found themselves treating colleagues who had become critically ill and admitted to the same ICUs where they once worked. They performed life-saving interventions, including resuscitations, only to face the unbearable task of contacting family members with devastating news. The emotional toll was profound, leaving lasting scars on those involved.

Additionally, concerns have grown that these events may deter future healthcare professionals, especially as the pandemic highlighted the inadequate protection offered to frontline workers (Friese, 2021). Nurses like Friese and his colleagues endured overwhelming stress in a system already burdened with severe staffing shortages before the pandemic. According to the American Association of Colleges of Nursing (AACN), "insufficient staffing is raising the stress level of nurses, impacting job satisfaction, and driving many nurses to leave the profession" (AACN, 2020). Even with efforts to offer higher wages and sign-on bonuses, the nursing shortage continues unabated.

Diversity in Nursing

In 1988, the typical nurse in the U.S. was a white woman, approximately 38 years old, and outnumbered her male counterparts by a ratio of 20:1 (HRSA, 2019). By 2019, women, mostly white, continued to dominate the nursing profession, comprising 87% of the workforce, with nearly half of them over the age of 50 (HRSA, 2019).

In contrast, male nurses have tended to be younger and more ethnically diverse than their female counterparts (Auerbach, Buerhaus, Staiger, & Skinner, 2017). Despite making up just

12.6% of the 3.3 million nurses in the U.S. workforce (U.S. Bureau of Labor Statistics, 2020), men in nursing are working in a non-traditional career, defined by the U.S. Department of Labor (2019) as a field where either men or women make up less than 25% of the workforce.

To address the nursing shortage and provide culturally relevant care to diverse populations, the nursing workforce will need to become more diverse in terms of ethnicity, age, and gender (Institute of Medicine, 2011, p. 25; World Health Organization, 2019). However, nursing has long been a female-dominated profession, with men being outnumbered by ratios ranging from 8:1 to 50:1 since the early 1970s. For decades, men have remained an untapped pool of talent that could help fill the growing demand for nurses.

Scope of Practice

The scope of practice for RNs varies across the United States, with each state defining its parameters through specific Nurse Practice Acts and Board of Nursing regulations. These differences influence how RNs deliver care, interact with patients, and collaborate with healthcare teams.

In states like Montana, Oregon, and Rhode Island, the scope of practice emphasizes comprehensive assessments, development of care plans, medication administration, and delegation of certain tasks to unlicensed personnel, provided competency and safety are ensured (Montana Board of Nursing, n.d.; Oregon State Board of Nursing, n.d.; Rhode Island Board of Nurse Registration and Nursing Education, n.d.). Similarly, Nevada and Utah align with these roles, emphasizing RN responsibilities in administering treatments and supervising nursing staff (Nevada State Board of Nursing, n.d.; Utah Board of Nursing, n.d.). In Vermont and Connecticut, the scope also includes health education and patient counseling, further supporting RNs as

integral members of the healthcare system (Vermont Board of Nursing, n.d.; Connecticut Board of Examiners for Nursing, n.d.).

In contrast, states like Tennessee and North Carolina, while granting similar foundational roles, provide more restrictive environments regarding delegation and supervisory requirements (Tennessee Board of Nursing, n.d.; North Carolina Board of Nursing, n.d.). For example, Tennessee requires explicit oversight in delegating tasks to unlicensed assistive personnel, emphasizing a structured chain of command. Wisconsin also implements regulated delegation practices, mirroring a cautious approach to ensuring task appropriateness and personnel competence (Wisconsin Board of Nursing, n.d.).

Some states highlight additional procedural responsibilities or emphasize continuing education. For example, Oregon and New Mexico mandate adherence to specific protocols for administering advanced procedures, ensuring RNs meet defined competency thresholds (Oregon State Board of Nursing, n.d.; New Mexico Board of Nursing, n.d.). South Dakota complements this approach by encouraging the use of nursing practice guidelines to maintain a high standard of care (South Dakota Board of Nursing, n.d.).

Despite these differences, commonalities exist across states. All jurisdictions authorize RNs to perform core responsibilities, including health assessments, care planning, and medication administration, underscoring the universality of foundational nursing roles (National Council of State Boards of Nursing, n.d.). However, the degree of autonomy and the specific guidelines for delegation and supervision differ, reflecting the diverse regulatory landscapes that shape nursing practice in each state.

In summary, the scope of practice for RNs reflects both uniformity in essential functions and variability in regulatory nuances. States such as Montana, Oregon, and Vermont emphasize broader autonomy and procedural responsibilities, while Tennessee, North Carolina, and Wisconsin adopt more regulated approaches. These differences underline the importance of understanding state-specific regulations to ensure compliance and optimal patient care, as well as the critical role of RNs in adapting their practice to meet varying legal and professional standards (Bryant & Stratton College, n.d.).

The Minnesota Theory of Work Adjustment

TWA emphasizes that individuals not only exist and work but also interact with their environment (Dawis & Lofquist, 1984). TWA shares similarities with Holland's vocational typology and evolved from earlier trait and factor counseling models, which, in turn, were influenced by the social reforms initiated by Frank Parsons in the early 1900s (Chartrand, 1991). Betz (2008) referred to these theories—including those of Parsons, Holland, and TWA—as "matching models," emphasizing the importance of aligning individual characteristics with work environments to improve career satisfaction and performance. TWA provides a framework for understanding how individuals and organizations align their needs, abilities, and values with a specific career. This alignment, or person-environment fit, refers to the correspondence between an individual's personal traits and the characteristics of the work environment (Dawis & Lofquist, 1994).

Dawis and Lofquist (1984) proposed that satisfactory job performance occurs when there is a match between the individual's abilities and the demands of the environment (demands–abilities fit). Similarly, job satisfaction arises when the values provided by the environment align with the individual's needs (needs–supplies fit). Ultimately, tenure, or the length of time an

individual stays in a job (Swanson & Fouad, 2015, p. 135), is viewed as the product of reciprocal satisfaction between the person and the environment. As the theory's name suggests, TWA primarily explains the process of work adjustment. It can be used to guide individuals in making vocational choices that align with the requirements of the work environment and the individual's skills and interests (Brown & Lent, 2015).

Propositions of TWA

Dawis and Lofquist (1984) formally presented the 17 propositions of TWA. The predictive model is the core of TWA and is outlined in propositions I-IX. In summary, the propositions may be paraphrased as follows:

Proposition I: *Work adjustment* is indicated by a person's *satisfaction* and *satisfactoriness*.

Proposition II: *Satisfaction* is predicted by the correspondence between *values* and *environmental reinforcers*, provided that there is correspondence between the person's *abilities* and the environment's *ability requirements*.

Corollary IIA: A person's *values* may be inferred from knowledge of their *satisfaction* and the environment's *reinforcers*.

Corollary IIB: An environment's *reinforcers* may be inferred from knowledge of a person's *values* and their *satisfaction*.

Proposition III: A person's *satisfactoriness* is predicted from the correspondence between their *abilities* and the environment's *ability requirements*, if there is also correspondence between the person's *values* and the environment's *reinforcers*.

Corollary IIIA: An environment's *ability requirements* may be inferred from knowledge of a person's *abilities* and their *satisfactoriness*.

Corollary IIIB: A person's *abilities* may be inferred from knowledge of an environment's *ability requirements* and the person's *satisfactoriness*.

Proposition IV: Prediction of a person's *satisfaction* is moderated by their *satisfactoriness*.

Proposition V: Prediction of a person's *satisfactoriness* is moderated by their *satisfaction*.

Proposition VI: The probability that a person will leave an environment is inversely related to their *satisfaction*.

Proposition VII: The probability that an environment will fire a person is inversely related to their *satisfactoriness*.

Proposition VIII: *Tenure* is predicted from a person's *satisfaction* and *satisfactoriness*.

Given propositions II, III, and VIII:

Corollary VIIIA: *Tenure* is predicted from the correspondence between a person's *values* and the environment's *reinforcers*, and the correspondence between their *abilities* and the environment's *ability requirements*.

Corollary VIIIB: *Tenure* is predicted from the correspondence between a person and their environment.

Proposition IX: *Person-environment correspondence* increases as a function of a person's *tenure*.

Proposition X: The correspondence between a person's style in the environment style moderates the prediction of the person's *satisfaction* from the correspondence between their *values* and environment's *reinforcers*, and the prediction of a person's *satisfactoriness* from the correspondence between their *abilities* and environment's *ability requirements*.

Proposition XI: *Flexibility* moderates the prediction of a person's *satisfaction* from the correspondence between their *values* and that environment's *reinforcers*.

Proposition XII: An environment's *flexibility* moderates the prediction of a person's *satisfactoriness* from the correspondence between their *abilities* and the environment's *ability requirements*.

Proposition XIII: The probability that a person will engage in *adjustment behavior* is inversely related to his or her *satisfaction*.

