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Bottom-up Theory of Life Satisfaction by Running Event Participants

In line with the bottom-up theory of life satisfaction, this study examined the quality of life of long and short-distance runners. Data were collected from a total of 1,676 runners in a running event. WHOQOL-BREF (26-item version of WHOQOL-100) was used to measure the quality of life of the runners. Results showed that event satisfaction has a statistically significant relationship only with physical wellbeing, which has a significant relationship with the overall quality of life. Thus, the bottom-up theory of life satisfaction was partially supported. The nature of the event was believed to be one of the reasons for the results.

Keywords: Bottom-up theory, Event satisfaction, Life satisfaction, Marathon, Running event, Quality of life

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Introduction

Because improving life satisfaction has been a vital goal for modern societies, quality of life (QOL) has become one of the important subjects of discourse in the literature. Accordingly, it has also developed as an indicator of people's perception of their life trajectory and satisfaction (Chen, Lehto, & Cai, 2013; Taniguchi, 2012). This can be traced back to the 1970s when geographic needs called for quality of life as researchers sought to understand the social and economic problems arising from inequality (Day & Weitz, 1977; Rogerson, 1995). Since then, numerous studies on QOL have been conducted in order to develop better understandings of societies and social problems (Navarro & Shi, 2001). A substantial amount of attention has been devoted to the relationship between leisure/tourism and individual wellbeing, and the studies have suggested multiple structural models (e.g., Neal, Uysal, & Sirgy, 2007; Yodal, Gursoy, Uysal, Kim & Karacaoglu, 2016). The literature, however, still lacks any comprehensive application of the theory, which would help in expanding and generalizing the QOL concept. As such, this research aims to fill this gap and draw attention to the research community by empirically examining the effect of running event experience on participants' QOL from the bottom-up theory of life satisfaction perspective.

Literature review

Traditionally, long-distance running (e.g., marathon running) has been considered an activity primarily reserved for elite athletes who have trained for serious competition. Marathon runners compete as a form of serious leisure, which is often based on personal dedication and physical effort; runners expose themselves to physical suffering through rigorous training, demanding schedules, and careful diets (Robinson, Patterson, & Axelsen, 2014). However, running a marathon or long-distance has recently become a leisure activity due to the advent of "jogging" (Ogles & Masters, 2000). Since marathon running has become

one of the world's popular running experiences for individuals of all ages, race organizers have experienced slower finishing times and substantial increases in participation rates (Zinner & Sperlich, 2016). As long-distance running is a relatively high demanding task requiring training and commitment (Ratten & Ferreira, 2017), the outcomes of long-distance racing can be perceived differently than merely visiting sporting events or local festivals. In this regard, this study argues that the race-running experience affects various life domains—such as psychological, physical, and social life domains—which in turn affect overall life satisfaction.

The bottom-up theory of life satisfaction has been used to identify the factors enhancing individual QOL in social science (Diener, 1984; Sirgy, 2002), and the theory argues that overall life satisfaction is functionally related to satisfaction with all of life's domains and subdomains (Lee, Sirgy, Larsen, & Wright, 2002). That is, pleasant and unpleasant life experiences that generate a "lower-level" of satisfaction will spill over bottom-up to superordinate domains and then to the quality of life in general (Heller, Watson, & Ilies, 2004; Lee et al. 2002) (see Figure 1).

