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SERIOUS LEISURE, JOB TASK LOAD, & SATISFACTION

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
Applied Psychology

by
Carson Sadler Matsick
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Accepted by:
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ABSTRACT

The study examined the relationship between degree of leisure seriousness and leisure, job, and life satisfaction, as moderated by perceived job mental workload. Serious leisure has largely been studied in reference to general life satisfaction and health outcomes, and less research exists to examine whether serious leisure participation may influence work. This study tested the following hypothesis: the relationship between serious leisure participation and employee well-being is moderated by mental workload on the job, such that a) as mental workload increases, then serious leisure participation and satisfaction will be less strongly positively correlated, and b) as mental workload decreases, then serious leisure participation and satisfaction will be more strongly positively correlated. Participants completed Gould's Serious Leisure Inventory on their most frequently pursued leisure activity, the NASA Task Load Index on characteristics of their employment and chosen activity, and the Leisure Satisfaction Scale, short form Minnesota Satisfaction Questionnaire, and the Satisfaction with Life Scale to respectively measure leisure, job, and life satisfaction. The results shed light on the conditions with which serious leisure can be pursued to enhance well-being, both to inform individuals on how to improve their health and on the nature of resources organizations ought to invest in.

Keywords: serious leisure, leisure satisfaction, job satisfaction, life satisfaction, workload, NASA task load index, work-life balance, passion

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INTRODUCTION

Work is an enduring facet of life for many people, but unfortunately, not everyone finds meaning or pleasure in their workplace. Partly in response, ongoing research on how to improve the way we feel about and approach our jobs emerged. Findings thus far show that higher employee well-being not only relates to better health and life outcomes, but also enhances the workplace environment and overall productivity of the greater organization (Sonnentag, 2015; Thompson & Bruk-Lee, 2020). Fewer of these studies, however, examine methods that lie beyond the job. At times, employees will be frustrated by an inability to implement changes in the workplace itself, such as due to insufficient organizational resources, administrative barring, or employer apathy. If work and nonwork lives interact with one another, then assessing the effectiveness of individual interventions, such as what to do with free time and how to do it, can serve practical purposes.

First, I overview the Serious Leisure Perspective (SLP), discussing the characteristics of serious leisure and the means to identify seriousness in a self-reported leisure activity. Next, I examine the constructs leisure, job, and life satisfaction, as they are presently defined, measured, and found to relate to other relevant constructs. I hypothesize that, as serious leisure participation increases, then all three of these forms of satisfaction will also increase. In addition, I discuss task load, which I anticipate moderating the relationships between serious leisure and the three forms of satisfaction. Specifically, as task load at work increases, then the impact of serious leisure participation on satisfaction will decrease. I expect this moderating impact to apply in the

same manner to all three forms of satisfaction surveyed: leisure, job, and life. Then, I incorporate a summary of work-life balance, which was not directly assessed in this study, but nonetheless bears significant associations with the variables of interest. Additionally, I review the Dualistic Model of Passion, another framework for considering the conditions and outcomes of devoted leisure participation, which shares several qualities with the SLP. Finally, I propose the present study, which will examine potential links between serious leisure participation and leisure, job, and life satisfaction, as moderated by job task load.

The Serious Leisure Perspective

The Serious Leisure Perspective (SLP) denotes a system of categorization for various forms of leisure. I use Stebbins's definition of leisure as "uncoerced, contextually framed activity engaged in during free time, which people want to do and, using their abilities and resources, actually do in either a satisfying or a fulfilling way" (2012, p. 4). Six qualities distinguish serious leisure from other forms: the occasional need for perseverance; establishing a nonwork, long-term career that offers opportunities for growth; requiring significant and specialized effort and abilities; enduring benefits, either internally, through lasting products, or both; social involvement based on the interest; and a strong identification with their pursuit (Stebbins, 2018, p. 11). Several of these qualities can be divided into further categories, which were delineated in the creation of the Serious Leisure Inventory and Measure (SLIM), a survey for assessing the seriousness of a leisure activity according to the presence of various characteristics (Gould, Moore, McGuire, & Stebbins, 2008). The quality of establishing a nonwork career was split into

career progress and career contingencies, and unique ethos was separated into group attraction, group accomplishments, group maintenance, and unique ethos itself.

Numerous categories of enduring benefits were also listed: personal enrichment, self-actualization, self-express abilities (the self-expression of one's abilities), self-express individual (the self-expression of one's individuality), self-image, self-grat-satisfaction (self-gratifying satisfaction), self-grat-enjoy (self-gratifying enjoyment), re-creation (the restorative qualities of leisure), and financial return. In addition to the three qualities which were not divided further (perseverance, effort, and identity), a total of eighteen leisure seriousness factors were specified.

Because the measure was originally designed with a Likert scale in mind, the six qualities can be understood as existing on a spectrum (Gould, 2008). In other words, leisure activities may possess various degrees of aggregate seriousness or non-seriousness, and dimensions of seriousness can also be separated into different-but-related continuums as well. A given activity largely may fall anywhere on the spectrum, although arguably, some leisure pursuits are more predisposed to seriousness than others (e.g., alpine skiing demands a higher minimum investment of resources, as opposed to going for a jog). Additionally, the seriousness of an activity need not remain constant, as the approach to and perceptions of leisure can also change (e.g., someone who used to knit twice a week becomes interested enough in a different activity to reduce their frequency of knitting to once a week).

I refer to leisure that manifests comparatively lower degrees of the six qualities of serious leisure as casual leisure. The same framework provides categories of casual

leisure in lieu of defining its own qualities, but I posit that casual leisure can also be understood as bearing the opposite qualities to serious leisure. So, casual leisure can be recognized as not requiring perseverance, not generally having enduring benefits, and so on.

Participation in serious leisure continues to be a topic of fervent research. A great deal of studies assessed those who engage in specific activities that constitute serious leisure, such as pickleball (Heo et al., 2018), Taekwondo (Kim, Heo, Lee, & Kim, 2015), ice skating (McQuarrie & Jackson, 1996), and various arts (Liu, 2014; Liu & Yu, 2015), though others have looked to a more general population as well (Heo et al., 2010; Lee & Hwang, 2018). Special populations have also been considered, such as older adults (Heo et al., 2010; Heo et al., 2018) and people with disabilities (Patterson, 1997). Overall, the existing body of research has linked serious leisure to greater health outcomes than participation in exclusively casual or no leisure at all, including in subjective well-being, leisure satisfaction, and positive affect. However, serious leisure has rarely been simultaneously considered alongside its close analogue: work. Although some consideration has been given to serious leisure as an alternative to work (Patterson, 1997), or how serious leisure and work may together relate to personal goals such as commitment to lifelong learning (Hirst & LeNavenec, 2022), little to no attention has been given to how serious leisure might specifically influence workplace outcomes, such as job satisfaction or greater performance.

Leisure Satisfaction

Definition

In the Serious Leisure Perspective section, I adopted Stebbins's view of leisure, which, again, is defined as "uncoerced, contextually framed activity engaged in during free time, which people want to do and, using their abilities and resources, actually do in either a satisfying or a fulfilling way" (2012, p. 4). However, a working definition of leisure does not provide a complete picture of leisure satisfaction. The nature of satisfaction itself lies beyond the scope of this study, but one commonly recognized definition states that leisure satisfaction is the connotation (i.e., negativity or positivity) of feelings or perceptions resulting from leisure participation (Beard & Ragheb, 1980). Therefore, leisure satisfaction is comprised of both cognitive and affective components and informed by factors beyond the activities themselves.

Measures

A variety of measures exist that assess leisure satisfaction. While some scales specifically and solely address the single construct of leisure satisfaction (Beard & Ragheb, 1980; Kuykendall et al., 2017), others measure several variables alongside (Harvio-Manila, 1971; London, Crandall, & Seals, 1977). Some studies adapt survey items from other scales, such as those which assess job (Overs et al., 1974), tourist (Lin, Wong, & Ho, 2013), or online course satisfaction (Kim, Sung, Park, & Dittmore, 2015). Regardless of the quantity of items used or the sub-dimensions of leisure satisfaction declared, however, these scales all share a crucial property: they are self-report, usually in a Likert scale format, rather than inferred from some outcome of the leisure itself. This

supports the idea that leisure satisfaction stems from internal affect or cognitive evaluation.

A particular scale of note is the Leisure Satisfaction Scale, or LSS (Beard & Ragheb, 1980). The measure conceptualizes leisure satisfaction as the aggregate of six sub-dimensions: Psychological, Educational, Social, Relaxational, Physiological, and Aesthetic. Psychological satisfaction is composed of intrinsically motivating rewards such as accomplishment, novelty, and self-expression. Educational satisfaction refers to the capacity to obtain new experiences and understanding of oneself or the world through leisurely pursuits. Social satisfaction involves meeting needs for fulfilling relationships, group identity, and opportunities to act altruistically. Relaxational satisfaction stands for the alleviation of stress through leisure. Physiological satisfaction entails the potential for leisure to facilitate physical rejuvenation and growth. Aesthetic satisfaction represents the pleasure of leisure undertaken in “beautiful and well designed” environments (pp. 22-23).