Corollary XIIIA: A person's *flexibility threshold* may be determined from knowledge of the probability associated with their *satisfaction*.

Proposition XIV: The probability that an environment will engage in *adjustment behavior* is inversely related to the person's *satisfactoriness*.

Corollary XIVA: An environment's *perseverance threshold* may be determined from knowledge of this probability associated with the environment's terminating a person.

Proposition XV: The probability that a person will quit an environment is inversely related to their *perseverance*.

Corollary XVA: A person's perseverance threshold may be determined from knowledge of this probability associated with their quitting the environment.

Proposition XVI: The probability that an environment will terminate the employment of an individual is inversely related to its *perseverance*.

Corollary XVIA: An environment's *perseverance threshold* may be determined from knowledge of this probability associated with the environment's terminating a person's employment.

Given propositions VIII, XV, and XVI:

Proposition XVII: A person's tenure is predicted jointly with their *satisfaction*, *satisfactoriness*, and *perseverance* and the environment's perseverance.

Challenges in Operationalizing the Theory of Work Adjustment

While Dawis and Lofquist (1984) developed a comprehensive framework, they did not address contextual factors, such as gender and career development, which have become more prominent in vocational literature in subsequent years. Moreover, the constructs presented in TWA, such as satisfaction, environment, style, and satisfactoriness, have proven difficult to operationalize and empirically measure. Defining and quantifying these constructs is a challenging task, which complicates their use in empirical research. In addition, not all studies regarding TWA, especially those performed before the inception of the internet, are easily accessed. The most comprehensive filings of TWA literature are kept in the possession of University of Minnesota (UM), where TWA was first developed. In fact, some studies—like UM's dissertations from the 1980s and early 1990s (e.g., Flint, 1980)—are especially difficult to access and must be requested directly, by name and year from UM librarians.

Applying the Theory of Work Adjustment to Nursing

The tenets of the Theory of Work Adjustment (TWA) have been instrumental in understanding contemporary work trends and the career adaptability patterns of diverse populations across various occupations (Brown & Lent, 2015). This study integrates TWA constructs—such as satisfaction, needs, work values, and reinforcers—with existing literature on non-traditional careers, nursing, and the unique dynamics of the nursing profession. It also examines the methodologies used to measure these constructs, while providing additional context by exploring nursing history, masculinities, and the positive psychology movement.

Globally, the demand for healthcare workers is rapidly increasing (World Health Organization, 2020). In the U.S., an aging population and a shrinking median working age have created a heightened need for registered nurses (RNs; U.S. Census Bureau, 2019; U.S.

Department of Health and Human Services, 2020). Despite this demand, nursing remains a female-dominated profession, with men historically comprising a gender minority in the field. Addressing gender imbalances in the workplace, Brown and Lent (2013, p. 187) emphasized the importance of leveraging untapped talent pools to tackle such challenges.

In 1970, only 2% of nurses were male, a figure that has risen to just 12.6% today (U.S. Bureau of Labor Statistics, 2020). As a result, male nurses are categorized as working in a non-traditional career, defined as one where men or women represent less than 25% of the workforce (U.S. Department of Labor, 2019). While increasing the number of men in nursing would benefit the U.S. healthcare system, it is critical that male nurses find satisfaction in their roles to meet their personal needs and ensure long-term retention in the profession.

TWA's predictive model has been extensively tested and offers valuable insights into how men can achieve satisfaction in nursing careers (Dawis & Lofquist, 1984). TWA emphasizes the alignment between an individual's abilities, personal needs, values, and reinforcers, and the demands and reinforcers of the work environment (Dawis, 2005). Building on this foundation, Eggerth (2008) reviewed the intersections of TWA, positive psychology, and person-environment-centered counseling (PEC; Dawis & Lofquist, 1984; Eggerth, 2004; Rounds, Dawis, & Lofquist, 1987). Eggerth highlighted the significant relationship between need–reinforcer correspondence and job satisfaction, which he identified as a crucial component of overall life satisfaction. Moreover, research has demonstrated that job satisfaction is closely tied to professional tenure and overall well-being (Bedeian, Ferris, & Kacmar, 1992).

The Study of Male and Female Career Development

Despite vocational psychology's advancement in knowledge of how gender impacts career development, much needs to be explored about how contextual factors contribute to

gendered occupational experiences (Fouad, et al., 2019). Over forty years ago, Fitzgerald and Crites (1980) issued a call to action for researchers to focus intently on the career development of women. Since then, there have been significant improvements in the attitudes of vocational psychologists—and society's collective awareness—regarding women's career development and occupational choices (Fouad, Whiston, & Feldwisch, 2016, p. 503). For example, many career researchers have conducted in-depth investigations that have revealed the systematic and differential filtration that persists for women in the fields of science, technology, engineering, and mathematics (STEM; Fouad, et al., 2010; Brown & Lent, 2013, p. 192; Betz, 2006, pp. 51-54). There has been, in turn, a sustained focus highlighted on institutionalized sexism and how it has limited women's equal opportunities for employment (Kantamneni, 2013).

Although these gains for women and their careers have been celebrated, within the last decade, some career scholars have raised concerns that the study of men and career is lagging (Fouad, et al., 2016, p. 503). Thus, there has been a renewed effort in vocational psychology to study men's occupational issues.

Over the past two decades, scholars have been examining the critical links between work and masculinity (Fouad, Whiston, & Feldwisch, 2016, p. 504). They are taking new and progressive perspectives on occupational segregation, gender role socialization, and the impact gender may have on the perceptions of men's career choices and work adjustment. Myriad studies have described the ways in which gender inequality has manifested, for men and women, in the form of restricted career choices, gender stereotyping, socialized gender roles, pay imbalances, and sexual harassment (Brown & Lent, 2013, pp. 194-209). Brown and Lent (2013, p. 188) pointed out that these inequities are literally affecting the health and well-being of women and men in the U.S. and beyond.

Nursing Satisfaction

Studies of RNs usually find that greater intent to leave the job is associated with younger nurses (De Gieter, Hofmans, & Pepermans, 2011; Hayes et al., 2012; Liu et al., 2011; Ma et al., 2009) and those with fewer years of tenure (De Gieter et al., 2011; Tourangeau & Cranley, 2006). RNs of color are more likely to intend to leave (Cottingham, Erickson, Diefendorff, & Bromley, 2013), whereas married RNs are less so (Liu et al., 2011). A greater number of children and younger children in the home also predict less intent to leave (Brewer et al., 2009; Hayes et al., 2012). RNs with diplomas or associate degrees have less intent to leave compared to those with bachelor's or master's degrees (Brewer et al., 2009; Tourangeau & Cranley, 2006). Experienced RNs are more likely to stay in an organization than newer nurses (Cottingham et al., 2013; Hayes et al., 2012; Liu et al., 2011; Stone et al., 2007).

Unfortunately, the nursing literature has suggested that, in general, men have a dissimilar work and academic experiences compared to their female cohorts. Male nursing students, for example, have described feeling isolated, humiliated, and discriminated against by their professors and peers (Sedgwick, Kellet, 2015; Kelly, Shoemaker and Steele, 1996). Anderson (2015) noted that many male nursing students felt pressured by their faculty and peers to undress and serve as a male patient in the clinical skills lab. Also, supervisors tailored their nursing assignments to their specific gender, and it was common to be sent out of a patient’s room because they were a man. Another study suggested that these negative feelings and experiences may derive from societal stereotypes, prejudices, and the lack of male role models in nursing (Clow, Ricciardelli, & Bartfay, 2015).

The literature highlights the importance of understanding the reasons for nurse turnover, one of which is job satisfaction. Scholars have identified a variety of factors that directly

influence job satisfaction among nurses. Maqbali (2015) conducted a literature review of 1, 500 published research papers on nurses' job satisfaction to investigate the factors that influence job satisfaction. Maqbali found that nurse's level of job satisfaction or dissatisfaction influences nurse turnover, which causes a detriment to organizations' overall productivity and financial stability. Andresen, Hansen, and Grov (2016) conducted a quantitative study, which consisted of 498 nurses and 3,714 non-nurses acquired from the Life Course, Gender and Generation survey, (LOGG), a database survey company, to investigate satisfaction with jobs, life, and their influence on intention to change jobs. Like Maqbali, Andresen et al. found that nurses' intention to change jobs relied on their satisfaction levels. The researchers also found that demographic variables correlate with job satisfaction. Andresen et al. found that demographic variables such as age, gender, number of years on the job, working shift, or income level did not demonstrate a significant correlation with job satisfaction. However, Andresen et al. found that temporary positions, "nagging" coworkers, and low satisfaction might contribute to an individual's intention to change jobs.