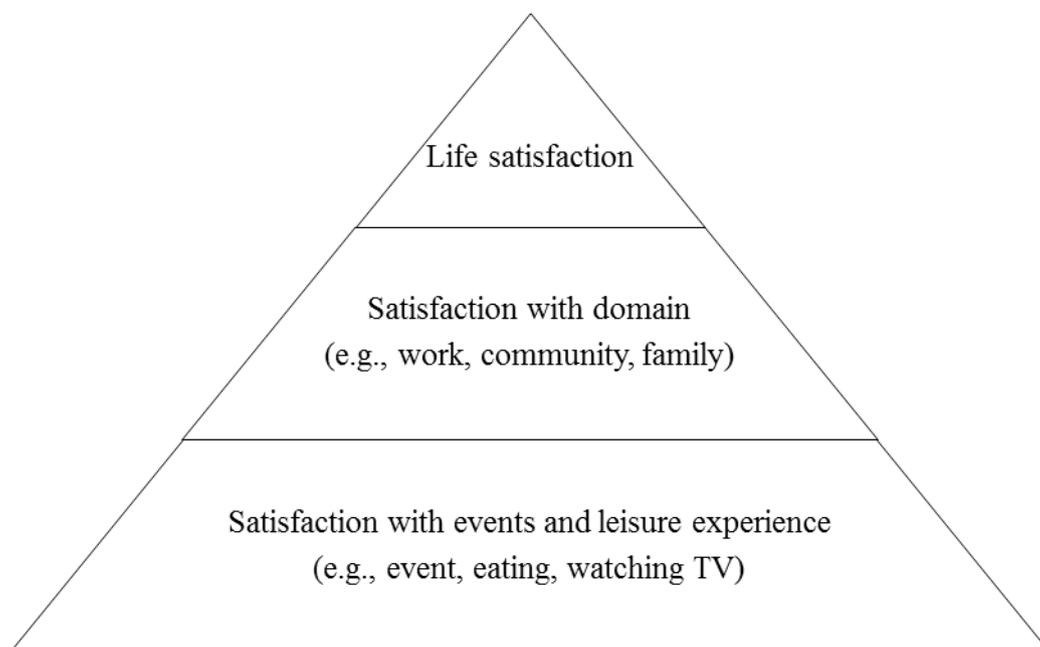


Figure 1: Bottom-up theory of life satisfaction

By now it is well known that regular or moderate physical activities such as walking or running helps reduce the symptoms of mild depression and anxiety by enhancing overall wellbeing (Taylor, Sallis, & Needle, 1985) and physical health (Iwasaki, Zuzanek, & Mannell, 2001). It is interesting to examine the intersection of physical activities with leisure activities since leisure satisfaction has been found to enhance individuals' psychological, physical, and spiritual benefits (Veal, 2001; Wankel, 1994), as well as to predict global life satisfaction (Huang & Carleton, 2003). Prior research has demonstrated that event participants' positive experiences, in building "lower-level" of satisfaction, positively predict life satisfaction (Chen, Ye, Chen, & Tung, 2010; Yolal et al., 2016). From this perspective, the current study empirically tests if the bottom-up theory applies to long-distance running events (see Figure 2). The overall model was based on the argument that event satisfaction, as a lower level of satisfaction, predicts the upper life satisfaction domains, and ultimately influences overall QOL.

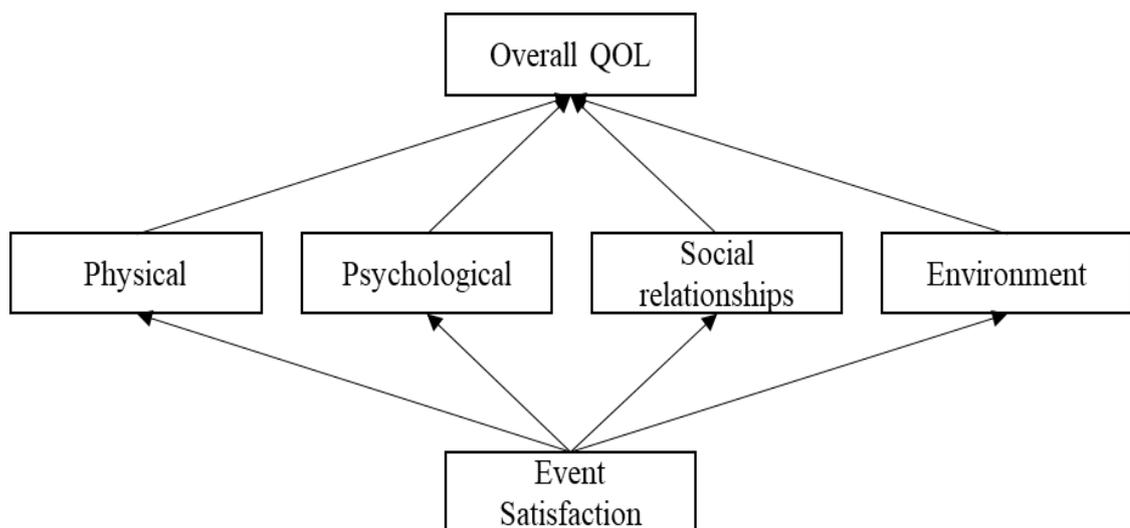


Figure 2: Proposed QOL model

Methodology

Those who registered in a running event held in the United States were recruited to complete a survey. Three days after the event, a web-based survey with an embedded link in an invitation email was distributed to 20,000 runners. A total of 1,897 respondents participated in the survey, a response rate of 9.45%. The low response rate may be a limitation; however, the sample size was large enough to conduct the statistical analysis. Out of the 1,897 collected questionnaires, 1,676 responses were kept for further analyses after eliminating 221 incomplete questionnaires.