The full LSS is composed of 59, 5-point Likert scale items, which boasts an alpha reliability coefficient of .96 for the overall scale, and a range of coefficients between .85 and .92 when examining individual dimensions (Beard & Ragheb, 1980, pp. 26-27). Alternatively, a shorter version of the LSS, which uses a uniform 4 items from each dimension, also demonstrates an alpha reliability coefficient of .93 (p. 30) and support of satisfactory empirical rigor by other researchers (Di Bona, 2000; Trottier, Brown, Hobson, & Miller, 2002). Since its creation, numerous studies have employed the LSS to assess self-reported leisure satisfaction (Liu, 2014; Liu & Yu, 2015; Pearson, 1998; Stanton-Rich & Iso-Aloha, 1998).

Related Concepts

The positive correlative relationships between leisure satisfaction, job satisfaction, and quality of life have long been noted as modest but still significant (London, Crandall, & Seals, 1977). Pearson (1998) conducted a study relating job and leisure satisfaction to psychological health. Although the generalizability of his study is limited by a relatively small and homogenous (i.e., primarily white men) sample, the findings posit that, while job satisfaction alone is a stronger influencer of psychological health than leisure satisfaction alone, the two combined have the strongest predictive capacity, regardless of occupational category (i.e., blue-collar or white-collar workers). Leisure satisfaction may also relate to other important work outcomes, such as in minimizing feelings of burnout (Stanton-Rich & Iso-Ahola, 1998). A more recent meta-analysis conducted by Kuykendall, Tay, & Ng (2015) finds that engagement in leisurely activities, as mediated by satisfaction with said undertakings, bears a modest, positive relationship with subjective well-being.

With this in mind, companies are capable of making changes at the organizational level to improve employee well-being. For example, a study by Lin, Wong, & Ho (2013) focuses on “coping [resources] for frontline employees’ work-to-leisure conflict,” or leisure benefit systems (p. 178). For frontline employees, meaning those who regularly interact with customers or other people outside of the organization, leisure benefit systems may be anything from flexible or reduced work hours to vacation and holiday time off. Ultimately, the intent of these systems is to enhance leisure and other nonwork life facets to improve overall employee satisfaction. The results of this study show that

quality of life is respectively increased and decreased by satisfaction with leisure benefit systems and work-life conflicts, and that leisure benefit systems both moderate the relationship between role conflict and quality of life degradation, as well as predict leisure satisfaction and, to a lesser degree, job satisfaction (Lin, Wong, & Ho, 2013).

Job Satisfaction

Definition

What exactly job satisfaction means and what facets it can be divided into, if any, is up for debate. Generally, it is understood to relate to attitudes toward one's job, such as whether one enjoys their work or feels adequately content, accomplished, or compensated relative to the required effort (Cannas et al., 2019; Singh, 2019). One widely recognized definition posited by Locke (1976) frames job satisfaction as “a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences” (p. 1304). Considering this, job satisfaction may be divided into various sub-dimensions that intend to capture satisfaction for various aspects of work, ranging from intrinsic meaningfulness of the work itself to pay and benefits, which can also vary from job to job. For example, a measure of job satisfaction for healthcare workers may include a sub-dimension for satisfaction with relationships with patients, but this would not necessarily apply to other contexts. Job satisfaction may also be approached through either an affective or cognitive lens, or understood as an aggregate of both, respectively addressing overall feelings toward one's work or satisfaction with specific parts of a job (Cannas et al., p. 186, 2019). Irrespective of the chosen facets of job satisfaction for measurement purposes, Hulin and Judge (2003) at least stressed in an expansion of Locke's definition that job

satisfaction and its outcomes could entail cognitive, emotional, and behavioral components.

Some studies which examine the construct choose to dodge the challenge of defining job satisfaction outside of being an aggregate of the sub-dimensions employed by a given scale, framing the construct relative to other variables with pre-established relationships to job satisfaction, or even in simply presenting participants with a single item to the extent of, “How satisfied are you with your job?” (Saane, Sluiter, Verbeek, & Frings-Dresen, 2003). Some researchers also opt to create a working definition of job satisfaction according to a single related and more specific aspect of work (Cannas et al., 2019). In short, job satisfaction has no one method of being defined, in spite of the vast amount of research involving it.

Measures

Just as with creating a working definition, settling on an appropriate measure of job satisfaction remains a strong point of contention. Many scales exist, varying in transparency of wording, examining the phenomenon on a global scale or through multiple facets, and whether they are lengthily thorough or contain only a single item (Bowling, Eschelman, & Wang, 2010; Choi & Kim, 2016; Saane, Sluiter, Verbeek, & Frings-Dresen, 2003). The majority of extant job satisfaction measures rely on self-report on a Likert scale, suggesting that the construct can be assessed on a spectrum and is an internal phenomenon, which can be predicted by, but not assumed through antecedent factors, such as working conditions. Rarely, job satisfaction may instead be conflated with some contextual phenomenon, such as frequency of weekend shifts or need to work

overtime on short notice, grounded on the assumption that job satisfaction can be reliably deduced from these conditions (Cannas et al., 2019). Regardless of the chosen approach, however, not all of said scales have been tested for or demonstrate acceptable construct and content validity or reliability, despite some of them being widely employed (Saane, Sluiter, Verbeek, & Frings-Dresen, 2003).

Of the many available measures, Judge and Klinger (2008) offers particular recognition to three: The Job Descriptive Index (JDI), a heavily-supported facet-based scale (Smith, Kendall, & Hulin, 1969); the Minnesota Satisfaction Questionnaire (MSQ), which boasts multiple forms that differ in length and a global- or facet-based approach as the situation demands (Weiss, Davis, & England, 1967); and the Brayfield-Rothe Scale, a common global-based measure (Brayfield & Rothe, 1951). In their review, Judge and Klinger (2008) posit that the use of a global- or facet-based measure is not likely to significantly impact content validity, and that while multi-item measures generally perform better than single-item ones, the latter can also demonstrate acceptable validity and reliability.

Related Concepts

Theories of job satisfaction may attribute differences between individuals as the product of external circumstances (e.g., intrinsically motivating job characteristics), disposition (e.g., self-esteem and other self-evaluative characteristics), or both, and findings presented by Judge and Klinger (2008) suggest that these theories are not necessarily mutually exclusive. Regardless, several workplace outcomes beneficial to a greater organization positively correlate to high job satisfaction, such as higher job

performance, decreased absenteeism, burnout, and turnover rates and intention, and increased organizational commitment, especially in high-stress occupations (Choi & Kim, 2016; Judge, Thoresen, Bono, & Patton, 2001). Organizations may be tempted to assume that job satisfaction is a product of individual characteristics, and thus beyond the scope of any intervention. To an extent, at least the former is true. Traits such as generalized self-efficacy, internal locus of control, emotional stability, self-esteem, and low neuroticism all appear predictive of both job satisfaction and performance (Judge & Bono, 2001). However, research in high-stress occupations demonstrate that organizational interventions targeting intrinsic motivation can significantly improve satisfaction and mitigate unwanted consequences such as high turnover and burnout (Niskala et al., 2020). Of course, providing acceptable working conditions and contexts, such as adequate pay, reasonable hours, and resources available to employees also generate higher levels of job satisfaction. So, although personality partly predicts job satisfaction, hygiene factors and interventions influenced by good management strategies can also ensure continued employee happiness and morale.

Individuals may also enjoy a wide range of benefits related to higher job satisfaction, such as increased life satisfaction, high positive and low negative affect, greater overall happiness, and enhanced global well-being (Bowling, Eschleman, & Wang, 2010). In fact, job satisfaction appears to be a better predictor of psychological well-being than leisure satisfaction (Rice, Near, & Hunt, 1980; Pearson, 1998; Cannas et al. 2019). A happy worker not only appears to be a better worker, but also a happier person in general.

Life Satisfaction

Definition

While the term satisfaction may compel one to assume that life satisfaction to be an affective phenomenon, well-being researchers generally understand the construct as rooted in cognition. To clarify, one prevailing view specifies life satisfaction as a judgmental, or thinking facet of subjective well-being (Diener, Emmons, Larsen, & Griffin, 1985). While some authors use the phrases life satisfaction and subjective well-being interchangeably (Eid & Larsen (eds.), 2008), the former view suggests that subjective well-being would also have to do with affect, whereas life satisfaction does not. One recurring, specific definition by Shin and Johnson (1978) states that life satisfaction is “a global assessment of a person's quality of life according to [their] chosen criteria” (p. 478). In other words, the standards and perceptions upon which a judgment of life satisfaction is made depends upon the individual. However, more specific theories differ as to how exactly individual differences play a role when assessing their overall satisfaction with life. They could be bottom-up, meaning that people consider various situational factors or domains of life that they personally deem important to them to reach a sum score of satisfaction, or they could be top-down, meaning that some people are naturally and consistently predisposed to report higher life satisfaction than others (Bialowolski & Weziak-Bialowolska, 2020). Perhaps life satisfaction is influenced by both personally important external factors and enduring disposition. So, while the view of life satisfaction as subjective and determined via

conscious thought is widely recognized, which and to what degree certain factors influence an individual's judgement remains a relevant research frontier.