Buhr (2011) investigated two primary questions: first, whether male nurses receive a wage premium, and second, whether men experience a "glass escalator," rising to supervisory positions at a higher probability than women. Using data from the 2005 National Survey of the Work and Health of Nurses (NSWHN), Buhr found that male nurses who worked as registered nurses were more likely to fall into higher income brackets. Male registered psychiatric nurses demonstrated a slight but higher likelihood of holding supervisory roles, providing limited evidence for the existence of a glass escalator in Canada's nursing labor market. Christensson et al. (2010) reported on the mental health challenges faced by nursing students, noting that male students tended to report higher levels of depression compared to their female counterparts.

Despite evidence that male nurses are more privileged in some aspects of their work (i.e. higher wages and more leadership opportunities) than their female colleagues, the indication that male nursing students have higher levels of depression highlights the unique difficulties that men may experience in nursing programs. Furthermore, these findings suggest that GRS and GRCs begin for males in nursing school and may contribute to career dissatisfaction after graduation.

TWA Measurement Tools

The Minnesota Importance Questionnaire (MIQ)

Persons completing the MIQ are asked to indicate the relative importance, to them, of 21 vocationally relevant need reinforcers. Participants completing the MIQ report the importance of 21 reinforcers in their work (e.g., being recognized by management, having steady work). Gay, Weiss, Hendel, Dawis, & Lofquist (1971) found the need-reinforcer dimensions measured by the MIQ have been found to be important to job satisfaction. The 21 needs are placed into 6 value dimension subgroups derived via factor analysis. The 6 value dimensions are the following: Achievement, Comfort, Status, Altruism, Safety, and Autonomy (though these names were later changed in the O*NET tools to Achievement, Working Conditions, Recognition, Relationships, Support, and Independence—for elaboration see McCloy, Waugh, Medsker, Wall, Rivkin, and Lewis, 1999).

For clarity and consistency, throughout the remainder of the present study, I will combine some of the synonymous terms used throughout the relevant literature and refer to the above-mentioned work values thusly: *altruism/relationships, support/safety, achievement, autonomy/independence, comfort/working conditions, status/recognition.*

The first published form of the Minnesota Importance Questionnaire (MIQ)—a precursor to the Work Importance Profiler-Computer version (WIP-C)—consisted of 20 scales of five

items each. Participants were instructed to rate the importance of specific aspects of work on a 5-point Likert scale. According to Gay et al. (1971), "This form produced negatively skewed distributions of scale scores and yielded high intercorrelations among scale scores." To address these measurement shortcomings, ipsative forms of the MIQ, including a paired-comparison form and a multiple ranking form, were developed. Ipsative forms are designed to measure preferences within an individual rather than across individuals.

WIL-P&P and WIP-C

Like the MIQ, the Work Importance Locator-Pencil & Paper version (WIL-P&P) and the WIP-C have been popular career assessment tools. The WIL-P&P and WIP-C measure participants' perceived work reinforcers. Scoring formulas subsequently rank these reinforcers into six different work value categories, each corresponding to six respective scales. In alignment with the tenets of the TWA, needs and values with the highest scores contribute most significantly to a person's satisfaction. Conversely, needs and values with the lowest scores have "little or no effect upon a person's satisfaction" (Rounds et al., 1978). For example, the level of autonomy/independence inherent in a specific job will substantially affect individuals who score high on the autonomy/independence need scale, but it will have negligible effects on individuals who score low.

McCloy et. Al (1998) summarized the WIL-P&P and WIP-C scoring methods developed by Rounds et al., (1978):

> There are two sections: a ranked section and an absolute zero section. In the ranked section, stimuli are grouped into a balanced incomplete block in which each stimulus is paired with every other stimulus an equal number of times. Each block has five statements. Within each block, respondents rank-order the statements according to the relative importance of the

needs of their ideal jobs. Each need appears in five blocks and with every need exactly once. Using this format, 210 paired comparisons can be reduced to 21 blocks of five stimuli each. This format produces profiles similar to those provided using the paired-comparison form and reduces administration time and the number of judgments required of respondents.

Research Goals

To review, the aim of this study was to describe and compare the ORPs and work values of male and female nurses using the TWA framework to capture the real-life work values of male and female nurses. Also, this study intends to provide a socio-cultural reason, within the TWA framework, as to why so few males become RNs and/or report being dissatisfied with their nursing career.

There are three goals of the study:

1. Report the ORPs and mean work values endorsed by satisfied male RNs on the WIP-C.
2. Report the ORPs and mean work values endorsed by satisfied female RNs on the WIP-C.
3. Compare the ORPs and mean work values of satisfied male RNs to the mean WIP-C work values of satisfied female RNs.
4. Compare the GRCS-SF scores of satisfied male RNs to the GRCS-SF scores of dissatisfied male RNs.

Hypotheses of the Present Study

Hypothesis 1a – Satisfied male RNs, when compared to satisfied female RNs nurses, will endorse statistically different work reinforcement patterns resulting in gender based ORPs.

Hypothesis 1b - The gendered differences in work reinforcement patterns will be strongest in three work value categories: altruism/relationships, comfort/working condition, and autonomy/independence.

Hypothesis 2 – Satisfied male RNs will have lower GRCS-SF scores than dissatisfied male RN

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Chapter 3

In this section I will restate the hypotheses for the present study. Next, I will outline how I recruited participants and what criteria were used to include them in the group samples. Then, I will present an overview of the construct measurements, discuss select item questions, and relevant psychometrics. Lastly, in the analysis section, I will review the statistical procedures I have selected to test the three hypotheses.

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Procedure and Participants

Participants were recruited using a combination of online and offline methods. No compensation was offered. About 98% of the study's respondents were solicited via approximately 485,000 e-mails utilizing Qualtrics bulk e-mail feature. These e-mail addresses were provided as a matter of public record by their respective state's board of nursing or health department. Nurses included on the following twelve states' nursing registries were targeted and contacted via e-mail and asked complete the survey: Oregon, Nevada, Montana, Utah, New Mexico, South Dakota, Wisconsin, Tennessee, North Carolina, Vermont, Connecticut, and Rhode Island.

In addition, participants were solicited on The American Association of Critical Care Nurses (AACN) website and, with permission from the department's dean, the University of Wisconsin-Milwaukee's bulk e-mail list of nursing school graduates. These methods of targeted recruitment returned less than 1% of the study's total responses.

Supplementary to the online methods, participants were recruited through postings on the American Association of Critical-Care Nurses (AACN) website and, with permission from the department dean, via the University of Wisconsin-Milwaukee's (UWM) bulk email list of nursing school graduates. These efforts yielded less than 1% of the total study responses.

Other offline recruitment methods included distributing postcards, paper flyers, and signs—each featuring a unique QR code to track response attribution—which accounted for approximately 2% of respondents. Flyers were placed on public bulletin boards in community locations near the UWM campus, such as coffee shops, pharmacies, and libraries. Additionally, one hundred handwritten postcards were mailed to male registered nurses (RNs) in Wisconsin; however, mailing postcards to potential participants did not result in any responses.

Scoring the WIP-C

Once data was procured via the above methods, the participants' WIP-Cs were scored. Scoring the WIP-C is a rather complicated algorithm. The author of the present study borrowed the ORP calculation methods directly from Fouad, et. Al, (2023). To calculate participants' WIP-C results, Fouad, et. Al., (2023) employed the calculation instructions outlined in McCloy et al. (1999). The calculations can be summarized in the following steps, but this author would like to reiterate the advice of the authors of Fouad, et al. (2023) and strongly recommend future researchers consult McCloy et al. (1999) and Rounds et al. (1978) for additional detail.

The following is a simplified summary of the step-by the formula published by McCloy et al. (1999) and Rounds et al. (1978) to score the WIP-C:

Total Ranks: Add up the ranks for each of the 21 items in the WIP-C.

Convert to Votes: Use the formula: votes = 25 - total ranks.

Set the Zero Point: Each person rates the 21 needs as "Important" or "Not Important." This helps create a "zero point" to show the importance of each need. The zero point is an imaginary item placed between the highest-ranked "Not Important" and the lowest-ranked "Important." Its adjusted score is zero.

Count Votes for Zero Point: The number of votes for the zero-point equals how many items were rated as "Not Important."

Adjust Votes: Each item gets extra votes because it is compared with itself and with other items. So, if an item is never picked, it gets 0.5 votes, while an item always picked gets 20.5 votes. Now there are 22 items to compare.

Add Votes for Important Items: For items rated "Important," add one vote to their total.

Calculate Initial z-scores: Use a table to find the z-scores based on the number of votes. The z-scores show how important each item is.

Adjust z-scores: Set the zero point's z-score to zero and adjust all other items' z-scores accordingly.

Find Subscale Scores: Calculate the average scores for each of the six subscales, which reflect different work values.

Participants

The sample represented a subset of 449 participants who began the survey. Of those beginning the survey, 173 were removed from data analyses due to not completing the WIP-C.

An additional 27 respondents failed to answer the survey's three attention check questions with at least 66% accuracy. Two people did not self-identify as male nor female at the time they completed the survey ("nonbinary/two-gendered" *n = 1* and "gender queer" *n = 1*), thus they were removed from the study based on the study's binary sample construct.

