

The Importance of Leisure for Subjective Well-Being

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Abstract:

This chapter reviews what is known about how leisure contributes to subjective well-being (SWB). We review evidence documenting the importance of leisure for SWB and point to psychological need fulfillment as the main mechanism through which leisure promotes well-being. We discuss why individuals often do not fully experience the beneficial effects of leisure, focusing on intrapersonal, interpersonal, and structural constraints to leisure participation, and review differences in the degree and type of constraints experienced by different demographic groups. Finally, we review research on the cognitive and behavioral strategies individuals employ to overcome leisure constraints, and highlight the need to understand how societal and institutional policies influence leisure participation and quality. Throughout, we identify important questions for future research.

Keywords: Leisure, Subjective well-being, Leisure constraints

The role leisure plays in facilitating well-being is a timeless topic. For many, leisure has been regarded as essential for a satisfying life. The ancient Greek philosopher Aristotle wrote about the centrality of leisure for a satisfying life, emphasizing that—unlike work—leisure activities are particularly worthwhile because they are done for their own sake (trans. 1980). Echoing these ideas, the 19th to 20th century playwright George Bernard Shaw (1971) commented that “leisure...is not idleness. It is not even a luxury: it is a necessity, and a necessity of first importance.” More recently, the German philosopher Josef Pieper—in his critique of the culture of overwork and busyness (1952)—celebrated leisure as an essential element of a happy life and a necessary escape from the busyness of the working world. Yet, for others, leisure is regarded as an aspect of life that must be sacrificed to achieve higher, more useful ends or as a luxury that must be forgone until retirement.

On balance, however, people do value leisure and to consider it important for a satisfying life. In fact, in a recently nationally representative survey of the U.S., 43% of working adults said that leisure is very important to their lives—a number slightly greater than the 38% who considered work very important to their lives (World Values Survey, 2016). Yet, while people value leisure and while leisure is an ideal context for engaging in activities to promote well-being, people often do not use their leisure to engage in the types of activities that are most conducive to promoting well-being. In fact, recent U.S. nationally representative time use data showed that people spend over 50% of their free time watching television—an activity that is likely very limited in its potential for psychological need fulfillment—and very little time pursuing activities that are likely to fulfill a wider range of social needs such as social activities (13% of free time) and sports (6% of free time; Bureau of Labor Statistics, 2017). Together, these features of leisure—that it is commonly highly valued for a satisfying life yet seemingly not commonly utilized to promote well-being—bring it to the forefront as a domain that is potentially very important for promoting individual and societal well-being (Kuykendall, Tay, & Ng, 2015).

With these broader issues in mind, the current chapter reviews the psychological literature on the role leisure plays in promoting well-being. First, we define leisure and important aspects of leisure (i.e., leisure engagement, leisure satisfaction). Then, drawing on bottom-up perspectives on SWB, we explain whether and when leisure satisfaction contributes to SWB and review the available evidence. Next, we

introduce psychological need fulfillment as the main mechanism through which leisure influences SWB, focusing on evidence that leisure promotes SWB when leisure activities fulfill a broad range of psychological needs and when leisure is used to compensate for needs and values that are unmet by other life domains. Following the evidence for the role leisure plays in facilitating SWB, we then discuss what is known about the intrapersonal, interpersonal, and structural constraints that prevent people from engaging in and experiencing high-quality leisure, the constraints that are experienced by specific demographic groups, and the processes through which people attempt to overcome those constraints. In each section, we identify important questions for future research.

Defining Leisure

In conceptualizing leisure, researchers distinguish between leisure engagement (also called leisure participation) and leisure satisfaction. Leisure engagement refers to the extent to which people participate in leisure and is measured based on time spent in leisure or the breadth and/or frequency of participation in leisure activities. Within measures of leisure engagement, researchers distinguish between *residual* definitions and *experiential* definitions of leisure (Haworth & Veal, 2004). Residual definitions define leisure as all activities other than paid work or other obligatory activities. In contrast, experiential definitions of leisure define leisure based on characteristic experiential features. The experiential approach is exemplified in Neulinger's (1981) work on pure leisure, which defines pure leisure as activities that are freely chosen and intrinsically motivated. Leisure satisfaction refers to the degree to which individuals derive enjoyment or satisfaction from their leisure activities.

Why Leisure Influences Well-Being

Bottom-up models of well-being have been commonly used to explain how and when leisure influences SWB. Bottom-up models posit that individuals judge their overall life satisfaction based on their satisfaction in specific life domains, with the greatest weight given to the most valued domains. While the bottom-up mechanism is not the only mechanism linking domain satisfaction to SWB, it has been supported by a wide range of empirical findings (see Schimmack, 2008 for a review) and specifically as applied to leisure with meta-analytic findings on the relationship between leisure satisfaction and subjective well-being (Kuykendall et al., 2015). In the bottom-up model, leisure satisfaction (rather than leisure engagement) most proximally influences SWB, with leisure engagement being an important antecedent of leisure satisfaction (Kuykendall et al., 2015; Newman, Tay, & Diener, 2014).

Evidence for bottom-up effects of leisure on SWB. This bottom-up account suggests that improving the satisfaction with leisure is important for improving overall SWB. Supporting this prediction, a recent meta-analysis of experimental studies showed that interventions targeting the quality of leisure experiences improves SWB, providing further support for bottom-up mechanisms as applied to leisure, albeit limited generalizability, as the samples were largely older adults (Kuykendall et al., 2015).

In addition to directly influencing well-being, leisure experiences can also indirectly impact well-being through bottom-up mechanisms by affecting satisfaction with other domains (e.g., job satisfaction, family satisfaction). The few rigorous studies that have examined this mechanism have provided initial support for this mechanism for some types of leisure engagement. For instance, in a short-term (two-week) longitudinal study of Canadian university employees, Hecht & Boies (2009) found that volunteering (but not sports activities or membership in nonwork organizations) was associated with increased job satisfaction, career satisfaction, and life satisfaction. One study has also shown positive effects of volunteering on work-domain well-being. In a two-week daily diary study of working adults, Mojza, Sonnentag, & Bornemann (2011) found that the amount of time spent volunteering was associated with lower levels of negative affect (but not positive affect) during the following workday.

One longitudinal study has also examined how leisure experiences impact marital satisfaction. Crawford, Jackson, & Godbey (1991) used a 13-year longitudinal study to examine whether marital leisure patterns influence marital satisfaction or whether marital satisfaction influences marital leisure patterns and found support for a bi-directional relationship. That is, low-quality leisure patterns (i.e., engaging in leisure activities that the husband enjoyed but the wife did not) both influenced—and were influenced by—marital satisfaction. In sum, this research establishes that participation in leisure activities can influence the quality of one's work and family experiences, though the effects may depend on certain features of leisure activities (e.g., type of activity, enjoyment of activity). Future research should focus on identifying the types of activities that are most conducive to positive effects on the quality of others domains and the mechanisms responsible for these positive effects, taking into account that the most conducive activities may vary depending on features of the job and the person.

Are the effects of leisure moderated by its subjective value? Regarding the question of when leisure most strongly impacts well-being, bottom-up theory—specifically, the values-as-moderator

hypothesis—predicts that leisure satisfaction will have a stronger impact on SWB to the extent that it is a valued life domain. While the values-as-moderator hypothesis was supported initially (Oishi, Diener, Suh, & Lucas, 1999), it has recently been suggested that the values-as-moderator effect may operate differently for different life domains. In a recent study examining this issue, some domain satisfactions were important for well-being only if they were valued, whereas others were important regardless of whether they were valued (Tiefenbach & Kohlbacher, 2015).