Measures

Similar to leisure and job satisfaction, life satisfaction is generally recognized to be an internal phenomenon, and therefore is best captured through measures of self-report. Even within this constraint, however, a variety of scales exist. Some are composed of a single item, while others have multiple, and some gauge life satisfaction at the global level, while others consider overall satisfaction to be the sum of various domains (Rice, Near, & Hunt, 1980). Current findings are mixed as to whether single-item measures boast similar reliability to multi-item measures, while still retaining their increased convenience: research comparing the reliability of single-item measures in general found them wanting compared to multi-item measures in general (Lucas & Donnellan, 2012), although there are also isolated studies which designed single-item measures and found comparable empirical adequacy to certain multi-item ones (Cheung & Lucas, 2014; Jovanović & Lazić, 2018). Regardless, the majority of recognized measures employ a Likert scale for their items.

The most commonly utilized measure of life satisfaction is the Satisfaction with Life Scale, or SWLS (Diener, Emmons, Larsen, & Griffin, 1985). Since its creation, the scale has dominated the field of research, although alternatives such as the Riverside Life Satisfaction Scale (RLSS) have been proposed in the interest of increasing construct validity (Margolis, Schwitzgebel, Ozer, & Lyubomirsky, 2019), along with scales such as the Students' Life Satisfaction Scale (SLSS), which are tailored to specific sub-

populations or contexts (Huebner, 1991). The SWLS consists of five items on a seven-point Likert scale: the perception that one has an ideal life, that their life conditions are excellent, that they are satisfied, that their life is fulfilling, and the degree to which they would keep their life the same if able to live it again (Diener, Emmons, Larsen, & Griffin, 1985). The measure demonstrated acceptable validity and reliability during its pilot surveys, a position which has since been reinforced through the myriad studies employing the SWLS (Pavot & Diener, 2008).

Related Concepts

The relationship between life and job satisfaction demonstrates unexpected ambiguity, at least in earlier research. Again, Rice, Near, and Hunt (1980) distinguish three categories of work-nonwork interaction hypotheses: Spillover, where satisfaction in one role positively correlates with satisfaction in the other; Compensation, where people seek rewards or experiences in one role due to a deficit of opportunity to achieve them in the other; and Segmentation, where no significant relationship between work and nonwork roles exist. Although the studies reviewed project findings most in favor of the Spillover Hypothesis, the link between job and life satisfaction was more modest than the researchers expected.

More recent research, however, suggests positive correlative relationships between high positive affect, low negative affect, job satisfaction, life satisfaction, and self-reported happiness (Bowling, Eschleman, & Wang, 2010). One possible explanation is that a stronger causal relationship from well-being to job satisfaction was found than in the other way around, whereas Rice, Near, and Hunt (1980) focused solely on the latter

causality (Bowling, Eschleman, & Wang, 2010). Therefore, it may be possible that greater well-being can lead to greater job satisfaction, whereas whether the reverse is true remains a point of contention. Speculatively, sociocultural changes over the decades may have strengthened the relationship; perhaps with innovations in mass communication and shifting workplace climate and expectations, it becomes harder to leave work behind in the workplace, so to speak, and so how we feel about our jobs can more deeply affect how we feel about our lives as a whole. A second speculation is that the measures and variables specified in research may have changed over time, and that these new scales or conceptual definitions might build upon the knowledge and correct the weaknesses of older measures, and so are better able to accurately assess real life conditions. As of now, no readily accessible research has directly posited these questions, so future study would be required to support or debunk any of these explanations.

Nevertheless, life and work satisfaction appear to share a reciprocal relationship, though not necessarily a balanced one. A longitudinal study by Weziak-Bialowolska et al. (2020) indicates that happiness and satisfaction within and outside of the workplace bear a reciprocal causal link to one another, although the life domains more strongly influence work domains than the other way around, in accord with Bowling, Eschleman, and Wang's 2010 meta-analysis. Interestingly, however, the authors note that the relationships appear weaker in what few longitudinal studies have been conducted than through cross-sectional research.

Task Load

Definition

As with several other variables described above, workload can colloquially mean many different things to different people, and so it may be unsurprising that various working definitions and measures for the construct exist. For decades, however, more of these scales that have emerged than not tap into subjective, self-report ratings, which arguably are better at accounting for individual differences or the context through which a given goal is completed (Hart & Staveland, 1988). Various factors, such as quantity and difficulty of individual tasks maintained, can also cause changes in one or the other between subjective workload and performance, suggesting that these constructs are fundamentally different and should not be treated interchangeably (Yei-Yu & Wickens, 1988). Some examples to help illustrate include relatively easy tasks being performed well but have a higher mental load on some days than others, such as because one slept poorly the night before; or because one performs an increasingly difficult job at a stable level, until it becomes so difficult that they lower their performance standards from then on (Moray, 1982; Tulga, 1978). Naturally, these scales can disagree on how to best capture the full construct, or what underlying definition of workload drives their creation.

Another difficulty in determining a majority consensus of definition lies in that, while subjective workload should not be conflated with performance outcomes, other names appear in the literature that may be similar or interchangeable constructs: mental workload, task load, mental load, and subjective mental load, to name a few. The lack of common language adds an additional layer of confusion in efficiently and accurately

assessing the state of relevant research. However, if we are to move forward with the understanding that subjective workload is, indeed, truly subjective, and so cannot be ascertained by assessing the task at hand without the environmental and performing individual context, then one possible definition is “that [it] represents the cost incurred by a human operator to achieve a particular level of performance” (Hart & Staveland, 1988, p. 140). Costs can be understood as the expenditure of various resources, some more directly observable than others, including effort invested, physical fatigue, or psychological wear. Again, not only would the nature of the task contribute to how these costs manifest, but also the individual performing the work and their current state, environmental contexts, circumstances in which the work is imposed upon the individual, and so forth. Essentially, those which take the position against a task-centered approach to defining workload posit that minding only the imposed work itself is reductive.

Measures

Multiple scales, including the NASA Task Load Index (NASA-TLX), the Overall Workload (OW) scale, the Cooper-Harper scale, and the Subjective Workload Assessment Technique, are available, and though they vary in their contextual strengths and weaknesses, there are several measures which have demonstrated acceptable empirical rigor (Hill et al., 1992). For several examples: factor and principal component analyses demonstrated the NASA-TLX to be the consistently most sensitive, followed by the OW; the NASA-TLX was most well-received and rated highly with participant face validity, but the OW was seen as the easiest to complete; and the NASA-TLX generally took the most time to fill out, whereas the OW took the least. The Cooper-Harper scale

and Subjective Workload Assessment Technique fell in the middle across each of these indices (pp. 437-438). Despite these variations, however, the authors conclude that each scale was acceptable in distinguishing between levels of self-reported workload, and so which one ought to be selected for a particular project may be up to the discretion and needs of the researcher.

Measures of subjective workload can also be subject to differences in results depending on the context or length of delay between task or shift completion and assessment, and there can also be disagreement in how to weigh or aggregate individual item scores to determine an overall workload score (Moroney, Biers, & Eggemeir, 1995). It may come as no surprise, then, that different available scales tend to demonstrate poor convergent validity, not just across survey measures, but also between subjective (e.g., self-report) and objective (e.g., physiological) assessment tools (Matthews, De Winter, & Hancock, 2020). This point raises several questions, such as to what degree different individuals understand workload as tapping into different phenomena and so are not reporting the same manner of experiences, whether each scale taken apart from the others is measuring the same construct, or even if the construct of workload might not have been born from a singular, latent variable from the start. At the time of writing, this remains a point of contention, and so individual researchers must take care to acknowledge the potential limitations of whichever measures they might harness.