The final sample resulted in 247 adult RNs (males *n = 47*; females *n = 199*; and trans female *n = 1*). The trans female participant was grouped in the female RN group due to research ethics and because doing so fulfilled the constructs of the study; therefore, the final female participant total was *n = 200*; males *n = 47*; total study participants *N = 247*.

By the end of the recruitment effort, the data collected revealed that within the sample there were 85 satisfied females, 115 dissatisfied females (*n = 114* dissatisfied females; 1 dissatisfied trans female; *n = 1*; total dissatisfied females *n = 115*), and 21 satisfied males, 26 dissatisfied males.

Of the all the adult RNs surveyed and included in the analyses (*N = 247*), the average age was 49 years and ranged from 23 to 80 years (SD= 14). The average age of all female respondents (*n = 200*) was 48.6 years and ranged from 23 to 80 years (*SD = 14*).
The average age of satisfied female respondents (*n = 85*) was 49 years and ranged from 30 to 72 years (*SD = 10.83*). The average age of dissatisfied female respondents (*n = 115*) was 50.2 and ranged from 23 to 80 years (*SD = 12.07*).

The average age of all male respondents (*n = 47*) was 48.32 and ranged from 24 to 73 years (*SD = 13.95*). The average age of satisfied male respondents (n = 21) was 44.38 and ranged from 28 to 70 years (SD = 12.95). The average age of dissatisfied male respondents (*n = 26*) was 51.5 years and ranged from 24 to 73 years (*SD = 14.16*).

Additionally, 198 of the participants self-identified as White or European American (79.2%), 23 as Asian or Asian American (12.8%), 8 as Latino/a or Hispanic (3.2%), 3 as African

American or Black (1.2%), 2 as American Indian or Alaskan Native (.8%), 2 as Native Hawaiian or Pacific Islander (.8%), and 11 self-identified as mixed race and/or with more than one specific category of race/ethnicity (4.5%), thus, the sum of the categorical percentages exceeded 100%.

In terms of relationship status, 48 people identified as single (19.4%), 161 as married or in a domestic partnership (65.2%), 28 as divorced (11.3%), 6 as widowed (2.4%), and 4 as separated (1.6%) as divorced. As for sexual orientation, 209 people identified as heterosexual/straight (84.6%), 13 as gay/lesbian (5.8%), 13 as bisexual (5.3%), 4 as asexual (1.6%), 2 as heteroflexible (.8%), 2 as pansexual (.8%)and 4 as "something else not listed here" (1.6%). Most of the participants in the sample identified as middle class. Specifically, 54 people identified as working class (21.9%), 176 of the participants identified middle class (71.3%), 16 identified as upper class (6.5%), and 1 person declined to answer (.8%).

Study Design

Independent samples *t*-tests were employed to compare the responses of satisfied male and satisfied female RNs. The following analyses were conducted:

Hypothesis 1a - Using the *z*-scores obtained from the WIP-C algorithm, independent *t*-tests were used to assess differences in

ORPs between satisfied male and satisfied female RNs.

Hypothesis 1b - Using the *z*-scores obtained from the WIP-C algorithm, separate t-tests were conducted between satisfied male and satisfied female RNs for each of the six work value categories—(1) altruism/relationships, (2) support/safety, (3) achievement, (4) autonomy/independence, (5) status/recognition, and (6) comfort/working conditions—to identify if the gendered differences in work reinforcement patterns were strongest in altruism/relationships, comfort/working condition, and autonomy/independence.

Hypothesis 2 - Independent samples *t*-tests were utilized to compare the GRCS-SF-scores (total and RABBM, RE, CBWFR, and SPC) of satisfied male RNs and dissatisfied male RNs.

Measures

Demographic Questionnaire

Within the consent and initial survey screening, participants needed to affirm that they were at least 18 years-old and worked at least one hour or more per week as an RN. At the end of the study's survey, information was collected regarding participants' age, self-identified race, ethnicity, gender, relationship status, and sexual orientation.

Work Satisfaction

Judge et al. (1998) created a five-item version of the Brayfield and Rothe (1951) Index of Job Satisfaction. This shorter satisfaction survey tool was used to measure participants' job satisfaction. Participants were asked to respond on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

The scoring of this tool is fairly straightforward. The values endorsed by a participant are summed, but questions #3 and #5 are reversed scored. Sample items included: "I feel fairly well satisfied with my present job," and "Most days, I am satisfied with my work." Several studies have used this measure and reported adequate reliability coefficients ranging from .82 to .95 (Ilies & Judge, 2003; Judge et al., 2002).

Although Judge et al., (1998) never stated specifically what cumulative score defined "satisfied", this present study's author originally intended to classify participants as "satisfied" if they endorsed average scores greater than 3 out of 5. The rationale for this was that an average of 3 out of 5 meant the worker was "neutral", while anything greater than 3 meant that the worker, if at least to some degree, was satisfied. Later, after collecting the data, this cutoff was lowered

because too few male RNs had satisfaction scores greater than 3 out of 5 (*n = 10*). Therefore, to gather an adequate satisfied male RN sample for the study, a male participant was deemed "satisfied" if their score was above the mean satisfaction score for their male peers. For female RNs, the cutoff remained 3 out of 5 as originally intended; however, for male RNs, the satisfaction cutoff was set at 2.58 out of 5. Thus, the satisfied male RN sample was slightly more than doubled (*n = 21*).

WIP-C

The WIP-C was used to gather and compare the ORPs and the six resulting categorical work values of every participant. The WIP-C is an online work values assessment tool based on the MIQ which was developed to help individuals discover what needs and values are most important to them within the workplace (McCloy, et. al., 1999).

The WIP-C, which was built on the older, pen and paper administered MIQ, is a useful instrument for measuring vocational needs and values. As previously discussed in this study's literature review, the MIQ, which was founded on TWA, has substantial evidence of reliability and construct validity. Additionally, the MIQ scales yielded sufficient stability of scores over time. Because of this, the U.S. Department of Labor wanted to adapt the MIQ to create work value measures for computer and paper testing (Dawis, 2001, p. 464).

Unlike the MIQ, the WIP-C is self-administered, and computer scored. The test taker is taken through a series of 21 screens. Each screen has five need statements, which are presented as virtual cards, with the stem, "On my ideal job it is important that...". The participant arranges the five need statements in order of their personal importance (McCloy, et. al., 1999). After the 21st screen, the respondent is asked to rate each need statement as either important or not important. This crucial step, combined with a final algorithm, is what sets the psychometric zero-

point, or an absolute zero value. Hence, each of the six work value constructs on the WIP-C are transformed from a ratio scale that ranges from -4.0 to + 4.0. The maximum range for any individual score is half of this total range. The zero point is located at the center of the range. A number that is greater than zero indicates the magnitude of importance a person places on the specific need. A number less than zero indicates the magnitude in which the person finds the specific need as unimportant (McCloy, et. al., 1999).

The internal consistency reliabilities of the six work values scales were estimated using coefficient alpha. McCloy, et. al., (1999) stated, "The moderate to high reliabilities for the WIP-C (median alpha = .76) and the MIQ (median alpha = .73) are generally somewhat lower than the ideal level of internal consistency for scales used to help individuals make decisions, but they are acceptable." The alpha values of .50 and .48, respectively, for the Altruism scale, however, are lower than desirable.

In summary, the internal consistency figures for the WIP-C scales are generally adequate, and, importantly, they parallel the MIQ internal consistency reliabilities (McCloy, et. al., 1999)." Finally, the WIP-C test-retest correlations for the individual needs were moderate, ranging from .53 to .76 with a median of .63 (McCloy, et. al., 1999).

Validity and Reliability of the WIP-C

The MIQ and WIP-C had very similar factor structures, supporting the idea that the two instruments are measuring similar constructs (McCloy, et. al., 1999). The goodness of fit indices for a six-factor model were marginal. Seven-factor models fit much better than the six-factor models for the MIQ and WIP-C. According to the authors, "…the reduction in $\chi 2$ value (1,118 - 776 = 342; 2,001 - 1,192 = 809), relative to the change in the number of degrees of freedom from

the oblique 6-factor to the empirical 7-factor model (174 - 168 = 6 for both instruments), was significant ($p < .01$)" (McCloy, et. al., 1999).

Two important conclusions can be made from the construct validity analyses. First, the MIQ and WIP-C appear to have very similar factor structures. Second, the data provide moderate support for the theoretical six -actor work values model. This suggests that the WIP-C can be substituted for the MIQ. As discussed in the literature review, certain group differences were found in testing the WIP-C. Hispanics, for example, tended to express higher value for status than did Whites. Females tended to express higher value for safety and altruism than males (McCloy, et. al., 1999).

Gender Role Conflict Scale – Short Form

If a participant identified themself as male, or trans-male, then the present study's Qualtrics survey directed them to complete the Gender Role Conflict Scale – Short Form (GRCS-SF; Wester, et al. 2012).