One implication of this research is that the values-as-moderator hypotheses may need to be assessed for specific domains. Regarding the domain of leisure, very few—if any—studies have examined whether the impact of leisure on well-being is moderated by how strongly leisure is valued. However, in research recently conducted in our lab, we found that leisure role salience—a concept very similar to how strongly leisure is valued—did not moderate the effects of leisure satisfaction on workers’ SWB (Kuykendall et al., 2017). That is, leisure satisfaction was generally important for workers’ SWB regardless of how strongly it was valued. While additional research is needed to understand why this pattern emerged, one possibility is that individuals are not fully aware of the benefits of leisure. That is, leisure may provide certain unique benefits (e.g., relaxation, autonomy) that cannot be provided—and are often obstructed—by other, more subjectively valued domains such as work and family, yet individuals may fail to fully recognize or subjectively value these benefits. Thus, satisfying leisure may be important for predicting well-being even if individuals are unaware of its value.

While very little research has explicitly assessed the values-as-moderator hypothesis for the effects of leisure on well-being, a substantial body of research has indirectly addressed these questions by assessing whether leisure is more strongly associated with SWB in specific populations that are thought to place greater value on leisure (e.g., people in specific life stages). Specifically, developmental life stage theorists posit that well-being hinges on pursuing and achieving progress with respect to one’s central life tasks (Sanderson & Cantor, 1999; Super, 1990). In working adulthood, these central life tasks tend to revolve around work and family, with leisure being less important. However, as one ages and has fewer work and family-related central tasks, leisure should become increasingly important. As such, comparing the impact of leisure on well-being for different life stages provides an indirect test of the values-as-moderator hypothesis. A recent meta-analysis comparing the effects in cross-sectional studies did find support for these predictions, revealing that leisure satisfaction is more strongly related to SWB for retired individuals than for workers (Kuykendall et al., 2015). However, it is worth noting that—even though the effect was stronger for retired individuals than for workers—the relationship between leisure satisfaction and life satisfaction did remain significant for workers, suggesting that leisure satisfaction is still important for workers’ well-being, albeit less important than it is for retired individuals.

In addition to life stage, another demographic factor thought to impact the value of leisure is cultural values. Specifically, Schwartz (1999) has suggested that leisure is less important in societies where mastery values and hierarchy values are important, and leisure is more important in societies in which affective autonomy values, egalitarian values, harmony values, and conservatism values are important. These predictions have been supported indirectly by research showing that individuals in European countries (with values corresponding to those that should predict valuing leisure) value work less and work fewer hours (Schwartz, 1999; Organisation for Economic Cooperation and Development, 2009) and—by extension—value leisure more. However, in a recent meta-analysis, the effect of leisure satisfaction on well-being was not significantly different across European and U.S. samples (Kuykendall et al., 2015), though the European sample included more worker studies than the U.S. sample, preventing a precise and more conclusive test of the hypothesis that teased apart the effects of life stage and cultural values.

In sum, while the main prediction of bottom-up theories is strongly supported for leisure—namely, that leisure satisfaction impacts overall SWB—the prediction that the size of the effect varies based on how important leisure is has not yet been fully resolved, with some research showing that leisure satisfaction is important for well-being regardless of whether it is valued and some research showing—albeit indirectly—that it is more important in life stages when it is likely more strongly valued.

If future research replicates the finding that leisure is important for well-being regardless of the extent to which it is valued, it will be important to understand why this is the case. Specifically, research should consider the possibility that leisure provides unique benefits (i.e., autonomy, rest) that are typically not sufficiently afforded by other life domains. Additionally, research could consider the possibility that seeking satisfaction and need fulfillment across numerous life domains is more beneficial than seeking concentrated need fulfillment in one domain (e.g., seeking mastery only at work)—an idea that has been raised recently in the literature on balanced need satisfaction (Milyavskaya et al., 2009). Addressing these questions would help further clarify the types of leisure participation that are most likely to enhance SWB.

What Facilitates High-Quality Leisure?

Given that leisure is generally very malleable compared to other life domains (i.e., individuals can typically choose what to do with their leisure time), that leisure satisfaction predicts well-being across a range of life stages and cultures, and that the effects of leisure satisfaction on well-being have been supported across cross-sectional, longitudinal, and experimental studies, leisure satisfaction is likely an important target for enhancing well-being. Accordingly, it is important to understand the experiential aspects of leisure that are most likely to facilitate satisfaction and enhance SWB. In this section, we highlight psychological need fulfillment as the main mechanism through which leisure influences SWB.

Need-based perspectives. Needs-based perspectives posit that leisure activities are most likely to be satisfying and to facilitate SWB when they fulfill fundamental psychological needs. Integrating needs posited by prominent needs-based theories, Newman et al. (2014) recently proposed the DRAMMA model to delineate how leisure facilitates SWB through specific needs. Drawing from a number of needs-based theories, their framework includes Detachment-Recovery, Autonomy, Meaning, Mastery, and Affiliation (DRAMMA) as the distinct needs through which leisure engagement can facilitate need fulfillment and subsequently overall SWB. In what follows, we provide an overview of each of these needs, review the evidence linking fulfillment of these needs through leisure to SWB, and discuss any known interventions that help people fulfill each need through leisure.

Detachment-recovery. Detachment occurs when people refrain from job-related activities and thoughts during nonwork time (Sonnentag & Fritz, 2015). Detachment is an important prerequisite for facilitating recovery, which is the “process during which individual functional systems that have been called upon during a stressful experience return to their prestressor levels” (p. 205; Sonnentag & Fritz, 2007). Detachment and recovery are necessary for protecting well-being on a daily basis from the short-term consequences of exposure to demands and stressors and from the long-term consequences of cumulative exposure to stressors without sufficient rest. After periods of exerting effort to address demands and stressors, individuals feel exhausted and desire a break from continued effort (Meijman & Mulder, 1998). This experience has been called the need for recovery (Sonntag & Zijlstra, 2006). Without restorative breaks that facilitate detachment and recovery, SWB suffers (Fritz, Sonnentag, Spector, & McInroe, 2010; Siltaloppi, Kinnunen, & Feldt, 2009; Sonnentag & Fritz, 2007).

Detachment and recovery are increasingly difficult for working adults, as many workers feel pressure to respond to work-related emails during non-work hours—a phenomenon recently coined “telepressure” (Barber & Santuzzi, 2015). Research has shown that high levels of smartphone usage during nonwork time impair psychological detachment and subsequently harm well-being (Derks, van Mierlo, & Schmitz, 2014). Learning to detach from demands during the evening is difficult, but possible. In the first attempt at a psychological detachment intervention, an intervention designed to facilitate recovery experience during leisure (i.e., detachment, relaxation, mastery, and control) educated participants about the benefits of detachment, presented different strategies for detaching from work (e.g., engaging in absorbing activities, using “transition rituals” to separate work and nonwork time), and asked participants to set personal goals for promoting better detachment (Hahn, Binnewies, Sonnentag, & Mojza, 2011). This intervention resulted in improved psychological detachment compared to the experimental group one week and three weeks after the training and decreased state negative affect three weeks after the training. Other approaches to improve psychological detachment have used mindfulness interventions and have yielded inconsistent results with one study effectively increasing psychological detachment (Michel, Bosch, & Rexroth, 2014) and the other not (Hülshager, Feinholdt, & Nübold, 2015), highlighting the need for additional research about whether and when mindfulness interventions can help improve detachment.