Arguably the most commonly used and widely applied subjective workload scale is the NASA-TLX, which purports to assess the self-reported mental workload of one or more given tasks, as divided into six subdimensions: mental demand; physical demand;

temporal demand, or the urgency of completion; performance, or self-reported success at the task; effort; and frustration, or interferences with successful task completion (Hart, 1986). Evidence shows that the nature of the task being assessed cannot fully explain score variances between participants reporting on the same activity, suggesting that the NASA-TLX demonstrates sensitivity to individual differences (Grier, 2015). The pilot studies used to craft the NASA-TLX were primarily composed of aviators participating in premade tasks or flight simulations, who would later rate their experienced workload demands. Particularly in recent years, however, the NASA-TLX has not only seen regular use outside of the laboratory, but also application in a wider variety of contexts, such as in healthcare, the military, and operation of machines ranging from remotely controlled vehicles to personal cellphones (Hart, 2006, p. 906). While originally designed to measure activities in isolated or artificial environments, the measure eventually began to see use for increasingly complex, interdependent groups of tasks, such as live surgical procedures (Zheng et al., 2012). Other recent studies also applied the NASA-TLX or a modified form beyond assessing a single instance of performance, instead looking at overall workload in a longer time frame, such as nurses assessing the demands of their shifts as a whole (Tubbs-Cooley, Mara, Carle, & Gurses, 2018). The administration of the NASA-TLX has also gone beyond the original paper-and-pencil method, with digital surveys and even entire programs having sprung up over the years (Cao, Chintamani, Pandya, & Ellis, 2009). Although not all researchers agree as to whether self-reports would be the same between paper and digital distribution methods, employment of the

latter means has nonetheless proliferated with the rise of virtual research sampling and execution (Noyes & Bruneau, 2007).

With time, the NASA-TLX branched out with numerous versions and means of data analysis. Most commonly, some researchers argue against the original application of differing weights to each dimension when producing an aggregate score, instead favoring the use of unweighted raw scores, or even disregarding the usefulness of creating an overall score at all (Galy, Paxion, & Berthelon, 2018; Hart, 2006). A sizable fraction of studies using the scale added to, removed, renamed, or otherwise modified its six dimensions in order to improve relevance to the job or situational factors at hand, though this has not been the case for every application. Given the trend of diversifying contexts for which the scale is employed, I posit that the NASA-TLX could reasonably assess subjective workload in various occupations considered as a whole, a means which has already been employed at least at a company-wide level (Díaz Ramiro, Rubio Valdehita, Martín García, & Luceño Moreno, 2010).

Considering the versatility of applications for the measure, I will attempt to employ the NASA-TLX to assess serious leisure participation as well. Naturally, the sub-dimensions of the serious leisure framework and its standard SLIM for assessment do not cleanly line up with the NASA-TLX items. However, I argue that the convergent validity of certain facets between the scales is still worth at least a cursory examination: for example, both the SLIM and NASA-TLX have an effort dimension, and perseverance in the SLIM may relate to frustration in the NASA-TLX. Previous research involving the serious leisure framework has touched upon how a serious leisure career may show

similar characteristics to work career approaches, but whether the capacity for work and workload measures to intermix with leisure measures without sacrificing significant validity or reliability has yet to be given much attention, if any (McQuarrie & Jackson, 1996). Depending on these results, the question of whether and how people approach the non-work commitment of serious leisure as they would their job could warrant further study.

Related Concepts

The concept of task load and drain can be operationalized in several ways, such as workload, job strain, or stress, and so the exact nature of how task load associates with various employee outcomes may not be as concise as desired. However, studies indicate a negative relationship between work demands and inter-role harmony, and physical and psychological well-being, among others, and that job complexity positively correlates with strain, albeit moderated by individual emotional stability and autonomy (Bowling, Alarcon, Bragg, & Hartman, 2015; Li, Burch, & Lee, 2017). Overall, current data implicates that more demanding and complicated jobs generally lead to more negative outcomes in well-being and performance.

Work-Life Balance

People often seek meaning in leisure or other nonwork life domains, but responsibilities or self-driven experiences can cause conflicts with work. Due to the many possible sources of role conflicts, the work-life, work-leisure, or work-family balance is a multi-faceted construct, such as through being measured as both engagement within and conflict between roles (Sirgy & Lee, 2018).

Theory on the relationship between work and nonwork life facets can be understood with three classes of hypotheses: Spillover, Compensation, and Segmentation (Rice, Near, & Hunt, 1980). The Spillover Hypothesis suggests a direct relationship, such that outcomes in either domain influence the other. For example, a person who loves their job or had a good day at work would be more likely to report higher overall life satisfaction. The Compensation Hypothesis posits an inverse correlation, reasoning that people seek positive experiences in one domain because of dissatisfaction in the other. Forms of compensation can be further divided into two categories: Supplementary and Reactionary (Kando & Summers, 1971; Pearson, 1998). Supplementary compensation is at play when leisure or other life facets become a source of obtaining positive experiences or meeting needs unavailable at work. For example, a person who feels intellectually unstimulated at their clerical job may challenge themselves to learn a new language in their free time. Reactionary compensation occurs when leisure or other life facets are used to mitigate negative work experiences, such as when a person watches light-hearted cartoons to reduce their stress after working at a customer service job. Finally, the Segmentation Hypothesis posits that our work and nonwork lives and their respective outcomes are largely unrelated.

The Spillover Hypothesis proves the most generative in terms of empirical support. Existing research demonstrates that scoring high on both dimensions of work-life balance are related to a variety of work and nonwork outcomes, including high job, life, and leisure satisfaction, as well as physiological and psychological health outcomes, all of which bear relation to employee well-being (Sirgy & Lee, 2018, p. 236). On the

opposite end, work-leisure conflicts negatively predict not only satisfaction in both life facets, but also physical and psychological health outcomes (Gisler et al., 2018; Tsaur & Yen, 2018). Demographic variables such as gender and age can play a role in the strength of the relationship, but the statistical significance of this reciprocity holds over time and irrespective of said moderators (Bialowolski & Weziak-Bialowolska, 2020).

Much less research exists in support of the Compensation and Segmentation hypotheses, but they have not been entirely forgotten. For example, a study by Rode and Near (2005) controlling for demographic variables and work and nonwork conditions found a surprisingly weak relationship between work and life attitudes. At a surface level, this would imply evidence in favor of the Segmentation hypothesis, although in answering to the monumental number of findings relating work and life satisfaction, the authors suggest an indirect relationship via working conditions. In other words, people who report either better working or living conditions are more likely to indicate higher levels in the other as well, and that these conditions ultimately influence satisfaction.

At the conceptual level, people may undertake all manner of cognitive or behavioral approaches to achieve the highest possible satisfaction, including by compartmentalizing, compensating for, or relating different life domains (Lee & Sirgy, 2017). Just as the means of striving for optimal satisfaction and work-life balance can vary, so might the model used to explain the relationship between job and life satisfaction for each individual. Findings assessed by Judge and Watanabe (1994) posit that a significant minority of people report a negative or negligible relationship between the two forms of satisfaction, respectively pointing toward the Compensation and Segmentation

hypotheses. Specifically, 68%, 20%, and 12% of workers they surveyed reported a Spillover, Segmentation, and Compensation relationship between job and life satisfaction. As a result, they urge that even if the Spillover hypothesis bears the most empirical fruit, simply discarding alternative lenses through which to understand work-life balance would also strip researchers of a more complete understanding on how different satisfaction domains might influence one another. A future avenue of research could inquire into how individual differences and external factors impact the relationship between job and life satisfaction domains, such as self-reported satisfaction, which the present study intends to address.

The Dualistic Model of Passion

Not all voluntary activity necessarily benefits the partaker. One framework through which to illustrate is the dualistic model of passion, which divides motivation for participation in desirable and self-valued activity into harmonious and obsessive forms (Vallerand et al., 2003). Across different categories of activity, the two forms can be distinguished as respectively encompassing strongly desired but autonomous activity engagement, and an uncontrollable need to participate for some benefit or another. Each can lead to its own set of outcomes, as well. For example, harmonious passion generally leads to higher outcomes in life satisfaction and activity valuing, while obsessive passion generally leads to higher outcomes in rumination and work-life conflict (Marsh et al., 2013).

This is not to suggest that the dualistic model of passion and the Serious Leisure Framework could justifiably be conflated, but in the case of the former, the

individualized nature of approaching self-imposed activity consistently means the difference between healthy and ambivalent outcomes, in addition to correlating with different forms of varying healthy emotion regulation strategies (Fuster et al., 2014; Lafrenière et al., 2009; Orosz et al., 2018; St-Louis et al., 2020). In other words, activity undertaken at one's leisure does not necessarily lead to beneficial outcomes, at least exclusively, and so the question arises as to whether serious leisure may also harm the devotee when undertaken in excess.

The qualities that Vallerand (2017) presents of passion as being perceived as meaningful, accompanied by strong identification, and resulting in the investment of large quantities of time do closely overlap with serious leisure, which, again, is marked by perseverance, even in the face of setback or frustration; growth opportunities; requiring specialized knowledge or effort; enduring benefits; social involvement; and strong identification (p. 149; Stebbins, 2018, p. 11). Considering this overlap, it is possible to treat passion and serious leisure as parallel constructs, and indeed, they appear to confer similar benefits as compared to those who do not participate in either; however, unlike the dualistic model of passion, the serious leisure framework fails to account for the nature of approaching the activity in question, which can be adaptive and overtly beneficial, or maladaptive and ambivalently beneficial (Mills, 2019).