The GRCS-SF is a measure of negative outcomes from experiencing restricted gender roles (O'Neil, 2008, O'Neil et al., 1986; Wester & Vogel, 2012). The GRCS-SF was developed from the items of the Gender Role Conflict Scale (GRCS), which is the most used tool to measure GRCs (O'Neil et al., 1986).

The GRCS-SF requires respondents to rate their agreement with items on a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree). The GRCS-SF contains 16 items that make up four subscales: Success, Power, and Competition (SPC); Restrictive Emotionality (RE); Restrictive Affectionate Behavior Between Men (RABBM); and Conflict Between Work and Family Relations (CBWFR).

GRCS and GRCS-SF Validity and Reliability

The 16-item GRCS-SF (Wester et. Al. 2012) was based on the longer 37-item GRCS (Wester et. Al., 2012). O'Neil and Denke (2016, p. 54) noted the GRCS had "Cronbach's alpha that ranged from .75 to .85. Four-week test-retest reliabilities ranged from 72 to 86 for each factor. Also, twenty-four factor analyses have been completed on the GRCS to document its factorial validity (O'Neil, 2008, 2015), and overall, the factor analyses of the GRCS with U.S. college students and diverse samples of men living in the United States and all over the world have supported the early GRC model (O'Neil, 1981a, 1981b,1982; O'Neil et al., 1986)." Wester, et al. (2012) reported "all four GRCS-SF subscales significantly correlated with their original GRCS subscales.

Chapter 4

Data Analysis

The sample represented a subset of 449 participants who began the survey. Of those beginning the survey, 173 were removed from data analyses due to not completing the WIP-C. An additional 27 respondents failed to answer the survey's three attention check questions with at least 66% accuracy. Two people did not self-identify as male nor female at the time they completed the survey ("nonbinary/two-gendered $n = 1$ and "gender queer" $n = 1$), thus they were removed from the study based on the study's binary sample construct. The final total sample was 247 adult RNs (males $n = 47$; females $n = 199$; and trans female $n = 1$). As previously noted, the trans female participant was grouped in the female RN group due to research ethics and because doing so fulfilled the constructs of the study; therefore, the final female participant total was $n = 200$; males $n = 47$; total study participants $N = 247$.

Data Screening

The first two hypotheses (H1a and H1b) relied on the WIP-C data that was, per the WIP-C algorithm, converted to *Z*-scores. Therefore, this data was ready in terms of normality and linearity for the independent t-tests.

The third hypothesis (H2) relied on data obtained from the satisfied males ($n = 21$) and dissatisfied males ($n = 26$) who completed the GRC-SF. The data obtained from this survey were totaled (GRCS-SF Total) and grouped into the 4 categorical subsets outlined by its creators: (1) restrictive affectionate behavior between men (RABBM), (2) restrictive emotionality (RE), conflict between work and family relations (CBWFR), and success power competition (SPC). Next, these data were analyzed in SPSS (29.0) to assess normality, linearity, and to determine if outliers were present within the dataset. Graphical methods were used to determine normality for data. Histograms, normal probability plots, and residual plots were created and assessed. The

total scores from the GRCS-SF for both groups were normally distributed. However, results indicated deviations from normality in 2 of the 4 subsets of data—SPC and RE. A final test for normality and linearity was conducted using the Shapiro-Wilk test, which is a formal statistical test for normality. Again, the results indicated that the SPC and RE subsets were not normally distributed. Therefore, the plan to utilize MANOVA was abandoned and the two remaining subsets of normally distributed data—RABBM and CBWFR—were statistically analyzed using independent *t*-tests.

Research Question 1: Do satisfied male RNs endorse significantly different ORPs than satisfied female RNs?

***Hypothesis 1a* –** Satisfied male RNs, when compared to satisfied female RNs, will endorse statistically different work reinforcement patterns resulting in gender based ORPs.

Independent *t*-tests were conducted comparing **s**atisfied male RNs to satisfied female RNs using the WIP-C *z*-scores in 21 subcategories with a 95%, two-tailed confidence interval (CI) for the mean difference. It was found that the participants in the group of satisfied female RNs endorsed a statistically different mean from the group of satisfied male RNs when comparing the 3rd ORP subgroup, "Do for Others": $t(7) = 2.23$, $p = .05$. Cohen's $d = .74$, a relatively large effect.

Satisfied female RNs, when compared to satisfied male RNs, were statistically more likely to endorse higher WIP-C scores withing the 3rd ORP subgroup, "Do for Others". Therefore, hypothesis 1a was supported.

Table 1

Mean ORPs of Satisfied Male RNs and Satisfied Female RNs

Independent Samples Test

Occupational Reinforcer Patterns (ORPs)		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig	t	df	Significance		Mean Difference	Std. Error Difference	95% CI of the Difference	
						One-Sided p	Two-Sided p			Lower	Upper
BUSY	Equal variances assumed	3.45	.07	.93	104.0	.18	.36	.23	.25	-.26	.72
	Equal variances Ø assumed			1.09	39.07	.14	.28	.23	.21	-.20	.66
VARIETY	Equal variances assumed	.23	.63	1.25	104.0	.11	.21	.21	.17	-.12	.54
	Equal variances Ø assumed			1.27	31.39	.11	.21	.21	.16	-.13	.55
DO FOR OTHER	Equal variances assumed	3.72	.06	2.53	104.0	.01	.01	.46	.18	.10	.82
	Equal variances Ø assumed			2.05	25.14	.03	***.05**	.46	.22	.00	.92
DIRECT OTHER	Equal variances assumed	5.76	.02	.16	104.0	.44	.87	.03	.20	-.36	.43
	Equal variances Ø assumed			.22	49.36	.42	.83	.03	.15	-.27	.34
OWN IDEAS	Equal variances assumed	1.01	.32	.32	104.0	.37	.75	.05	.16	-.26	.36
	Equal variances Ø assumed			.29	27.86	.39	.77	.05	.17	-.30	.40
SUPPORT	Equal variances assumed	.20	.65	1.73	104.0	.04	.09	.25	.15	-.04	.54
	Equal variances Ø assumed			1.88	34.33	.03	.07	.25	.13	-.02	.52
RECOGNITION	Equal variances assumed	.48	.49	.35	104.0	.36	.72	.07	.21	-.34	.49
	Equal variances Ø assumed			.34	29.18	.37	.74	.07	.22	-.37	.52
TRY IDEAS	Equal variances assumed	.44	.51	1.00	104.0	.16	.32	.20	.20	-.20	.61
	Equal variances Ø assumed			1.02	31.32	.16	.32	.20	.20	-.20	.61
WORK ALONE	Equal variances assumed	2.36	.13	.89	104.0	.19	.37	.21	.23	-.25	.66
	Equal variances Ø assumed			1.06	39.33	.15	.30	.21	.20	-.19	.60
TRAIN WELL	Equal variances assumed	4.78	.03	-.24	104.0	.41	.81	-.04	.17	-.38	.30
	Equal variances Ø assumed			-.19	25.12	.42	.85	-.04	.21	-.47	.39
SUPERVISORS	Equal variances assumed	9.02	.00	1.58	104.0	.06	.12	.26	.16	-.07	.59
	Equal variances Ø assumed			1.13	23.09	.14	.27	.26	.23	-.22	.74
USE ABILITIES	Equal variances assumed	1.64	.20	.01	104.0	.49	.99	.00	.17	-.33	.34
	Equal variances Ø assumed			.01	26.54	.50	.99	.00	.19	-.39	.40
PRESTIGE	Equal variances assumed	.33	.57	.15	104.0	.44	.88	.04	.23	-.43	.50
	Equal variances Ø assumed			.16	31.63	.44	.88	.04	.23	-.43	.50
TREATED FAIR	Equal variances assumed	5.68	.02	-.11	104.0	.46	.91	-.02	.17	-.36	.32
	Equal variances Ø assumed			-.09	24.98	.47	.93	-.02	.21	-.46	.42
ETHICS	Equal variances assumed	1.24	.27	-.16	104.0	.44	.88	-.03	.19	-.40	.34
	Equal variances Ø assumed			-.14	27.58	.44	.89	-.03	.21	-.45	.40
GET ALONG	Equal variances assumed	.67	.42	-.11	104.0	.45	.91	-.02	.17	-.37	.33
	Equal variances Ø assumed			-.10	27.10	.46	.92	-.02	.20	-.42	.38
PAY	Equal variances assumed	1.87	.17	-.77	104.0	.22	.44	-.15	.19	-.54	.23
	Equal variances Ø assumed			-.68	26.93	.25	.50	-.15	.22	-.60	.30
CONDITIONS	Equal variances assumed	.01	.94	-.59	104.0	.28	.56	-.11	.18	-.47	.26
	Equal variances Ø assumed			-.58	29.99	.28	.57	-.11	.19	-.49	.27
OPPORTUNITY	Equal variances assumed	.02	.90	-.72	104.0	.24	.47	-.13	.19	-.50	.24
	Equal variances Ø assumed			-.70	29.76	.24	.49	-.13	.19	-.52	.26
STEADY JOB	Equal variances assumed	1.24	.27	-1.98	104.0	.03	.05	-.40	.20	-.79	.00
	Equal variances Ø assumed			-1.84	28.36	.04	.08	-.40	.21	-.84	.04
ACCOMPLISH	Equal variances assumed	.23	.63	.00	104.0	.50	1.00	.00	.22	-.43	.44
	Equal variances Ø assumed			.00	28.07	.50	1.00	.00	.24	-.49	.49

*$p = .05$

Research Question 2: Do the ORPs differ significantly in the 3 work value domains of altruism/relationships, comfort/working condition, and autonomy/independence?