Given that the types of activities that most effectively facilitate detachment likely depend on the person and his or her job characteristics, interventions like the Hahn et al. (2011) intervention that educate people about how different activities might facilitate detachment and encourage individuals to reflect on and set goals for activities that would be most conducive will likely be more effective than encouraging specific types of leisure activities. To support the design and refinement of such interventions, future research is needed to determine the personal and contextual factors that impact the effectiveness of different types of activities for facilitating detachment. For instance, people with ruminative tendencies may benefit more from effortful and absorbing activities than from more relaxing activities that don’t necessarily demand one’s full attention. Additionally, in line with the recent emphasis on well-being interventions addressing both the person and organization (Hammer & Sauter, 2013), interventions should be expanded to include what organizations, not just individuals, can do to facilitate detachment, as work-related variables such as time pressure and long work hours are associated with poor detachment (see review in Sonnentag & Fritz, 2015).

Autonomy. Autonomy refers to the sense that one’s actions are freely chosen and reflect what one wants to do. Autonomy and similar concepts (e.g., control, perceived freedom, autonomous motivation) are highlighted as essential psychological needs in numerous theoretical models of well-being (e.g., Ryan &

Deci, 2000; Ryff & Keyes, 1995; Su, Tay, & Diener, 2014). Because leisure is a domain that is typically characterized by greater freedom of choice than other life domains (e.g., work and household activities; Graef, Csikszentmihalyi, & Gianinno, 1983), it is an ideal context for promoting autonomy and thereby contributing to well-being. Accordingly, autonomy (or control) plays a central role in several leisure frameworks that explain the importance of leisure for well-being (e.g., the leisure and well-being model; Carruthers & Hood, 2007; the recovery experiences framework; Sonnentag & Fritz, 2007). In fact, several researchers consider autonomy (or related concepts) to be a defining feature of leisure (Iso-Ahola, 1999; Kelly, 1972; Neulinger, 1981). While different theories provide different reasons for why autonomy is important for subjective well-being, most explanations emphasize that people have desire to feel that their lives are predictable and within their control and that their actions are a reflection of their values and desires rather than controlled or coerced by external influences. When this sense is threatened, well-being is diminished. Although autonomy is generally higher in leisure than in other life domains (Graef et al., 1983), individuals do differ in the extent to which their leisure activities fulfill their needs for autonomy, and those who experience greater autonomy have higher levels of well-being (Derous & Ryan, 2008; Sonnentag & Fritz, 2007).

Given the importance of leisure autonomy for well-being and the unique opportunity leisure affords for promoting well-being, interventions designed to facilitate leisure autonomy are likely very important for facilitating well-being, particularly when experiences in other life domains (e.g., work and family) are less malleable. In the previously discussed Hahn et al. (2011) intervention, one module focused on leisure control and involved educating participants about its importance for well-being, facilitating a reflection to help participants identify the activities during which they experience control, deciding on changes to make to their leisure, and providing goal-setting, implementation intention, and time management strategies for accomplishing changes. This intervention resulted in improved control during leisure when comparing the experimental group to the control group one week and three weeks after the training and decreased state negative affect three weeks after the training. Future interventions should continue to build upon and refine this model.

Mastery. Needs for mastery are fulfilled when individuals have opportunities to utilize or increase their skills or learn something new. Mastery and similar concepts such as accomplishment and competence are needs emphasized in numerous theories of well-being (i.e., Csikszentmihalyi, 1990; Diener, 1984; Ryan & Deci, 2000; Ryff & Keyes, 1995; Seligman, 2011) and also in leisure-specific well-being frameworks (i.e., Sonnentag & Fritz, 2007). Mastery plays a central role in the literature on serious leisure (Stebbins, 1992; 1997)—a particular type of leisure defined as “the systematic pursuit of an amateur, hobbyist, or volunteer activity sufficiently substantial and interesting for participants to find a career there in the acquisition and expression of a combination of its special skills, knowledge, and experience” (p. 3, Stebbins, 1992). Stebbins suggests that serious leisure promotes life satisfaction and attributes its effects on well-being largely to sense of skill development and accomplishment that can be derived from serious leisure pursuits.

Empirical research supports these predictions, as experience-sampling studies have shown that engaging in leisure activities that facilitate mastery is associated with well-being (Sonnentag & Fritz, 2007), and daily mastery experiences in leisure predict high levels of momentary well-being (Sonnentag, Binnewies, & Mojza, 2008). Further, the pursuit of serious leisure, which has a large mastery component, is generally positively associated with leisure satisfaction and life satisfaction—a finding that has been replicated across a number of specific populations (e.g., older adult volunteers in Taiwan: Chen, 2014; older adult competitive athletes in the United States: Heo, Lee, McCormick, & Pedersen, 2010; Heo, Stebbins, Kim, & Lee, 2013; participants in arts groups in a Chinese university: Liu, 2014; recreational event volunteers in Taiwan: Pi, Lin, Chen, Chiu, & Chen, 2014). However, future research is needed on the potential negative well-being consequences of sustained serious leisure, given that it may give rise to role conflicts (Stebbins, 1997).

In the Hahn et al. (2011) intervention, the module focused on leisure mastery educated participants about the importance of mastery for well-being, facilitated a reflection to help participants identify the types of challenging leisure activity that could provide mastery, provided a short exercise to boost self-efficacy for engaging in challenging activities, and asked participants to identify changes to make to improve their leisure. This intervention resulted in improved leisure mastery one week but not three weeks after the training and decreased state negative affect three weeks after the training. Future interventions should continue to build upon and refine this model to determine ways to facilitate longer lasting changes in leisure mastery.

Meaning. Another need that is frequently emphasized in theories of well-being is meaning, which is also sometimes referred to as purpose in life. Meaning has been emphasized as an important psychological need for fulfilling well-being in general well-being theories (Diener et al., 2009; Ryff &

Keyes, 1995; Seligman, 2011) as well as leisure-specific perspectives (Carruthers & Hood, 2007; Iwasaki, 2008), and is an important antecedent of life satisfaction, especially when affect is non-optimal (Diener, Fujita, Tay, & Biswas-Diener, 2012). Specifically, Iwasaki (2008) has focused on leisure as a key domain of life for meaning-making and has begun to investigate the common ways that meaning in life can be facilitated through leisure activities (see Iwasaki, 2016 for a review). Iwasaki's research has suggested that a variety of leisure activities can be used for meaning-making, and has identified several specific ways that people engage in meaning-making through leisure, including cultivating a positive group or individual identity, engaging in creative expression, cultivating connectedness with others or nature, experiencing harmony/balance that is not necessarily available through other demanding domains, and experiencing growth/transformation. Similarly, Petrou, Bakker, & van den Heuvel (2017) found that weekly leisure crafting, defined as "the proactive pursuit of leisure activities targeted at goal setting, human connection, learning, and personal development" (p. 129), was associated with meaning-making in a sample of Dutch employees.