The Current Study

In summary, many of the discussed concepts, such as degree of leisure seriousness; job, leisure, and life satisfaction; and workload are all considered subjective experiences, and so self-report remains the most common means of assessment. Although

the link between leisure seriousness with leisure and life satisfaction has been previously addressed, in addition to the potential relationships between different domains of satisfaction, the question of whether the theoretical connection between leisure seriousness and job satisfaction would be statistically significant has yet to be posed, much less when considering workload as a potential moderating variable. For this study, I presented the following hypotheses:

Serious leisure participation has been linked to higher leisure satisfaction (Kim et al., 2015; Heo, 2010; Heo et al., 2018; Lee & Hwang, 2017; Liu, 2014; Liu & Yu, 2015). Due to the spillover effect which applies for the majority of people surveyed in previous research, leisure satisfaction also positively correlates with higher life and job satisfaction (Bowling, Eschleman, & Wang, 2010; London, Crandall, & Seals, 1977; Rice, Near, & Hunt, 1980; Weziak-Bialowolska et al., 2020). The first set of hypotheses, as follows, intended to confirm whether these findings hold for the study sample:

H1a: Serious leisure participation is positively correlated with job satisfaction.

H1b: Serious leisure participation is positively correlated with leisure satisfaction.

H1c: Serious leisure participation is positively correlated with life satisfaction.

For this study, I speculated that, while serious leisure has been consistently found as positively influential, the degree of benefits conferred may depend upon how demanding one's work is perceived. An employee who finds their job to be menial and mentally unchallenging may obtain greater benefit from serious leisure, which is characterized by such qualities as demanding the development and application of specialized effort and abilities, or maintaining a long-term career of growth opportunities.

This idea could be supplemented by the compensation hypothesis as well, which suggests that people might wish to seek fulfillment or intellectual stimulation in one life satisfaction domain (e.g., leisure) when they fail to find it in another (e.g., work) (Kando & Summers, 1971; Pearson, 1998; Rice, Near, & Hunt, 1980). Thus, the next set of hypotheses is as follows:

H2a: Subjective job workload moderates the relationship between serious leisure participation and job satisfaction such that, as subjective job workload increases, the magnitude of the positive correlation between serious leisure participation and job satisfaction weakens.

H2b: Subjective job workload moderates the relationship between serious leisure participation and leisure satisfaction such that, as subjective job workload increases, the magnitude of the positive correlation between serious leisure participation and leisure satisfaction weakens.

H2c: Subjective job workload moderates the relationship between serious leisure participation and life satisfaction such that, as subjective job workload increases, the magnitude of the positive correlation between serious leisure participation and life satisfaction weakens.

Finally, because serious leisure is partly defined for its establishment of a non-work “career” for long-term investment of effort, persistence in the face of frustration, and potential for development opportunities, serious leisure participation as measured by the SLIM could theoretically draw parallels to job or workload measures, which attempt to gauge the perceived intensity of work. Thus, it may be possible that certain dimensions

of serious leisure can align with portions of job measures, and to tailor assessments meant for workplace or simulated tasks to tap into the properties of leisurely pursuits. So, the third set of hypotheses is as follows:

H3a: The Serious Leisure Inventory and Measure (SLIM) and NASA Task Load Index (NASA-TLX) bear convergent validity in limited respects when assessing leisure activities, such that items measuring the dimension of Effort in the SLIM will positively correlate with ratings of the dimension Effort in the NASA-TLX.

H3b: The Serious Leisure Inventory and Measure (SLIM) and NASA Task Load Index (NASA-TLX) bear convergent validity in limited respects when assessing leisure activities, such that items measuring the dimension of Perseverance in the SLIM will positively correlate with ratings of the dimension Frustration in the NASA-TLX.

METHOD

Participants

Initially, 449 adults aged 18 and over and employed in a full-time position were sampled for this study. Invitation of recruitment was administered via MTurk. All participants provided informed consent prior to beginning the study and were told that they may withdraw their participation at any time without penalty or the use of their responses for research purposes. As compensation, \$3.75 USD was distributed to participants upon their completion of the study.

Of particular note, the Fair Labor Standards Act does not specify the conditions of what constitutes full-time employment (United States, 2011). Therefore, participants

were expected to report their employment status as full-time or not full-time based on their employer's labeling their position as such.

Of the 449 responses initially collected, 146 responses were removed for failing to follow instructions (e.g., did not list leisure activities when prompted, provided a distinct fourth leisure activity when asked to pick from one of three previously given, provided an incoherent response when asked to summarize what the survey was about at its end). Additionally, 40 respondents were removed for not being a full-time employee, 18 responses were discarded for being duplicates, and 4 respondents did not complete the survey in full. This left 241 participants for data analysis, 80 women and 162 men (mean age = 35.01 years, SD = 9.46 years).

Materials

To assess serious leisure participation, two measures were employed: the short form Serious Leisure Inventory and Measure (SLIM), and the NASA Task Load Index (NASA-TLX) modified for the purposes of this study (Gould, Moore, McGuire, & Stebbins, 2008, Appendix A; Hart, 1986, Appendix B). The short form SLIM consists of 54 items on a nine-point Likert scale of agreement, with prompts such as "If I encounter obstacles in _____, I persist until I overcome them" and "I feel renewed after _____". After listing their three favorite leisure activities, participants were asked to pick the one that they believe best fits a colloquial definition of leisure seriousness, and answered all subsequent prompts according to the one activity they chose. Agreement ratings were translated into numerical values and summed across sub-dimensions or the whole measure to create aggregate intensity of serious leisure participation. The NASA-TLX

measures the requirements of a job or task according to six stated dimensions: mental demand; physical demand; temporal demand, or the urgency of completion; performance, or self-reported success at the task; effort; and frustration. Example prompts include “How mentally demanding was the chosen leisure activity?” and “How successful were you in accomplishing what you wanted to do?”. Participants were asked to report the perceived demands of their chosen leisure activity in an average week, using 21-point Likert scales. Of note, the weighting process of the original NASA-TLX was not used here, instead opting for a modification known as the Raw TLX (RTLX), which has been applied for its comparative ease of administration and scores interpretation, as well as purportedly having neither consistently greater nor lesser sensitivity than the standard NASA-TLX (Hart, 2006).

To assess leisure satisfaction, the short form Leisure Satisfaction Scale (LSS) was employed (Beard & Ragheb, 1980, Appendix C). The short version of the scale uses 24 items distributed equally across six general domains of life satisfaction, with each using a five-point Likert scale. Items include prompts such as “My leisure activities give me a sense of accomplishment” and “My leisure activities help me to learn about myself”. None of the items selected by Beard and Ragheb for the short form are reverse-coded, and so higher numerical values suggest higher levels of life satisfaction.

To assess job satisfaction, the short form Minnesota Satisfaction Questionnaire (MSQ) was used (Weiss, Dawis, England, & Lofquist, 1967, Appendix D). The measure contains 20 items designed to assess various aspects of one’s job, with participants indicating satisfaction for each item on a five-point Likert scale. Examples of prompts to

consider satisfaction include “The chance to do different things from time to time” and “The working conditions”. An aggregate job satisfaction score was obtained by translating and summing the five possible responses as numerical values, with higher scores indicating greater satisfaction.

To assess life satisfaction, the Satisfaction with Life Scale (SWLS) was employed (Diener, Emmons, Larsen, & Griffin, 1985, Appendix E). The measure includes five Likert items on a seven-point scale and assess cognitive evaluations of how ideal, fulfilling, or otherwise desirable the conditions of one’s life are. Examples of prompts include “In most ways my life is close to my ideal” and “If I could live my life over, I would change almost nothing”. The five reported numerical values were summed, with higher scores indicating greater satisfaction.

To assess job demands, the modified NASA Task Load Index (NASA-TLX) was employed a second time (Hart, S. G., 1986, Appendix B). Participants were asked to report the perceived demands of their job in an average week. Example prompts include “How mentally demanding was the job?” and “How successful were you in accomplishing what you were asked to do?”. Again, the Raw TLX (RTLX) format was used here and the weighting process of the original NASA-TLX eliminated entirely, as with its use as an alternative measure for leisure activity qualities.

To assess correlations between the Effort dimensions of the NASA-TLX and SLIM, as well as the Frustration dimension of the NASA-TLX and the Perseverance dimension of the SLIM, responses to specific items were evaluated separately. Specifically, scores of the three items in the Perseverance and Effort sections of the

SLIM were separately summed and respectively compared to scores on the one item Frustration and Effort section of the NASA-TLX, as tailored toward the participant's chosen leisure activity (Appendix A; Appendix B).

All measures were distributed via Qualtrics survey. Gender, age, and status as a caregiver or enrollment in an education program were be collected, although these factors do not constitute the primary research question. In addition, an open-ended question concerning how participants allot their time in an average week was posed. Although other studies have opted to pose the same question in terms of an average day, asking to report on an entire week helped account for schedule variances between workdays and free days. Finally, several questions were asked pertaining to satisfaction with work-life balance and available resources with which to engage in leisure activities (Appendix F).