Hypothesis 1b **-** The gendered differences in work reinforcement patterns will be strongest in three work value categories: altruism/relationships, comfort/working condition, and autonomy/independence.

Using the *z*-scores obtained from the WIP-C algorithm, separate independent *t*-tests were conducted between satisfied male and satisfied female RNs for each of the six work value categories: altruism/relationships, support/safety, achievement, autonomy/independence, comfort/working conditions, status/recognition — to identify if the gendered differences in work reinforcement patterns were strongest in altruism/relationships, achievement, and autonomy/independence.

It was found that the participants in the group of satisfied female RNs did not endorse statistically different means from the group of satisfied male RNs when comparing the six work value categories. Hypotheses 1b was not fully supported, but the rank order of the mean work values for the present study were different than the work values published on O*NET. The rank order for the mean work values on O*NET for nurses are listed as (1) altruism/relationships, (2) support/safety, (3) achievement, (4) autonomy/independence, (5) comfort/working conditions, (6) status/recognition; however, for the present study they were (1) support/safety, (2) achievement, (3) comfort/work conditions, (4) altruism/relationships, (5) autonomy/independence, and (6) status/recognition. Support and safety were reported as the most important for the nurses in the present study and altruism/relationships was third in the rank order of importance, not first as listed on O*NET.

Table 2

Mean Work Values of Satisfied RNs

WORK VALUE	GENDER 1= M; 2 = F	N	Mean	Std. Deviation	Std. Error Mean
ACHIEVEMENT	1.00	86	.76	.69	.07
	2.00	21	.76	.87	.19
COMFORT/WORK CONDITIONS	1.00	86	.63	.49	.05
	2.00	21	.64	.45	.10
STATUS/RECOGNITION	1.00	86	.29	.72	.08
	2.00	21	.29	.67	.15
ALTRUISM/RELATIONSHIPS	1.00	86	.64	.47	.05
	2.00	21	.59	.68	.15
SUPPORT/SAFETY	1.00	86	.86	.47	.05
	2.00	21	.79	.87	.20
AUTONOMY/INDEPENDENCE	1.00	86	.57	.59	.06
	2.00	21	.40	.59	.13

Table 2 *continued*

Mean Work Values of Satisfied Male RNs and Satisfied Female RNs

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
WIP-C Work Values		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
ACHIEVE-MENT	Equal variances assumed	1.65	.20	.01	105	.50	.99	.00	.1758	-.35	.35
	Equal variances not assumed			.01	26.40	.50	.99	<.01	.20	-.42	.42
COMFORT	Equal variances assumed	.17	.68	-.01	105	.50	.99	<-.01	.12	-.23	.23
	Equal variances not assumed			-.01	32.55	.49	.99	<-.01	.11	-.23	.22
STATUS	Equal variances assumed	.29	.59	.00	105	.50	1.00	.00	.17	-.34	.34
	Equal variances not assumed			.00	32.52	.50	1.00	.00	.17	-.34	.34
ALTRUISM	Equal variances assumed	2.40	.12	.42	105	.34	.67	.05	.13	-.20	.30
	Equal variances not assumed			.34	24.81	.37	.74	.05	.16	-.27	.38
SAFETY	Equal variances assumed	14.22	<.001	.48	105	.32	.63	.07	.14	-.21	.34
	Equal variances assumed			.34	22.91	.37	.74	.07	.20	-.34	.47
AUTONOMY	Equal variances assumed	.03	.86	1.17	105	.12	.25	.17	.14	-.12	.45
	Equal variances not assumed			1.17	30.61	.13	.25	.17	.14	-.13	.46

Research Question 3: Can males' dissatisfaction with nursing be partially explained by their reported GRCS-SF scores?

Hypothesis 2 – Satisfied male RNs will have lower GRCS-SF scores than dissatisfied male RNs.

Independent samples *t*-tests were utilized to compare the GRCS-SF-scores that were normally distributed (GRC-SF Total, RABBM, and CBWFR) of satisfied male RNs and dissatisfied male RNs using a 95%, two-tailed confidence interval (CI) for the mean difference. No significant difference was found between the satisfied male RNs' GRCS-SF total scores and the dissatisfied male RNs' GRCS-SF total scores.

Table 3

GRCS-SF Total Scores of Satisfied and Dissatisfied Male RNs

	MALE SATISFACTION 1 = YES; 2 = NO	N	Mean	Std. Deviation	Std. Error Mean
GRCSF.TOTAL	1.00	21	51.52	11.87	2.59
	2.00	26	49.27	11.27	2.21

		Levene's Test for Equality of Variances	t-test for Equality of Means									
		F	Sig.	t	df	Significance	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference			
						One-Sided p	Two-Sided p			Lower	Upper	
GRC-SF TOTAL	Equal variances assumed	.01	.92	.67	45	.254	.509	2.25	3.39	-4.56	9.07	
	Equal variances not assumed			.66	41.93	.256	.511	2.25	3.40	-4.62	9.13	

Although, it was found that the participants in the group of satisfied male RNs endorsed a statistically different mean from the group of dissatisfied male RNs when comparing the GRCS-SF subscale, CBWFR, "conflict between work and family relations": $t(2.4) = .09$, $p = .01$; contrary to expectations, no significant correlations were found between GRC subscales and male participant satisfaction scores,

Table 4

GRCS-SF Subscale Scores (RABBM and CBWFR) of Satisfied and Dissatisfied Male RNs

Independent Samples Test											
	Levene's Test for Equality of Variances	t-test for Equality of Means									
					Significance	Mean Difference					
	F	Sig.	t	df	One-Sided p	Two-Sided p	Std. Error Difference	95% Confidence Interval of the Difference	Lower	Upper	
RABBM	Equal variances assumed	.17	.68	-.77	45	.22	.45	-.86	1.12	-3.12	1.40
	Equal variances not assumed			-.78	44.70	.21	.44	-.86	1.11	-3.09	1.37
CBWFR	Equal variances assumed	3.08	.09	2.4	45	.01	.02	2.09	.89	.30	3.87
	Equal variances not assumed			2.3	36.40	***.01**	.03	2.09	.91	.24	3.94

*$p < .05$

Table 5

Correlations Between Male RN Satisfaction Scores and GRCS-SF Subscale Scores

		SATISFACTION	RABBM	RE	CBWFR	SPC	GCRS TOTAL
SATISFACTION	Pearson Correlation	1	-.04	.08	.13	.02	.08
	Sig. (2-tailed)		.78	.61	.37	.89	.61
	N	47	47	47	47	47	47
RABBM	Pearson Correlation	-.04	1	.23	.27	.35*	.70**
	Sig. (2-tailed)	.78		.12	.06	.02	<.01
	N	47	47	47	47	47	47
RE	Pearson Correlation	.08	.23	1	.40**	.22	.69**
	Sig. (2-tailed)	.61	.12		.05	.14	<.01
	N	47	47	47	47	47	47
CBWFR	Pearson Correlation	.13	.27	.40**	1	.17	.76**
	Sig. (2-tailed)	.37	.06	.01		.25	<.01
	N	47	47	47	47	47	47
SPC	Pearson Correlation	.02	.35*	.22	.17	1	.52**
	Sig. (2-tailed)	.89	.02	.14	.25		<.01
	N	47	47	47	47	47	47
GCRS TOTAL	Pearson Correlation	.08	.70**	.69**	.76**	.52**	1
	Sig. (2-tailed)	.61	<.01	<.01	<.01	<.01	
	N	47	47	47	47	47	47

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Chapter 5

Re-statement of the Problem

The U.S. is facing a critical shortage of RNs, exacerbated by an aging population and the aftermath of the COVID-19 pandemic, with an estimated 1.2 million nursing positions unfilled. While federal efforts have long aimed to encourage men to enter nursing, they still constitute a minority in the field, making up only 12.6% of the nursing workforce today, up from 2% in 1970.