Affiliation. The need for social connection—often called affiliation or relatedness—is emphasized in nearly all theoretical models of well-being (Diener et al., 2009; Ryff & Keyes, 1995; Seligman, 2011). Because many leisure activities are social, leisure is an important context for fulfilling the need for affiliation and subsequently enhancing well-being. As expected, social leisure activities are positively associated with well-being (Kelly, Steinkamp, & Kelly, 1987; Reyes-Garcia et al., 2009), including in an experience-sampling studies of working adults (Sonnentag, 2001; Sonnentag et al., 2008; Sonnentag & Zijlstra, 2006) and a short-term longitudinal study of working adults (Fritz & Sonnentag, 2005).

Compensatory benefits of fulfilling needs through leisure. While much research focuses on the ways that leisure directly promotes SWB, other research focuses on how leisure activities can protect well-being when used to compensate for the lack of need fulfillment in other life domains. Because people tend to have high levels of freedom to choose their leisure activities, leisure can be used as an opportunity to fulfill needs and desires that are not met in other domains such as work. Such compensatory use of leisure should protect well-being in general and possibly also in the domain for which need fulfillment is obstructed by substituting for need fulfillment in that domain (Heine, Proulx, & Vohs, 2006; Petrou & Bakker, 2016; Petrou et al., 2017; Vogel, Rodell, & Lynch, 2016; Vallerand, 2000).

Studies have shown that leisure activities are important for protecting well-being when those interests or values are not congruent with one's job. For instance, in a study of working professionals, Melamed, Meir, and Samson (1995) found that engaging in leisure activities was beneficial to a wide range of well-being indicators, particularly for workers whose jobs were not congruent with their interests. More recently, in a sample of working adults from a variety of industries, Vogel et al. (2016) found that involvement in leisure activities lessens the negative effects of working in an organization that has values incongruent with the subjective quality of one's work experiences. Similarly, Petrou and Bakker (2016) found that weekly leisure crafting (i.e., "the proactive pursuit and enactment of leisure activities target at goal setting, human connection, learning, and personal development" p. 1) is most strongly related to weekly well-being when opportunities for job crafting are low. Along the same lines, within counseling psychology, leisure-based interventions have been suggested for increasing the life satisfaction of individuals who are situationally constrained from leaving dissatisfying jobs (Hansen, Dik, & Zhou, 2008) and also for increasing the well-being of other special populations such as unemployed adults (Liptak, 1991), college students (Lengfelder, 1987), older adults (Munson & Munson, 1986), and individuals coping with mental health issues (Juniper, 2005).

While several theoretical models assume that people will adaptively seek need fulfillment in leisure for needs that are not met in other domains (Guest, 2002), inconsistent support for these compensatory models—as well as the prevalence of passive forms of leisure—raises doubts about how commonly people engage in these adaptive compensatory processes and highlights the need to understand the motivational processes that drive leisure decisions and to identify the processes and situational factors that would facilitate participation in activities that would compensate for needs that are insufficiently fulfilled by other domains (Petrou & Bakker, 2016; Petrou et al., 2017).

One question that emerges when considering the compensatory benefits of leisure is whether leisure activities that fulfill one's needs and values are important for well-being even if those needs and values are met by other domains. Research relevant to this issue has yielded mixed findings, with at least one study (Melamed et al., 1995) finding that engaging in leisure congruent with one's personality was associated with higher levels of well-being, even for workers with congruent jobs, and other studies have failed to find effects of leisure congruence on well-being for workers with congruent jobs (e.g., Kabanoff, 1980; Loscocco & Roschelle, 1991; Spreitzer & Snyder, 1987; Staines, 1980; Surber, 1983). Given these mixed results, future research is needed to resolve the issue of whether leisure need fulfillment benefits well-being even when needs are met in other important domains. On the one hand, for specific populations (e.g.,

“happy workaholics” who invest intensely in highly need-fulfilling jobs), engaging in activities that fulfill only a small subset of needs such as detachment and recovery, which are not fulfilled by work, may be the main benefit of leisure for well-being. Alternatively, balanced need satisfaction perspectives would suggest that seeking satisfaction and need fulfillment across numerous life domains is more beneficial than seeking concentrated need fulfillment in one domain (Milyavskaya et al., 2009). Given the mixed findings and divergent theoretical perspectives on this issue, future research is needed to untangle whether and when broad need fulfillment in leisure is important for well-being. That is, is broad need fulfillment in leisure important only when work does not fulfill a wide range of psychological needs, or would individuals benefit from broadly need-fulfilling leisure even when work fulfills a wide range of psychological needs?

Summary of need-based perspectives. In sum, research has shown that people have higher well-being when they engage in leisure activities that fulfill the needs for detachment-recovery, autonomy, meaning, mastery, and affiliation. While much research in this area has been cross-sectional, the longitudinal, experience-sampling, and experimental work conducted has also been largely supportive of the effects of need-fulfilling leisure on well-being. While fewer studies have focused on whether and how each of these needs uniquely relates to well-being, research in the general well-being literature has shown that needs tend to have an additive effect on well-being—that is, fulfillment of each need contributes beyond the fulfillment of other needs (Tay & Diener, 2011). Accordingly, the best way to optimize leisure with respect to promoting well-being may be to prioritize activities that fulfill multiple needs, particularly those needs that are not fulfilled through other domains. Unfortunately, however, this does not appear to be how people make leisure choices. Recent U.S. nationally representative time use data showed that people spend over 50% of their free time watching television—an activity that is likely very limited in its potential for need fulfillment—and spend very little time pursuing activities that are likely to fulfill a wider range of needs such as social activities (13% of free time) and sports (6% of free time; Bureau of Labor Statistics, 2017). These trends have been documented not only in the United States but also in all eighteen countries surveyed by the Organisation for Economic Cooperation and Development (2009). As such, increasing the amount of time people spend in leisure activities that are more broadly need-fulfilling and that fulfill needs that are obstructed by other domains may be an important target for enhancing societal well-being across the world. Future experimental research is needed to assess whether and for whom such approaches would be effective for enhancing well-being.

Future research should also examine whether leisure provides the opportunity for fulfillment of some needs that typically are not emphasized in general models of well-being. For instance, play is a psychological state that has been recently highlighted as essential for well-being but is not included in typical need-based models of well-being (Brown, 2009).

Barriers to Leisure Engagement and Satisfaction

Given the documented importance of leisure for well-being, a substantial body of research has focused on understanding the barriers to leisure engagement and satisfaction. In what follows, we review the most prominent model of leisure barriers—the hierarchical leisure constraints model. We review several contributions of this model, including its emphasis on the important types of leisure constraints, the ways people negotiate or overcome leisure constraints, and demographic differences in leisure constraints. We also briefly mention the literature on leisure affordances—factors that facilitate interest in leisure. Finally, we review research on barriers to leisure time physical activity—a specific type of leisure activity that received substantial attention due to its importance for health and well-being

Types of leisure constraints. Given the documented importance of leisure for well-being, a substantial body of research has focused on understanding the barriers to leisure engagement and satisfaction. Within this stream of research, the most prominent organizing framework has been the hierarchical leisure constraints model (Crawford et al., 1991; Crawford & Godbey, 1987; Godbey, Crawford, & Shen, 2010), which has focused on specifying the most common types of leisure constraints (i.e., factors that limited the desired level or quality of leisure participation) and understanding the process through which people negotiate or fail to negotiate these constraints. Their model specifies three types of leisure constraints. Intrapersonal constraints are internal states such as feelings of guilt or beliefs about one’s capabilities that act as barriers to developing leisure interests. Interpersonal constraints are social factors such as a lack of activity partners or a spouse’s leisure preferences that influence one’s own preferences and the level of participation in one’s preferred leisure activities. Structural constraints are contextual or environmental factors such as a lack of local recreational opportunities, lack of financial resources, or inflexible/highly demanding work schedules that interfere with participation in a preferred activity.