Procedure

Data was collected from the sample via Qualtrics, with an invitation to the survey given through MTurk. Again, participants were asked to provide informed consent, informed that their responses will have any identifying information removed prior to aggregating and analyzing the survey data, and that they may exit at any time if they wished for their responses to not be recorded.

Data Analysis

The study is a cross-sectional correlative design, with degree of leisure seriousness; job, leisure, and life satisfaction; and job workload as the core variables. In addition, response scores to the Effort and Perseverance dimensions of the SLIM, and Effort and Frustration dimensions of the NASA-TLX, were isolated for additional

analysis. Data was cleaned for insufficiently complete responses, and any participants who identified themselves as not currently possessing full-time employment. Aggregate data was fitted to conduct eight Pearson's correlations. H1a-c was tested using three simple linear regression models: one apiece for job, leisure, and life satisfaction against serious leisure as measured by the SLIM, which offer a standard and simple means of examining potential correlations between only two variables. H2a-c was tested using three multiple regression analyses instead, which is a necessary step above simple linear regression in order to simultaneously consider the potential effects of a moderator on a correlational relationship: one apiece for the H1a-c models, with subjective workload as measured by the NASA-TLX incorporated. Finally, H3a-b was tested using another two simple linear regression models: one to test Perseverance ratings in the SLIM with Frustration ratings in the NASA-TLX, and one to test Effort ratings in the SLIM with Effort ratings in the NASA-TLX.

RESULTS

Descriptive statistics for variables relevant to the hypotheses are provided in Table 1.

To test H1a-c, that serious leisure participation was positively correlated to leisure satisfaction, life satisfaction, and leisure satisfaction, three simple correlations were used. All three hypotheses were supported. Serious leisure participation and leisure satisfaction with the chosen activity were found to be positively correlated, $r(239) = .48, p < .001$. Serious leisure participation was also found to be positively correlated with job satisfaction, $r(239) = .41, p < .001$. Additionally, serious leisure participation was found

to be positively correlated with life satisfaction, $r(239) = .26, p < .001$.

To test H2a, that serious leisure participation and job demands significantly predicted leisure satisfaction, a multiple regression analysis was used. The results indicated that serious leisure and job demands explained 23.7% of the variance in leisure satisfaction ($R^2 = .24, F(2, 238) = 36.89, p < .001$). A main effect of serious leisure significantly predicted leisure satisfaction ($\beta = .12, p < .001$), but not a main effect of job demands ($\beta = .09, p = .067$). No significant interaction between serious leisure and leisure satisfaction was found ($\beta < .01, p = .249, \text{Figure 1}$). Thus, H2a was not supported.

To test H2b, that serious leisure participation and job demands significantly predicted job satisfaction, a multiple regression analysis was used. The results indicated that serious leisure and job demands explained 17.3% of the variance in job satisfaction ($R^2 = .17, F(2, 238) = 24.85, p < .001$). A main effect of serious leisure significantly predicted job satisfaction ($\beta = .09, p < .001$), but not a main effect of job demands ($\beta = -.05, p = .268$). Serious leisure and job demands significantly interacted to predict job satisfaction ($\beta < .01, p = .002, \text{Figure 2}$). Specifically, as job demands increase, then the effect of serious leisure participation on job satisfaction is more pronounced. Those with higher job demands reported significantly lower job satisfaction in the absence of serious leisure participation, whereas those who did report higher levels of serious leisure participation also indicated significantly higher job satisfaction. In contrast, for those who reported lower levels of job demands, the impact of serious leisure participation on job satisfaction was less impactful. Thus, H2b is only partially supported.

To test H2c, that serious leisure participation and job demands significantly predicted life satisfaction, a multiple regression analysis was used. The results indicated that serious leisure and job demands explained 7.0% of the variance in life satisfaction ($R^2 = .07$, $F(2, 238) = 8.97$, $p < .001$). A main effect of serious leisure significantly predicted life satisfaction ($\beta = .03$, $p < .001$), but not a main effect of job demands ($\beta = -.01$, $p = .586$). Serious leisure and job demands significantly interacted to predict life satisfaction ($\beta < .01$, $p = .006$, Figure 3). The appearance of the interaction effect of job demands on serious leisure and life satisfaction is similar to that on job satisfaction. Specifically, as job demands increase, then the effect of serious leisure participation on life satisfaction is more pronounced. Those with higher job demands reported significantly lower life satisfaction in the absence of serious leisure participation, whereas those who did report higher levels of serious leisure participation also indicated significantly higher life satisfaction. In contrast, for those who reported lower levels of job demands, the impact of serious leisure participation on life satisfaction was less impactful. Thus, H2c is also only partially supported.

To test H3a-b, that responses to items in the Effort and Perseverance sections of the SLIM correlate, respectively, to the Effort and Frustration dimensions of the NASA-TLX, two simple correlations were used. Responses to items corresponding to the Effort dimension in the Serious Leisure Inventory and Measure (SLIM) were found to be positively correlated with responses to the Effort sub-scale in the NASA Task Load Index (NASA-TLX), $r(239) = .43$, $p < .001$. However, responses to items corresponding to the Perseverance dimension the SLIM were not significantly correlated with responses to the

Frustration sub-scale in the NASA-TLX, $r(239) = -.12$, $p = 0.57$. Thus, H3a is supported, but H3b is not.

A post hoc mean split analysis was conducted to determine if levels of serious leisure participation and leisure, job, and life satisfaction differed for those with higher or lower job demands. Participants were split into two conditions, depending on whether their job demands were above or below the average reported rating of 12.39 out of 21, and assessed for statistically significant differences in serious leisure participation and leisure, job, and life satisfaction via four independent samples *t*-tests. The tests for differences were non-significant for leisure satisfaction ($p = .051$), job satisfaction ($p = .877$), and life satisfaction ($p = .811$). However, for serious leisure participation, those with higher job demands ($M = 7.17$, $SD = 1.10$) than lower job demands ($M = 6.77$, $SD = 1.20$) reported higher presence of serious leisure characteristics in their chosen activity, $t(239) = 2.71$, $p = .007$.

DISCUSSION

Findings were in support of all three H1 hypotheses. Participants who rated their chosen leisure activity as being more serious according to the Serious Leisure Inventory and Measure (SLIM) generally also reported higher leisure, job, and life satisfaction, respectively according to the Leisure Satisfaction Scale (LSS), Minnesota Satisfaction Questionnaire (MSQ), and Satisfaction with Life Scale (SWLS). While a correlational design cannot posit the directionality of their relationship, this study supports the current body of literature that serious leisure engagement seems related to higher levels of satisfaction in various life domains, in addition to other benefits to psychological well-

being (Heo et al., 2010; Heo et al., 2018; Kim, Heo, Lee, & Kim, 2015; Lee & Hwang, 2018; Liu, 2014; Liu & Yu, 2015).

Findings were not in support of H2a. Ratings of job demands as collected through a raw version of the NASA Task Load Index (NASA-TLX) did not significantly impact the relationship found between SLIM responses with LSS responses. Two possible explanations arise for this: the first, that the NASA-TLX as it was administered was inappropriate to adequately capture the construct of job demands; and the second, that job demands simply do not play into the serious leisure-satisfaction relationships examined. To my knowledge, this is the first study examining a potential relationship between serious leisure and job aspects, and so it may not be possible to confidently determine the accuracy of either claim at this time.

Only partial support was found for H2b and H2c, which state that ratings of job demands impact the relationships found between serious leisure and, respectively, job satisfaction and life satisfaction. In both cases, although a main effect of job demands was non-significant, an interaction effect suggests that higher levels of reported job demands intensified the predictive potential of serious leisure engagement on both job and life satisfaction. So, rather than the magnitude of a positive correlative effect weakening because of higher job demands, higher job demands appeared to both make higher serious leisure engagement more predictive of higher job and life satisfaction, but also make lower serious leisure engagement more predictive of lower job and life satisfaction. In other words, people who have demanding jobs may find greater

satisfaction in both their work and lives by also engaging in serious leisure, whereas those with demanding jobs who do not may have especially lower satisfaction, compared to people who do not have demanding jobs. Depending on the directionality of this relationship, it is possible that serious leisure serves as a protective factor against dissatisfaction caused by strenuous job demands. However, this may be the first study that examines how job factors may influence serious leisure outcomes, and so no previously established explanations can be presented in response to these interaction effects.

Findings were in support of H3a, but not H3b. Items addressing the Effort and Perseverance facets of serious leisure in the SLIM were compared, respectively, to the Effort and Frustration items of a raw version of the NASA-TLX posed in regards to demands of the chosen leisure activity. Generally, those who reported a higher level of Effort required for their leisure activity in the SLIM also reported a higher level of Effort required in the NASA-TLX. However, responses in the Perseverance section of the SLIM did not appear significantly related to Frustration responses in the NASA-TLX. The study design and available data are insufficient to reasonably discuss how these relationships are reflective of the underlying constructs that the scales attempt to tap into, and whether the two measures are assessing the same Effort and Perseverance-Frustration constructs or not, but merely how responses in one facet might correlate to responses in another. Again, to my knowledge, this is the first study that applied a form of the NASA-TLX to general perceptions of leisure, rather than for an isolated task, set of tasks, or job, and so the relationships between scale facets indicated by this study are speculative at best.