Although studies on gender differences in the nursing profession have produced mixed results, recent research suggests that small but significant differences exist between male and female nurses in areas like relationships and altruism. Given that women make up 83% of the nursing workforce, these differences are especially relevant in a gender-dominated field. Despite the potential for gender-based differences in work values, traditional approaches to gender analysis in nursing tend to be one-size-fits-all and often overlook nuanced individual factors. This study aimed to compare the work values and ORPs of male and female nurses, using the TWA framework to better understand and capture the real-life work values that shape their job satisfaction and career choices.

Summary of Findings

The present study proposed the following hypotheses and research questions:

Hypothesis 1a – Satisfied male RNs, when compared to satisfied female RNs nurses, will endorse statistically different work reinforcement patterns resulting in gender based ORPs.

Hypothesis 1b - The gendered differences in work reinforcement patterns will be strongest in three work value categories: altruism/relationships, comfort/working condition, and autonomy/independence.

Hypothesis 2 – Satisfied male RNs will have lower GRCS-SF scores than dissatisfied male RNs.

Research Questions

1. Do satisfied male RNs endorse significantly different ORPs than satisfied female RNs?
2. If yes, do the ORPs differ significantly in the 3 work value domains of altruism/relationships, comfort/working condition, and autonomy/independence.
3. Can males' dissatisfaction with nursing be partially explained by their reported GRCS-SF scores?

Review of Results

Hypothesis 1a – Satisfied male RNs, when compared to satisfied female RNs nurses, will endorse statistically different work reinforcement patterns resulting in gender based ORPs.

This hypothesis was statistically supported (p=.05) with a large effect, however this finding was not impressive considering that the Altruism portion of the WIP-C has the lowest reliability of all the work values with an alpha of .50, which is lower than desirable.

Hypothesis 1b - The gendered differences in work reinforcement patterns will be strongest in three work value categories: altruism/relationships, comfort/working condition, and autonomy/independence.

It was found that the participants in the group of satisfied female RNs did not endorse statistically different means from the group of satisfied male RNs when comparing the six work value categories. Hypotheses 1b was not fully supported, however, it must be noted the rank order of the mean work values for the present study were different than the work values published on O*NET.

***Hypothesis 2* – Satisfied male RNs will have lower GRCS-SF scores than dissatisfied male RNs.**

No significant difference was observed between the GRCS-SF total scores of satisfied and dissatisfied male RNs. However, a significant difference emerged at the subscale level. Specifically, dissatisfied male RNs reported higher levels of conflict between work and family relationships (CBWFR) compared to satisfied male RNs, as evidenced by a statistically significant difference ($t(2.4) = .09$, $p = .01$). This finding indicates that dissatisfaction among male RNs may be closely associated with greater perceived struggles in balancing professional and family responsibilities. Interestingly, contrary to expectations, no significant correlations were found between GRC subscales and male participant satisfaction scores, suggesting that while work-family conflict is an important variable, it may not directly predict satisfaction in a linear manner.

Overall, the results of this study revealed a key gendered difference in the ORPs and work values of male and female registered nurses RNs, as well as the impact of gender role conflict GRC on job satisfaction among male nurses. Independent t-tests conducted comparing satisfied male RNs to satisfied female RNs revealed significant gender differences in the "Do for Others" ORP. Female RNs were statistically more likely to endorse higher scores on the "Do for Others" subcategory of the WIP-C ($t(7) = 2.23$, $p = .05$), with a Cohen's d effect size of .74, indicating a relatively large effect. This supports Hypothesis 1a, demonstrating that satisfied female RNs place greater emphasis on altruistic values in their work than their male counterparts. This finding aligns with previous research suggesting that caregiving and altruism are more

strongly associated with traditionally feminine professional values, even within the gender-diverse context of nursing.

These findings contribute to our understanding of how fit influences job satisfaction and retention in nursing. However, these results must be interpreted with consideration of the contextual regulatory environments in which the RNs practice, as state-specific scopes of practice may shape these variables significantly.

Contrary to expectations, no significant correlations were found between the Gender Role Conflict (GRC) subscales and male participant satisfaction scores. This lack of significant relationships highlights the complexity of understanding the factors influencing satisfaction among male nurses. There could be alternative explanations for satisfaction that were not specifically explored in this study, such as intrinsic motivation, perceived organizational (as opposed to managerial) support, and perceived work-life balance. Factors like these may play a larger role than GRC in shaping male nurse satisfaction. Additionally, state-specific scopes of practice could influence satisfaction by determining levels of autonomy, procedural authority, and role clarity for nurses in different regions.

Theoretical Implications

The absence of significant correlations between GRC subscales and male RN satisfaction underscores the possibility that other factors, beyond gender role conflict, may play a more substantial role in shaping job satisfaction for male nurses. While GRC remains a theoretically relevant framework, these findings suggest that its direct impact on satisfaction may be less pronounced than hypothesized. This result challenges assumptions about the centrality of GRC in influencing occupational experiences and suggests a need to explore alternative models, such as those emphasizing organizational dynamics, cognitive perceptions, or individual resilience.

State-specific scopes of practice further complicate the theoretical landscape by introducing variability in job roles and responsibilities across regions. For example, states like Oregon and Montana, which provide broad autonomy to nurses, may offer work environments that better align with professional values such as independence and decision-making. Conversely, more restrictive states like Tennessee and North Carolina may limit these opportunities, potentially dampening satisfaction for nurses who prioritize autonomy. These regulatory differences highlight the interplay between systemic and individual factors in shaping job satisfaction.

The lack of significant findings also raises questions about the interplay between cultural, professional, and personal factors in shaping job satisfaction. For example, male nurses may have developed adaptive strategies to navigate work-life balance and societal expectations, thereby mitigating the impact of GRC on their satisfaction. Additionally, workplace environments that emphasize recognition, support, and collaboration may serve as protective factors against potential stressors associated with GRC.

Methodological Implications

The challenges faced during the recruitment of male nurses for this study underscore the ongoing difficulties inherent in studying gender minorities within a traditionally gendered profession. Despite contacting hundreds of thousands of individuals through e-mail, participation remained limited—likely reflecting both the gender imbalance within the field and the broader cultural pressures faced by male nurses. This study relied heavily on the altruism of participants, many of whom were navigating work and family life in the wake of a global pandemic. It is reasonable to assume that the participants who completed the survey may have been more likely

to feel personally invested in the research topic or to possess higher-than-average levels of workplace dissatisfaction, leading to a potential selection bias.

Moreover, the geographic variability of the sample presents another methodological consideration. The reliance on public nursing registries meant that recruitment efforts were restricted to states that made this information publicly available, potentially introducing a cultural or political bias. States that value freedom of information may also differ in other important ways—such as healthcare policy, educational structures, or political ideologies—that could influence nursing experiences. This limitation highlights the importance of striving for a more balanced and representative sample in future studies.

A significant methodological concern also lies in the reliability of the WIP-C, particularly its Altruism subscale. As previously noted, the subscale's low reliability values reduce the interpretability of findings related to this construct. Although the study identified meaningful gender differences in reinforcement patterns, the limitations of this tool underscore the importance of psychometric refinement. Without reliable measurement instruments, the ability to draw precise and actionable conclusions about gender differences in vocational motivation remains limited. Future research should prioritize the development and validation of instruments that are sensitive to the nuances of gender, especially since gender constructs are sensitive to the societal shifts that occur over time.

Furthermore, the lack of significant correlations between male RN satisfaction and the GRC may indicate that the GRC subscales are not the most sensitive measures for capturing the nuanced experiences of male nurses in the context of job satisfaction. Future studies might benefit from incorporating additional constructs, such as perceived organizational support, intrinsic motivation, or team dynamics, which may better account for variations in satisfaction.

The findings suggest a need for qualitative approaches to complement quantitative analyses. Interviews or focus groups could provide deeper insights into the lived experiences of male nurses, uncovering factors that quantitative measures might overlook. Also, exploring the role of state-specific regulatory environments through mixed-methods designs could enhance our understanding of how external factors interact with individual perceptions of satisfaction.

Clinical Implications

While GRC subscales did not significantly predict satisfaction, this finding does not diminish the importance of addressing potential challenges related to GRC in the workplace. Clinical interventions should continue to focus on fostering supportive environments that recognize the unique experiences of male nurses. For example, organizations can prioritize mentorship programs, flexible scheduling, and initiatives that promote open dialogue around gender and professional identity.

Additionally, the absence of significant correlations suggests that male nurse satisfaction may be more closely tied to factors such as autonomy, professional growth opportunities, or recognition within the workplace. Tailoring interventions to enhance these aspects of the work environment could yield greater improvements in job satisfaction. Addressing state-specific regulatory barriers could help standardize opportunities for professional growth and decision-making autonomy across different regions.

Limitations

Several limitations of this study warrant discussion. The challenges of recruiting a representative sample of male nurses were significant, with participant recruitment relying heavily on altruistic engagement during a period of heightened professional stress. This reliance

likely introduced selection bias, skewing the sample toward participants who were more satisfied with their work or personally motivated to contribute to the research.