The hierarchical leisure constraints model posits that, of the three types of constraints, intrapersonal factors most strongly and proximally influence leisure interests and preferences, whereas structural

constraints primarily influence the relationship between preferences and participation and interpersonal constraints influence both preferences and acting on preferences (Crawford et al., 1991). The model further specifies that encountering and negotiating leisure constraints should occur in a sequential fashion (Jackson, Crawford, & Godbey, 1992), with people first encountering intrapersonal constraints (and possibly also interpersonal constraints) and then experiencing structural constraints as salient primarily after intrapersonal barriers have been addressed and leisure preference have been formed. While the model has not been completely and consistently supported, the supportive evidence that does exist (e.g., Raymore, Godbey, & Crawford, 1994; Raymore, Godbey, Crawford, & von Eye, 1993) has sustained its prominence as the leading model of leisure constraint negotiation. Importantly, the hierarchical leisure constrains model has been influential in suggesting that a focus on structural constraints is likely to be effective only insofar as preferences are formed, and such formation requires first overcoming intrapersonal (and often interpersonal) constraints.

Overcoming leisure constraints. More recently, researchers have also sought to understand the specific strategies individuals employ to negotiate or overcome leisure constraints. In some cases, when leisure constraints are sufficiently severe, people abandon the pursuit of a leisure activity or settle for low levels or quality of participation. Jackson et al. (1992) have suggested that abandonment of leisure interests is often a result of cognitive dissonance processes in which people devalue an activity when participating in it seems unfeasible. These processes can have positive or negative impacts on well-being. On the one hand, abandoning the activity and devaluing unattainable activities can help people to be more satisfied with the activities they can pursue (Wrosch, Scheier, Miller, Schulz, & Carver, 2003). However, in abandoning the activity, they may be prematurely foregoing other strategies that would allow them to retain the activity and thereby missing out on the benefits of the activity (Kleiber, Walker, & Mannell, 2011). For instance, abandoning one's interest in physically active leisure would likely come at a cost to health and well-being.

However, in other cases, even sometimes in cases where constraints are severe, people can overcome interpersonal or structural constraints that are preventing them from pursuing a preferred leisure activity (Kleiber et al., 2011). Both behavioral and cognitive negotiation strategies have proven useful for overcoming leisure constraints in ways that allow people to sustain participation in desired leisure activities. Behavioral strategies include actions individuals engage in to overcome leisure constraints. These actions can be directed toward the leisure activity or toward other aspects of life. Examples of leisure-directed behavioral strategies include choosing alternative sites for participating in leisure that are more affordable in order to overcome financial constraints or changing the timing of participation to overcome work-related or family-related barriers to participation. Examples of nonleisure-directed behavioral strategies include rearranging one's work schedule to better accommodate leisure participation or reducing other expenses to overcome financial leisure constraints (Lyu & Oh, 2015). Cognitive strategies include changes in the way one thinks about barriers to leisure participation. For instance, intrapersonal barriers related to competence may be overcome by persuading oneself that high levels of skills are not necessary for leisure participation or quality. Similarly, barriers related to guilt may be overcome by persuading oneself that leisure participation will help a person be a better employee or family member. Several studies have shown that people tend to use both strategies jointly (Jun & Kyle, 2011; Jackson & Rucks, 1995), though behavioral strategies are often used as the first option. Understanding when decisions to abandon leisure activities are adaptive or harmful to well-being and what factors drive these decisions is an important area for future research.

Demographic differences in leisure constraints. Another important contribution of the hierarchical leisure constraints model is the emphasis on demographic differences in leisure constraints, which has proven useful for guiding research on leisure constraints experienced by specific subpopulations. The model posits that social privilege influences the experience of leisure constraints and subsequently leisure participation and quality. Crawford et al. (1991) argued that individuals with lower income and education would experience more severe leisure constraints, and similar arguments have also been expanded to include women as a less privileged group. Supporting these predictions, studies have shown that leisure is more constrained (Jackson & Henderson, 1995) for women than for men, and has documented leisure constraints that are unique to women, particularly working mothers, such as intrapersonal constraints related to caring behaviors and a lack of sense of entitlement to leisure and structural constraints such as time scarcity and fewer opportunities to participate in sports (Shaw & Henderson, 2005). Research has also shown that individuals with lower levels of income and education experience overall higher levels of leisure constraints than do affluent and highly educated individuals (McCarville & Smale, 1993; Alexandris & Carroll, 1997; Raymore et al., 1994). Research in this framework has also considered leisure constraints for racial minorities (Shinew & Floyd, 2005) and immigrants (Stodolska & Yi-Kook, 2005).

While not necessarily under the scope of social privilege, research has also examined how leisure constraints differ across the life span (Jackson, 2000), highlighting that the leisure experiences of young

people tend to be constrained by a lack of money, opportunities for participation, and participation partners. In contrast, in middle adulthood, the barriers that are typically present for young people decrease and time commitments become a salient barrier to leisure. For older adults, time commitments are typically no longer a barrier, but skills and isolation more commonly constrain leisure.

Moving forward, research on demographic differences in leisure constraints would likely benefit from understanding how national and local policies influence demographic differences in leisure constraints, seeking to identify any policies that alleviate leisure constraints—and enhance leisure participation and satisfaction—for disadvantaged or vulnerable populations.

Leisure affordances. While research on the causes of leisure engagement has focused primarily on factors that impede participation, researchers have recently emphasized the need to focus on leisure affordances, defined as “the environmental conditions that elicit motivation (e.g., interest, enthusiasm, approach) in conjunction with felt needs” (p. 239, Kleiber, Wade, & Loucks-Atkinson, 2005). Emphasizing how positive motivational forces (e.g., enjoyment) work in conjunction with constraints and negotiation strategies to influence participation, Hubbard and Mannell (2001) tested multiple conceptual models and found that positive motivational components increase engagement in negotiation strategies and in leisure participation, and contribute uniquely to participation beyond the effects of constraints. These findings motivated subsequent research, which is still in very early stages, examining how structural and environmental conditions can elicit these positive motivational forces. Along these lines, future research should focus on understanding how communities and institutions can better design environments to elicit interest in beneficial leisure activities.

Barriers to leisure time physical activity. Within the literature on antecedents to leisure participation, one particular leisure activity that has received substantial attention is leisure time physical activity (LTPA)—a leisure activity that has been of particular interest because of its importance for health and well-being (Sofi, Capalbo, Cesari, Abbate, & Gensini, 2008; Wiese, Kuykendall, & Tay, 2017) and because the increasing prevalence of sedentary work makes leisure the most prominent context for pursuing physical activity (Church et al., 2011). Because physical activity is at lower than ideal levels for much of the U.S. population (National Center for Health Statistics, 2017), increasing LTPA is a major societal concern. Though much of the research on barriers to LTPA has been guided by the Theory of Planned Behavior (Ajzen, 1991)—an influential social psychological theory commonly used to explain health-promoting behaviors—rather than the hierarchical leisure constraints model, the findings can still be summarized based on intrapersonal, interpersonal, and structural factors.