Several limitations and future directions arise. The most forefront is that, as a correlational study, no statements of causality can be made. For example, with serious leisure engagement and leisure satisfaction being related, this study cannot make a case as to which may cause the other, or if there is a reciprocal causal relationship, or if other variables are responsible for their correlation in participant responses. The same limitation also applies to any of the interaction effects examined in the H2 hypotheses. Job demands may not actually moderate the relationship between serious leisure participation and satisfaction, but could also simultaneously influence them both, or be influenced in turn. While a correlational design is helpful in confirming the existence of relationships with minimal potential complications from manipulation, an experimental or longitudinal design would help to clarify the nature of how these variables are connected.

Second is that participants were recruited via Amazon MTurk. Gathering responses from one specific site begs the question of whether the data is truly representative of the general population, or if certain individual differences not examined by the research hypotheses influence the relationships between serious leisure, job demands, and domains of satisfaction. In addition, a substantial portion of the data was removed from subsequent analyses due to reasons such as failure to follow directions, suspected bot respondents, and so forth. In short, methods of collecting samples with guarantees of response quality and higher generalizability to the larger population ought to be considered for follow-up research.

Third is that, to my knowledge, this is the first study that specifically examined the potential relationship between serious leisure engagement and job satisfaction. While it is intriguing that there is a correlational connection, the directionality of their relationship remains unclear. It may be possible that serious leisure participation directly causes job satisfaction, that being satisfied on the job compels a person to seek out more serious leisure experiences, that life satisfaction or some other variable mediates their relationship, or that a previously unconsidered variable such as satisfaction with personal achievements simultaneously influences both serious leisure participation and job satisfaction. Additionally, many other characteristics of work that could be considered, such as hours worked per week, organizational commitment, among others, were not accounted for in the research hypotheses. Future research may wish to examine this relationship in greater detail.

Fourth is that the effect of overall disposition, if any, was not assessed by this study. Enduring characteristics such as self-esteem and emotional stability have previously shown significant predictive potential for job satisfaction and performance, and theories surrounding these outcomes may attribute individual variations as at least partly due to disposition (Judge & Bono, 2001; Judge & Klinger, 2008). Similarly, perhaps some people derive greater value from serious leisure engagement than others due to differences unrelated to their work or environment. Research which considers what constructs of well-being or personality play a significant role in how people participate in and benefit from leisure, particularly serious leisure, could substantially broaden our understanding of the serious leisure-satisfaction relationship.

Fifth, the psychological functions of leisure benefit were not explored in this study. For example, people with less stimulating or demanding jobs may engage in leisure in order to find fulfillment in another life domain to make up for what they are not receiving from the workplace, such as theorized in compensatory hypotheses of work-life balance (Kando & Summers, 1971; Pearson, 1998; Rice, Near, & Hunt, 1980). In contrast, people that may already find this sort of fulfillment in more stimulating or demanding jobs might engage in leisure to derive some other benefit, such as stress release or socialization. Serious leisure, the workplace, and time off in general can all confer different benefits in different contexts, or depending on how people approach them. So, one possible avenue for future inquiry could explore how work or leisure scales might better differentiate between what ways people derive value from various life domains, and how these individual differences can in turn affect the serious leisure-satisfaction relationships explored by this study.

Sixth is that, according to the post hoc mean split analysis, those with higher job demands may also be more engaged in leisure activities with serious qualities. Possibly, more demanding jobs may yield more resources with which to participate in non-work activities requiring certain levels of commitment and investment, or perhaps people who seek out more intensive jobs may also be more interested in the additional demands of serious leisure. Additional research could explore what characteristics of people or their circumstances would motivate serious leisure participation.

In conclusion, the study supports the prior findings that serious leisure engagement is related to higher levels of leisure and life satisfaction, but as a correlational design, does not have the data necessary to contribute to causal explanations behind these relationships. While it cannot explain underlying reasons, the study also uniquely adds that the relationship between serious leisure and job satisfaction also appears to be significant, even if the two variables, at face, would not seem to be connected. The findings also suggest that this relationship may hold regardless of the degree of demands people report on the job. Finally, the study suggests that, even if certain sub-scales of the SLIM and NASA-TLX seem similar, respondents will not necessarily answer them in similar ways. Altogether, the research contributes to the larger body of literature on the relationships between and outcomes of serious leisure engagement, and what other variables may contribute to or help explain this connection, while also opening the floor for further study on how serious leisure participation may be related to workplace outcomes.

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APPENDICES

Appendix A

54 Item Serious Leisure Inventory and Measure (SLIM)

Perseverance

1. If I encounter obstacles in _____, I persist until I overcome them.
2. By persevering, I have overcome adversity in _____.
3. I overcome difficulties in _____ by being persistent.

Effort

1. I try hard to become more competent in _____.
2. I practice to improve my skills in _____.
3. I am willing to exert considerable effort to be more proficient at _____.

Career Progress

1. I have improved at _____ since I began participating.
2. Since I began _____, I have improved.
3. I feel that I have more progress in _____.

Career Contingencies

1. For me, there are certain _____ related events that have influenced my _____ involvement.
2. There are defining moments within _____ that have significantly shaped my involvement in it.
3. There have been certain high or low points for me in _____ that have defined how involved I am in _____.

Personal Enrichment

1. I have been enriched by _____.
2. _____ has added richness to my life.
3. My _____ experiences have added richness to my life.

Self-Actualization

1. I make full use of my talent when _____.
2. I reach my potential in _____.
3. _____ has enabled me to realize my potentials.

Self-Express Abilities

1. _____ is a way to display my skills and abilities.
2. I demonstrate my skills and abilities when _____.
3. My knowledge of _____ is evidence when participating.

Self-Express Individual

1. _____ for me is an expression of myself.
2. My individuality is expressed in _____.
3. _____ allows me to express who I am.

Self-Image

1. My image of self has improved since I began _____.
2. _____ has enhanced my self image.
3. _____ has improved how I think about myself.

Self-Grat-Satisfaction

1. _____ provides me with a profound sense of satisfaction.

2. My _____ experiences are deeply gratifying.
3. _____ is intensely gratifying to me.

Self-Grat-Enjoy

1. _____ is enjoyable to me.
2. _____ is fun to me.
3. I enjoy _____.

Re-creation

1. I feel renewed after _____ time.
2. I feel revitalized after _____ time.
3. _____ is invigorating to me.

Financial Return

1. Financially, I have benefited from my _____ involvement.
2. I have received financial payment as a result of my _____ efforts.
3. I have received monetary compensation for my _____ expertise.

Group Attraction

1. I enjoy interacting with other _____ enthusiasts.
2. I value interacting with others that are also involved in _____.
3. I prefer associating with others that are devoted to _____.

Group Accomplishments

1. A sense of group accomplishment is important to me in _____.
2. Having helped my _____ group accomplish something makes me feel important.
3. I feel important when I am a part of my _____ group's accomplishments.

Group Maintenance

1. The development of my _____ group is important to me.
2. I contribute to the unification of my _____ group.
3. It is important that I perform duties which unify my _____ group.

Unique Ethos

1. I share many of the sentiments of my fellow _____ devotees.
2. Other _____ enthusiasts and I share many of the same ideals.
3. I share many of my _____ group's ideals.

Identity

1. Others that know me understand that _____ is a part of who I am.
2. I am often recognized as one devoted to _____.
3. Others recognize that I identify with _____.

Note: From publication by Gould, Moore, McGuire, & Stebbins (2008).

Appendix B

NASA Task Load Index (NASA-TLX), modified

1. Mental Demand: How mentally demanding is the (job / chosen leisure activity)?
2. Physical Demand: How physically demanding is the (job / chosen leisure activity)?
3. Temporal Demand: How rushed or hurried is the pace of the (job / chosen leisure activity)?
4. Performance: How successful are you in accomplishing what you (are asked / want) to do?
5. Effort: How hard do you have to work to accomplish your level of performance?
6. Frustration: How insecure, discouraged, irritated, stressed, and annoyed do you become?

Note: Modified from publication by Hart (1986).

Appendix C

24 Item Leisure Satisfaction Scale (LSS)

Psychological

1. My leisure activities are very interesting to me.
2. My leisure activities give me self-confidence.
3. My leisure activities give me a sense of accomplishment.
4. I use many different skills and abilities in my leisure activities.

Educational

1. My leisure activities increase my knowledge about things around me.
2. My leisure activities provide opportunities to try new things.
3. My leisure activities help me to learn about myself.
4. My leisure activities help me to learn about other people.

Social

1. I have social interactions with others through leisure activities.
2. My leisure activities have helped me to develop close relationships with others.
3. The people I meet in my leisure activities are friendly.
4. I associate with people in my free time who enjoy doing leisure activities a great deal.