Another limitation involves the geographic and cultural diversity of the sample. The use of state nursing registries restricted recruitment to states that publicly provide such information, potentially introducing cultural or political biases. States that emphasize transparency and freedom of information may differ in their healthcare policies, workforce demographics, or cultural attitudes, all of which would influence nursing experiences.

Additionally, the variability in state-specific scopes of practice presents a significant limitation in interpreting the findings. Participants drawn from states with differing regulatory environments experienced variations in autonomy, procedural authority, and delegation rights, which likely influenced their professional experiences and satisfaction levels. For example, nurses in states with broad autonomy, such as Oregon and Montana, may have reported higher satisfaction due to alignment with their professional values, while those in restrictive states like Tennessee and North Carolina might face constraints that dampen satisfaction.

Finally, the psychometric limitations of the WIP-C, particularly its Altruism subscale, present a challenge to the interpretation of key findings. The low reliability of this subscale reduces the confidence with which we can draw conclusions about gender differences in motivational patterns. Future research should focus on refining this and similar instruments to enhance their reliability and applicability.

Implications for Future Research

Future research should aim to overcome the methodological challenges identified in this study. Offering monetary incentives, diversifying recruitment strategies, and leveraging partnerships with professional nursing organizations could help improve participation rates and

sample representativeness. Social media and digital platforms may also offer more targeted and cost-effective avenues for reaching underrepresented populations.

Psychometric research should prioritize the refinement of tools like the WIP-C to ensure greater reliability and validity. Additionally, longitudinal studies could explore the evolving dynamics of gender and vocational motivation over time, providing deeper insights into the ways in which societal shifts influence career satisfaction and retention for men in nontraditional fields. The unexpected lack of significant relationships between GRC subscales and satisfaction highlights the importance of broadening the scope of inquiry in future research. Researchers may consider integrating additional variables, such as organizational culture, leadership styles, or other occupational reinforcers that were not explored here, to provide a more comprehensive understanding of male nurse satisfaction.

State-specific scopes of practice represent another critical area for exploration. Research comparing satisfaction levels across states with varying regulatory environments could yield insights into how autonomy, procedural authority, and delegation impact nurses' perceptions of their roles. Additionally, longitudinal studies could investigate whether the relationship between GRC and satisfaction evolves over time, particularly as male nurses gain experience and develop coping mechanisms. Exploring demographic variables, such as age, marital status, or career stage, may also reveal subgroup differences that were not investigated in the current study.

Concluding Remarks

The findings of this study emphasize the multifaceted nature of job satisfaction among male nurses. While no significant correlations were observed between GRC subscales and satisfaction, this result underscores the importance of exploring a wider range of factors that contribute to satisfaction in this population. The absence of significant findings does not

diminish the value of addressing gender-specific challenges but rather calls for a broader perspective on the experiences of male nurses.

Alternative factors, such as intrinsic motivation, organizational culture, leadership styles, or other occupational reinforcers yet to be discovered, could have larger roles in shaping satisfaction. Additionally, state-specific scopes of practice, which influence autonomy and procedural authority, further highlight the importance of contextual factors. By considering these alternative explanations, researchers and practitioners can develop more nuanced interventions that address the diverse needs of male nurses.

This study contributes to the growing body of literature on male nurses by highlighting the complexity of their occupational experiences. By shifting the focus beyond GRC, researchers and practitioners can identify more impactful determinants of satisfaction, ultimately fostering a more supportive and inclusive nursing workforce. The results reinforce the need for tailored strategies that consider the diverse experiences and values of male nurses, paving the way for future research and practical interventions that promote equity and well-being in the profession.

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Appendices

Instruments Used in Study

Appendix A

Work Importance Profiler (WIP-C) Questions

McCloy, R., Waugh, G., Medsker, G., Wall, J., Rivkin, D., & Lewis, P. (1999). Development of the O* NET computerized work importance profiler. *Raleigh, NC: National Center for O* NET Development*.

1. On my ideal job, it is important that I make use of my abilities.

2. On my ideal job, it is important that the job gives me a feeling of accomplishment.

3. On my ideal job, it is important that I could be busy all the time.

4. On my ideal job, it is important that the job provides an opportunity for advancement.

5. On my ideal job, it is important that I could give directions and instructions to others.

6. On my ideal job, it is important that I would be treated fairly by the company.

7. On my ideal job, it is important that my pay would compare well with that of other workers.

8. On my ideal job, it is important that my co-workers would be easy to get along with.

9. On my ideal job, it is important that I could try out my own ideas.

10. On my ideal job, it is important that I could work alone.

11. On my ideal job, it is important that I would never be pressured to do things that go against my sense of right and wrong.

12. On my ideal job, it is important that I could receive recognition for the work I do.

13. On my ideal job, it is important that I could make decisions on my own.

14. On my ideal job, it is important that the job provides steady employment.

15. On my ideal job, it is important that I could do things for other people.

16. On my ideal job, it is important that I would be looked up to by others in my company and community.

17. On my ideal job, it is important that I have supervisors who would back up their workers with management.

18. On my ideal job, it is important that I have supervisors who train workers well.

19. On my ideal job, it is important that I could do something different every day.

20. On my ideal job, it is important that the job has good working conditions.

21. On my ideal job, it is important that I could plan my work with little supervision.

Appendix A2

Brief Job Satisfaction Survey

Judge, T. A., Heller, D., & Mount, M. K. (2002). Five factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology*, *87*, 530-541. https://doi.org/10.1037//0021-9010.87.3.530

Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, *83*(1), 17-34. https://doi.org/10.1037/0021-9010.83.1.17

The following questions ask about your overall job satisfaction. Please respond using the indicated scale:

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
I consider my job rather unpleasant	☐	☐	☐	☐	☐
I feel fairly well satisfied with my present job	☐	☐	☐	☐	☐
Most days I am enthusiastic about my work	☐	☐	☐	☐	☐
Each day of work seems like it will never end	☐	☐	☐	☐	☐
I find real enjoyment in my work	☐	☐	☐	☐	☐

Appendix A3

Gender Role Conflict Scale – Short Form (GRCS-SF)

Wester, S. R., Vogel, D. L., O'Neil, J. M., & Danforth, L. (2012). Development and evaluation of the gender role conflict scale short form (GRCS-SF). *Psychology of Men & Masculinity, 13*(2), 199–210. https://doi.org/10.1037/a0025598

Instructions:

Below are 16 statements about gender role conflict. Please indicate how much you agree or disagree with each statement by choosing the response that best reflects your feelings.

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1. I feel emotionally restricted in my relationships.	☐	☐	☐	☐	☐
2. I often feel that I must be in control of my emotions.	☐	☐	☐	☐	☐
3. I experience stress when I don't meet traditional masculine expectations.	☐	☐	☐	☐	☐
4. I feel pressure to act in ways that are typically considered "masculine."	☐	☐	☐	☐	☐
5. I worry about not living up to others' expectations of what it means to be a man.	☐	☐	☐	☐	☐
6. I find it difficult to express emotions like sadness, fear, or tenderness.	☐	☐	☐	☐	☐
7. I often feel that I have to "keep it together" and not show vulnerability.	☐	☐	☐	☐	☐
8. I feel uncomfortable when others express their emotions openly.	☐	☐	☐	☐	☐
9. I believe that showing weakness is a sign of failure.	☐	☐	☐	☐	☐
10. I find it hard to accept help from others, even when I need it.	☐	☐	☐	☐	☐
11. I feel like my masculinity is challenged when I express emotions.	☐	☐	☐	☐	☐
12. I often feel pressure to succeed in ways that are defined by traditional male roles.	☐	☐	☐	☐	☐
13. I feel that I need to prove my worth in competitive situations.	☐	☐	☐	☐	☐
14. I experience conflict between expressing emotions and fulfilling traditional masculine roles.	☐	☐	☐	☐	☐
15. I feel that I must hide or suppress feelings that are considered "feminine."	☐	☐	☐	☐	☐
16. I struggle with balancing my career ambitions with my emotional needs.	☐	☐	☐	☐	☐

Appendix A4

Demographic Questions

Instructions:
Please respond to the following demographic questions.

Gender
What is your self-identified gender?
- Female
- Male
- Non-binary / Third gender
- Transgender male
- Transgender female
- Something else not listed above (please describe in the space below)

Age
What is your age? (please mark exact age using slider bar)

Marital Status:
What is your relationship status?
- Single
- Married or in a domestic partnership
- Widowed
- Divorced
- Separated

Race/Ethnicity:
What is your race/ethnicity? (You may select all that apply)
- White
- Black or African American
- Hispanic or Latino
- Asian
- Native Hawaiian or Other Pacific Islander
- American Indian or Alaska Native
- Other (please specify in the space below)

Sexual Orientation:
What is your sexual orientation?
- Heterosexual (straight)
- Gay or Lesbian
- Bisexual
- Pansexual
- Asexual
- Queer
- Something else not listed above (please describe in the space below)