In a recent systematic review of determinants of adults’ physically active leisure, Wendel-Vos, Droomers, Kremers, Brug, & Van Lenthe (2007) found that the most important interpersonal predictors were having social support for leisure and having a companion for physical activity. Structural factors were also important, as availability of physical activity equipment was associated with vigorous physical activity/sports, and connectivity of trails was associated with active commuting. Yet, this systematic review was limited in that it focused exclusively on cross-sectional studies.

More recently, reviews have focused on barriers to physically active leisure using more rigorous studies, albeit in narrower populations. A more recent meta-analysis (Prince et al., 2016) that focused specifically on the determinants of physically active leisure of adult women based on prospective cohort studies—a much stronger design than cross-sectional designs—found evidence for both intrapersonal, interpersonal, and structural determinants. Intrapersonal factors that were most commonly and consistently associated with physically active leisure were intentions, perceived behavioral control, self-efficacy, self-rated health, and quality of life. The interpersonal factor most commonly negatively associated with physically active leisure was having children.

In a recent systematic review assessing the determinants of physical activity and exercise in healthy older adults, similar findings emerged. Specifically, change in exercise self-efficacy was associated with exercise (Koeneman, Verheijden, Chinapaw, & Hopman-Rock, 2011). The most important interpersonal determinants were social capital and spousal physical activity, and the most important environmental factor was the season of the year. As many of the factors shown to be associated with leisure time physical activity across these studies are modifiable, they serve as promising targets for enhancing physically active leisure.

In the literature on physically active leisure, the emphasis has been primarily on intrapersonal and interpersonal determinants, with less emphasis on environmental determinants. Specifically, one of the most salient needs for future research is papers that examine how policies (e.g., workplace policies such as subsidies for gym memberships, enforced breaks or governmental policies such as active commuting incentives) influence physically active leisure (Prince et al., 2016), as very few—if any—studies have examined how national or workplaces policies influence physically active leisure.

Conclusion

To summarize, while much research is needed to more fully understand the role leisure plays in promoting SWB, the current literature does suggest that leisure is important for well-being across a wide range of cultures and life stages and that leisure oriented toward fulfilling psychological needs and compensating for needs or values that are not fulfilled in other domains is particularly important for SWB. While a variety of intrapersonal, interpersonal, and structural constraints prevent people from being interested in and engaged in the types of leisure activities that would enhance their well-being, specific behavioral and cognitive strategies can be employed to help facilitate leisure engagement and leisure quality. Research has not yet identified the types of societal and institutional policies that can help promote high-quality leisure, and understanding these factors—and how to design interventions that remove both personal and contextual barriers to high-quality leisure—should be an important priority moving forward.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Alexandris, K., & Carroll, B. (1997). Demographic differences in the perception of constraints on recreational sport participation: Results from a study in Greece. *Leisure Studies*, 16(2), 107-125.
- Aristotle. (1980). *Nichomachean ethics* (W. D. Ross, Trans.). Oxford, UK: Oxford University Press.
- Barber, L. K., & Santuzzi, A. M. (2015). Please respond ASAP: Workplace telepressure and employee recovery. *Journal of Occupational Health Psychology*, 20(2), 172-189.
- Brown, S. L. (2009). *Play: How it shapes the brain, opens the imagination, and invigorates the soul*. New York, NY: Penguin.
- Bureau of Labor Statistics (2017). *Average hours per day spent in leisure activities and sports activities by age., 2016 annual averages*. <https://www.bls.gov/charts/american-time-use/activity-leisure.htm>. Accessed 6.26.17.
- Carruthers, C., & Hood, C. D. (2007). Building a life of meaning through therapeutic recreation: The leisure and well-being model, part I. *Therapeutic Recreation Journal*, 41(4), 276-297.
- Chen, K. Y. (2014). The relationship between serious leisure characteristics and subjective well-being of older adult volunteers: The moderating effect of spousal support. *Social Indicators Research*, 119(1), 197-210.
- Church, T. S., Thomas, D. M., Tudor-Locke, C., Katzmarzyk, P. T., Earnest, C. P., Rodarte, R. Q., ... & Bouchard, C. (2011). Trends over 5 decades in US occupation-related physical activity and their associations with obesity. *PloS one*, 6(5), e19657.
- Crawford, D. W., & Godbey, G. (1987). Reconceptualizing barriers to family leisure. *Leisure Sciences*, 9(2), 119-127.
- Crawford, D. W., Jackson, E. L., & Godbey, G. (1991). A hierarchical model of leisure constraints. *Leisure Sciences*, 13(4), 309-320.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York, NY: Harper and Row.
- Derks, D., van Mierlo, H., & Schmitz, E. B. (2014). A diary study on work-related smartphone use, psychological detachment and exhaustion: Examining the role of the perceived segmentation norm. *Journal of Occupational Health Psychology*, 19, 74-84.
- Derous, E., & Ryan, A. (2008). When earning is beneficial for learning: The relation of employment and leisure activities to academic outcomes. *Journal of Vocational Behavior*, 73, 118-131.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95, 542-575.
- Diener, E., Fujita, F., Tay, L., & Biswas-Diener, R. (2012). Purpose, mood, and pleasure in predicting satisfaction judgments. *Social Indicators Research*, 105(3), 333-341.
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., & Oishi, S. (2009). New measures of well-being: Flourishing and positive and negative feelings. *Social Indicators Research*, 39, 247-266.
- Fritz, C., & Sonnentag, S. (2005). Recovery, health, and job performance: Effects of weekend experiences. *Journal of Occupational Health Psychology*, 10(3), 187-199.
- Fritz, C., Sonnentag, S., Spector, P. E., & McInroe, J. A. (2010). The weekend matters: Relationships between stress recovery and affective experiences. *Journal of Organizational Behavior*, 31(8), 1137-1162.