Relaxation

1. My leisure activities help me to relax.
2. My leisure activities help relieve stress.
3. My leisure activities contribute to my emotional well being.

4. I engage in leisure activities simply because I like doing them.

Physiological

1. My leisure activities are physically challenging.
2. I do leisure activities which develop my physical fitness.
3. I do leisure activities which restore me physically.
4. My leisure activities help me to stay healthy.

Aesthetic

1. The areas or places where I engage in my leisure activities are fresh and clean.
2. The areas or places where I engage in my leisure activities are interesting.
3. The areas or places where I engage in my leisure activities are beautiful.
4. The areas or places where I engage in my leisure activities are well designed.

Note: From publication by Beard & Ragheb (1980).

Appendix D

20 Item Minnesota Satisfaction Questionnaire (MSQ)

On my present job, this is how I feel about...

1. Being able to keep busy all the time
2. The chance to work alone on the job
3. The chance to do different things from time to time
4. The chance to be “somebody” in the community
5. The way my boss handles their workers
6. The competence of my supervisor in making decisions
7. Being able to do things that don’t go against my conscience
8. The way my job provides for steady employment
9. The chance to do things for other people
10. The chance to tell people what to do
11. The chance to do something that makes use of my abilities
12. The way company policies are put into practice
13. My pay and the amount of work I do
14. The chances for advancement on this job
15. The freedom to use my own judgment
16. The chance to try my own methods of doing the job
17. The working conditions
18. The way my co-workers get along with each other
19. The praise I get for doing a good job

20. The feeling of accomplishment I get from the job

Note: From publication by Weiss, Dawis, England, & Lofquist (1967).

Appendix E

Satisfaction with Life Scale (SWLS)

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far, I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

Note: From publication by Diener, Emmons, Larsen, & Griffin (1985).

Appendix F

Other Questions

What is your gender?

What is your age?

What is your employment status?

Are you enrolled in an education program?

Are you a caregiver for one or more other people (children, the elderly, etc.)?

On a typical week, how many hours do you spend on the following:

1. Work
2. Leisure
3. Self-Care (eating, hygiene, etc.)
4. Caring for Another (children, the elderly, etc.)
5. Sleep

On the whole, I am satisfied with the amount of time I spend engaging in different activities (work, leisure, etc.).

In a typical week, what percent of your leisure time do you devote to your one chosen activity?

How much time does it typically take to engage in your favorite leisure activity or activities?

I have the finances to engage in my chosen leisure activity as much as I want.

I feel that other demands interfere with my ability to engage in my favorite leisure activities.

I am satisfied with the amount of time I can spend engaging in my favorite leisure activities.

Table 1**Descriptive Statistics**

Variable	Mean	Std. Dev.	Cronbach's α
Serious Leisure (1 – 9 scale)	6.97	1.17	.97
Leisure Satisfaction (1 – 5 scale)	3.66	0.66	.88
Job Satisfaction (1 – 5 scale)	3.82	0.66	.92
Life Satisfaction (1 – 7 scale)	5.02	1.35	.88
Job Demands (1 – 21 scale)	12.39	3.23	.70
S. L. Effort (1 – 9 scale)	7.16	1.52	.80
NASA-TLX Effort (1 – 21 scale)	13.05	5.13	
S. L. Perseverance (1 – 9 scale)	7.06	1.49	.76
NASA-TLX Frustration (1 – 21 scale)	6.32	5.13	

Figure 1

Changes in Leisure Satisfaction as a Function of Serious Leisure and Job Demands

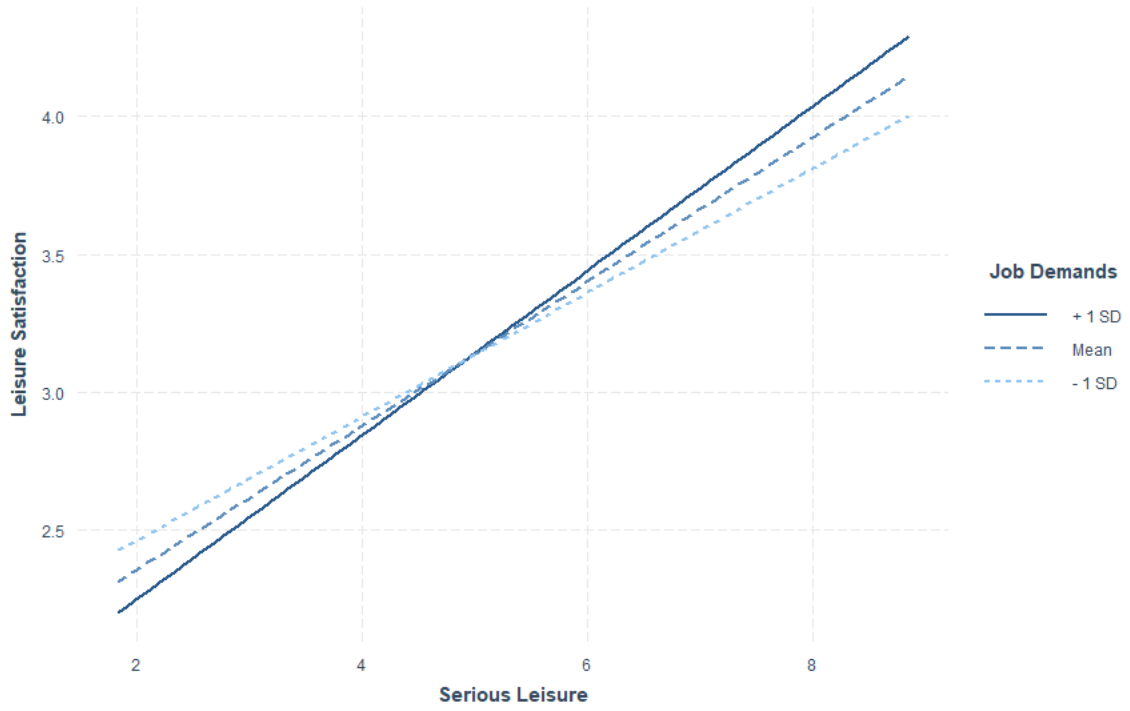


Figure 2

Changes in Job Satisfaction as a Function of Serious Leisure and Job Demands

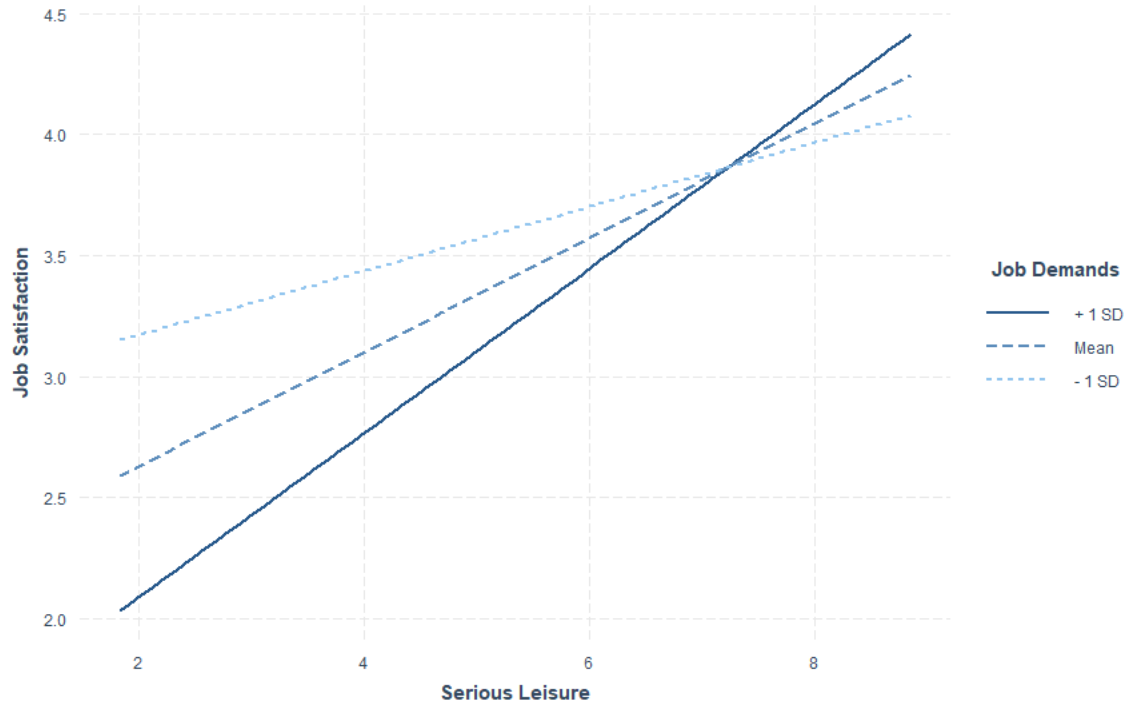


Figure 3

Changes in Life Satisfaction as a Function of Serious Leisure and Job Demands