- Godbey, G., Crawford, D. W., & Shen, X. S. (2010). Assessing hierarchical leisure constraints theory after two decades. *Journal of Leisure Research*, 42(1), 111-134.
- Graef, R., Csikszentmihalyi, M., & Gianinno, S. (1983). Measuring intrinsic motivation in everyday life. *Leisure Studies*, 2(2), 155-168.
- Guest, D. E. (2002). Perspectives on the study of work-life balance. *Social Science Information*, 41(2), 255-279.
- Hahn, V. C., Binnewies, C., Sonnentag, S., & Mojza, E. J. (2011). Learning how to recover from job stress: Effects of a recovery training program on recovery, recovery-related self-efficacy, and well-being. *Journal of Occupational Health Psychology*, 16(2), 202-216.
- Hammer, L. B., & Sauter, S. (2013). Total worker health and work-life stress. *Journal of Occupational and Environmental Medicine*, 55, S25-S29.
- Hansen, J. I. C., Dik, B. J., & Zhou, S. (2008). An examination of the structure of leisure interests of college students, working-age adults, and retirees. *Journal of Counseling Psychology*, 55(2), 133-145
- Haworth, J. T., & Veal, A. J. (Eds.). (2004). *Work and leisure*. New York, NY: Routledge.
- Hecht, T. D., & Boies, K. (2009). Structure and correlates of spillover from nonwork to work: An examination of nonwork activities, well-being, and work outcomes. *Journal of Occupational Health Psychology*, 14(4), 414-426.
- Heine, S. J., Proulx, T., & Vohs, K. D. (2006). The meaning maintenance model: On the coherence of social motivations. *Personality and Social Psychology Review*, 10(2), 88-110.
- Heo, J., Lee, Y., McCormick, B. P., & Pedersen, P. M. (2010). Daily experience of serious leisure, flow and subjective well-being of older adults. *Leisure Studies*, 29(2), 207-225.
- Heo, J., Stebbins, R. A., Kim, J., & Lee, I. (2013). Serious leisure, life satisfaction, and health of older adults. *Leisure Sciences*, 35(1), 16-32.
- Hubbard, J., & Mannell, R. C. (2001). Testing competing models of the leisure constraint negotiation process in a corporate employee recreation setting. *Leisure Sciences*, 23(3), 145-163.
- Hülshager, U. R., Feinholdt, A., & Nübold, A. (2015). A low-dose mindfulness intervention and recovery from work: Effects on psychological detachment, sleep quality, and sleep duration. *Journal of Occupational and Organizational Psychology*, 88(3), 464-489.
- Iso-Ahola, S. E. (1999). Motivational foundations of leisure. In E.L. Jackson & T.L. Burdon (Eds.), *Leisure studies: Prospects for the twenty-first century* (pp. 35-51). State College, PA: Venture Publishing Inc.
- Iwasaki, Y. (2008). Pathways to meaning-making through leisure-like pursuits in global contexts. *Journal of Leisure Research*, 40(2), 231-250.
- Iwasaki, Y. (2016). Contributions of leisure to “meaning-making” and its implications for leisure studies and services. *Annals of Leisure Research*, 1-11.
- Jackson, E. L. (2000). Will research on leisure constraints still be relevant in the twenty-first century? *Journal of Leisure Research*, 32(1), 62-68.
- Jackson, E. L., Crawford, D. W., & Godbey, G. (1992). Negotiation of leisure constraints. *Leisure Sciences*, 15(1), 1-11.
- Jackson, E. L., & Henderson, K. A. (1995). Gender-based analysis of leisure constraints. *Leisure Sciences*, 17(1), 31-51.
- Jackson, E. L., & Rucks, V. C. (1995). Negotiation of leisure constraints by junior-high and high-school students: An exploratory study. *Journal of Leisure Research*, 27(1), 85-105.
- Jun, J., & Kyle, G. T. (2011). Understanding the role of identity in the constraint negotiation process. *Leisure Sciences*, 33(4), 309-331.
- Juniper, D. (2005). Leisure counseling, coping skills and therapeutic applications. *British Journal of Guidance and Counselling*, 33, 27-36.
- Kabanoff, B. (1980). Work and nonwork: A review of models, methods, and findings. *Psychological Bulletin*, 88(1), 60-77.
- Kelly, J.R. (1972). Work and leisure: A simplified paradigm. *Journal of Leisure Research*, 4, 50-62.
- Kelly, J. R., Steinkamp, M. W., & Kelly, J. R. (1987). Later-life satisfaction: Does leisure contribute? *Leisure Sciences*, 9(3), 189-199.

- Kleiber, D. A., Wade, M.G., & Loucks-Atkinson, A. (2005). The utility of the concept of affordance for leisure research. In E.L. Jackson (Ed.), *Constraints to leisure* (pp. 23-34). State College, PA: Venture Publishing Inc.
- Kleiber, D. A., Walker, G.J., & Mannell, R.C. (2011). *A social psychology of leisure*. State College: Venture Publishing Inc.
- Koeneman, M. A., Verheijden, M. W., Chinapaw, M. J., & Hopman-Rock, M. (2011). Determinants of physical activity and exercise in healthy older adults: a systematic review. *International Journal of Behavioral Nutrition and Physical Activity*, 8(1), 142.
- Kuykendall, L., Lei, X., Tay, L., Cheung, H.K., Kolze, M., Lindsey, A., Silvers, M., & Engelsted, L. (2017). Subjective quality of leisure & worker well-being: Validating measures & testing theory. *Journal of Vocational Behavior*, 103, 14-40.
- Kuykendall, L., Tay, L., & Ng, V. (2015). Leisure engagement and subjective well-being: A meta-analysis. *Psychological Bulletin*, 141(2), 364-403.
- Lengfelder, J. R. (1987). Leisure wellness and time management: Is there a connection? *College Student Journal*, 21, 180–183.
- Liptak, J. J. (1991). Leisure counseling: An antidote for “the living death.” *Journal of Employment Counseling*, 28, 115–120.
- Liu, H. (2014). Personality, leisure satisfaction, and subjective well-being of serious leisure participants. *Social Behavior and Personality: An International Journal*, 42(7), 1117-1125.
- Loscocco, K. A., & Roschelle, A. R. (1991). Influences on the quality of work and nonwork life: Two decades in review. *Journal of Vocational Behavior*, 39(2), 182-225.
- Lyu, S. O., & Oh, C. O. (2015). Bridging the conceptual frameworks of constraints negotiation and serious leisure to understand leisure benefit realization. *Leisure Sciences*, 37(2), 176-193.
- McCarville, R. E., & Smale, B. J. (1993). Perceived constraints to leisure participation within five activity domains. *Journal of Park and Recreation Administration*, 11 (2), 40-59.
- Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. *Handbook of Work and Organizational Psychology. Volume, 2*.
- Melamed, S., Meir, E. I., & Samson, A. (1995). The benefits of personality-leisure congruence: Evidence and implications. *Journal of Leisure Research*, 27(1), 25-40.
- Michel, A., Bosch, C., & Rexroth, M. (2014). Mindfulness as a cognitive–emotional segmentation strategy: An intervention promoting work–life balance. *Journal of Occupational and Organizational Psychology*, 87(4), 733-754.
- Milyavskaya, M., Gingras, I., Mageau, G. A., Koestner, R., Gagnon, H., Fang, J., & Boiché, J. (2009). Balance across contexts: Importance of balanced need satisfaction across various life domains. *Personality and Social Psychology Bulletin*, 35(8), 1031-1045.
- Mojza, E. J., Sonnentag, S., & Bornemann, C. (2011). Volunteer work as a valuable leisure-time activity: A day-level study on volunteer work, non-work experiences, and well-being at work. *Journal of Occupational and Organizational Psychology*, 84(1), 123-152.
- Munson, W. W., & Munson, D. G. (1986). Multimodal leisure counseling with older people. *Activities, Adaptation, and Aging*, 9, 1–15.
- National Center for Health Statistics. (2017). *Exercise or physical activity*. <https://www.cdc.gov/nchs/fastats/exercise.htm>. Accessed 6.30.17.
- Neulinger, J. (1981). *The psychology of leisure: Research approaches to the study of leisure*. Springfield, IL: Charles C. Thomas.
- Newman, D. B., Tay, L., & Diener, E. (2014). Leisure and subjective well-being: A model of psychological mechanisms as mediating factors. *Journal of Happiness Studies*, 15(3), 555-578.
- Oishi, S., Diener, E., Suh, E., & Lucas, R. E. (1999). Value as a moderator in subjective well-being. *Journal of Personality*, 67(1), 157-184.
- Organisation for Economic Cooperation and Development. (2009). Special focus: Measuring leisure in OECD countries. Society at a Glance 2009: OECD Social Indicators. Retrieved from <http://www.oecd.org/berlin/42675407.pdf>
- Petrou, P., & Bakker, A. B. (2016). Crafting one’s leisure time in response to high job strain. *Human*

Relations, 69(2), 507-529.

Petrou, P., Bakker, A. B., & den Heuvel, M. (2017). Weekly job crafting and leisure crafting: Implications for meaning-making and work engagement. *Journal of Occupational and Organizational Psychology*, 90(2), 129-152.

Pi, L. L., Lin, Y. H., Chen, C. Y., Chiu, J. C., & Chen, Y. M. (2014). Serious leisure, motivation to volunteer and subjective well-being of volunteers in recreational events. *Social Indicators Research*, 119(3), 1485-1494.

Pieper, J. (1952). *Leisure: The basis of culture*. London: Faber & Faber.

Prince, S. A., Reed, J. L., Martinello, N., Adamo, K. B., Fodor, J. G., Hiremath, S., ... & Reid, R. D. (2016). Why are adult women physically active? A systematic review of prospective cohort studies to identify intrapersonal, social environmental and physical environmental determinants. *Obesity Reviews*, 17(10), 919-944.

Raymore, L. A., Godbey, G. C., & Crawford, D. W. (1994). Self-esteem, gender, and socioeconomics status: Their relation to perceptions of constraint on leisure among adolescents. *Journal of Leisure Research*, 26(2), 99-118.

Raymore, L., Godbey, G., Crawford, D., & Von Eye, A. (1993). Nature and process of leisure constraints: An empirical test. *Leisure Sciences*, 15(2), 99-113.

Reyes-García, V., Godoy, R. A., Vadez, V., Ruíz-Mallén, I., Huanca, T., Leonard, W. R., ... & Tanner, S. (2009). The pay-offs to sociability. *Human Nature*, 20(4), 431-446.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69(4), 719-727.

Sanderson, C. A., & Cantor, N. (1999). A life task perspective on personality coherence. In D. Cervone & Y. Shoda (Eds.), *The coherence of personality: Social cognitive bases of consistency* (pp. 372-392). New York, NY: Guilford Press.

Schimmack, U. (2008). The structure of subjective well-being. In M. Eid & R.J. Larsen (Eds.) *The science of subjective well-being* (pp. 97-123). New York: The Guilford Press.

Schwartz, S. H. (1999). A theory of cultural values and some implications for work. *Applied Psychology: An International Review*, 48(1), 23-47.

Seligman, M. E. (2011). *Flourish: A visionary new understanding of happiness and well-being*. New York: Free Press.

Shaw, B. (1971). *The road to equality: Ten unpublished lectures and essays, 1884-1918*. Beacon Press.

Shaw, S. M., & Henderson, K. A. (2005). Gender analysis and leisure constraints: An uneasy alliance. In E.L. Jackson (Ed.), *Constraints to leisure* (pp. 23-34). State College, PA: Venture Publishing Inc.

Shinew, K.J., & Floyd, M.F. (2005). Racial inequality and constraints to leisure in the post-civil rights era: Toward an alternative framework. In E.L. Jackson (Ed.), *Constraints to leisure* (pp. 35-51). State College, PA: Venture Publishing Inc.

Siltaloppi, M., Kinnunen, U., & Feldt, T. (2009). Recovery experiences as moderators between psychosocial work characteristics and occupational well-being. *Work & Stress*, 23(4), 330-348.

Sofi, F., Capalbo, A., Cesari, F., Abbate, R., & Gensini, G. F. (2008). Physical activity during leisure time and primary prevention of coronary heart disease: An updated meta-analysis of cohort studies. *European Journal of Cardiovascular Prevention & Rehabilitation*, 15(3), 247-257.

Sonnentag, S. (2001). Work, recovery activities, and individual well-being: A diary study. *Journal of Occupational Health Psychology*, 6(3), 196-210.

Sonnentag, S., Binnewies, C., & Mojza, E. J. (2008). "Did you have a nice evening?" A day-level study on recovery experiences, sleep, and affect. *Journal of Applied Psychology*, 93(3), 674-684.

Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work. *Journal of Occupational Health Psychology*, 12(3), 204-221.

Sonnentag, S., & Fritz, C. (2015). Recovery from job stress: The stressor-detachment model as an integrative framework. *Journal of Organizational Behavior*, 36, S72-S103.

- Sonnentag, S., & Zijlstra, F. R. (2006). Job characteristics and off-job activities as predictors of need for recovery, well-being, and fatigue. *Journal of Applied Psychology, 91*(2), 330-350.
- Spreitzer, E., & Snyder, E. E. (1987). Educational-occupational fit and leisure orientation as related to life satisfaction. *Journal of Leisure Research, 19*(2), 149-158.
- Staines, G. L. (1980). Spillover versus compensation: A review of the literature on the relationship between work and nonwork. *Human Relations, 33*(2), 111-129.
- Stebbins, R. A. (1992). *Amateurs, professionals, and serious leisure*. McGill-Queen's University Press.
- Stebbins, R. A. (1997). Serious leisure and well-being. In J. T. Haworth (Ed.), *Work, leisure, and well-being* (pp. 117–130). London: Routledge.
- Stodolska, M. & Yi-Kook, J. (2005). Ethnicity, immigration, and constraints. In E.L. Jackson (Ed.), *Constraints to leisure* (pp. 35-51). State College, PA: Venture Publishing Inc.
- Su, R., Tay, L., & Diener, E. (2014). The development and validation of the Comprehensive Inventory of Thriving (CIT) and the Brief Inventory of Thriving (BIT). *Applied Psychology: Health and Well-Being, 6*(3), 251-279.
- Super, D. E. (1990). A life-span, life-space approach to career development. In D. Brown & L. Brooks (Eds.), *Career choice and development* (pp. 197–261). San Francisco, CA: Jossey-Bass.
- Surber, M. (1983). Work and leisure: The problem of identity among professional workers. *Loisir et Société/Society and Leisure, 6*(2), 429-456.
- Tay, L., & Diener, E. (2011). Needs and subjective well-being around the world. *Journal of Personality and Social Psychology, 101*(2), 354-365.
- Tiefenbach, T., & Kohlbacher, F. (2015). Individual differences in the relationship between domain satisfaction and happiness: The moderating role of domain importance. *Personality and Individual Differences, 86*, 82-87.
- Vallerand, R. J. (2000). Deci and Ryan's self-determination theory: A view from the hierarchical model of intrinsic and extrinsic motivation. *Psychological Inquiry, 11*(4), 312-318.
- Vogel, R. M., Rodell, J. B., & Lynch, J. W. (2016). Engaged and productive misfits: How job crafting and leisure activity mitigate the negative effects of value incongruence. *Academy of Management Journal, 59*(5), 1561-1584.
- Wendel-Vos, W. M. S. J. F., Droomers, M., Kremers, S., Brug, J., & Van Lenthe, F. (2007). Potential environmental determinants of physical activity in adults: A systematic review. *Obesity Reviews, 8*(5), 425-440.
- Wiese, C.W., Kuykendall, L., Tay, L. (2017). Get active: A meta-analysis of leisure-time physical activity and subjective well-being. *Journal of Positive Psychology*. Published online on September 15, 2017.
- World Values Survey Association. (2016). World Values Survey Wave 6 2010-2014 official aggregate v. 20150418. *Aggregate File Producer: Asep/JDS, Madrid Spain*.
- Wrosch, C., Scheier, M. F., Miller, G. E., Schulz, R., & Carver, C. S. (2003). Adaptive self-regulation of unattainable goals: Goal disengagement, goal reengagement, and subjective well-being. *Personality and Social Psychology Bulletin, 29*(12), 1494-1508.



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