The event satisfaction was measured with three items about general satisfaction on the event, which were adopted from the previous studies (Bansal, Irving, & Taylor, 2004; Kim & Ok, 2010; Oliver, 2010). This study used the WHOQOL-BREF (26-item version of WHOQOL-100), developed by the World Health Organization, to measure QOL. WHOQOL-BREF includes one item for overall QOL and one item for general health. The WHOQOL-BREF produces a profile with four domain scores: physical, psychological, social relationships, and environment. The four domain scores are typically scaled in a positive direction with higher scores indicating a higher QOL. Three items were reversed before scoring. In this study, the summated event satisfaction score, one item for overall QOL, and four domain scores were used to test the bottom-up theory model. All variables were measured on a five-point Likert scale.

Results

The demographic profile is presented in Table 1. The sample was composed of a majority of females, 25-44 years old, with household income above \$50,000. Over 60% of respondents have participated in running events before, and most of them (about 65%) participated in the full course or half marathon. The descriptive analysis showed mean scores of four domains: physical at 84.04 (Std. Deviation = 10.41); psychological at 77.64 (Std.

Deviation = 12.10); social relationships at 75.87 (Std. Deviation = 17.70); environment at 80.67 (Std. Deviation = 11.30). The average score of summated event satisfaction was 12.95 (Std. Deviation = 2.95), and overall, QOL's mean score was 4.59 (Std. Deviation = 0.53).

Table 1: Demographic profile

Variables	Responses	Percent
Gender	Female	70.5%
	Male	29.5%
Age	18-24	8.2%
	25-34	31.2%
	35-44	30.2%
	45-54	17.7%
	55-64	11.3%
	65 or older	1.5%
Income	Under \$15,000	4.5%
	\$15,000-\$24,999	3.2%
	\$25,000-\$49,999	16.4%
	\$50,000-\$74,999	20.6%
	\$75,000-\$99,999	18.4%
	\$100,000-\$124,999	16.2%
	\$125,000 or higher	20.8%
Past experience	First time attendance	35.9%
	Once in the past	13.7%
	2-3 times in the past	21.4%
	4-5 times in the past	17.6%
	More than 6 times in the past	11.5%
Participated programs*	Full course marathon	18.1%
	Half marathon	46.4%
	Relays	3.8%
	10K marathon	21.0%
	5K run/walk	27.7%

* *Multiple responses possible*

A path analysis was conducted to test the bottom-up theory of life satisfaction using AMOS 22.0. The proposed model fits the data well; fit statistics indicate that indices meet the generally acceptance cutoffs (root mean squared error of approximation = .047; Tucker-Lewis index = .983; comparative fit index = .999). The significance of standardized regression weights between variables is presented in Table 2. Statistically significant positive

relationships were found between satisfaction with the event and physical health. All four domains of QOL have statically significant relationships with overall QOL.

Table 2: Parameter Estimates of Path Analysis

Exogenous variables	Endogenous variables	Estimate	Standardized β	Significance (p-value)
Event Satisfaction	Physical Health	0.246	0.070	0.004
Event Satisfaction	Psychological	0.130	0.032	0.196
Event Satisfaction	Social Relationships	0.164	0.027	0.264
Event Satisfaction	Environment	0.067	0.018	0.471
Physical Health	Overall QOL	0.003	0.061	0.022
Psychological	Overall QOL	0.012	0.276	0.000
Social Relationships	Overall QOL	0.002	0.074	0.004
Environment	Overall QOL	0.011	0.236	0.000

Discussion

The current study showed that respondents with higher levels of running event satisfaction are more likely to be satisfied with their physical health status. This is consistent with findings in the previous studies—the physical leisure experience helps improve health by reducing stress and health problems (Peterson & Stumbo, 2000), and leisure experience results in psychological and physical benefits (Veal, 2001). In another study about a marathon event, Ogles and Masters (2003) found that long-distance runners participate in the event not only for physical, social, and psychological (self-esteem) well-being but also for personal achievement.

The result in the current study may not be surprising because the sample was comprised of runners who have participated in various types of running programs involving physical activities. In this regard, running event organizers may consider promoting an event by emphasizing the physical and psychological benefits of the event. Non-significant

relationships between event satisfaction and other three domains existed as the three-day-long event in this study was composed of various entertaining programs that increase social interactions, ease stress, and make runners feel comfortable in the local environment.

The results also showed that respondents with higher QOL sub-dimensions are likely to have higher overall QOL. That is, the overall QOL of runners is determined by satisfaction with physical health, psychological domain, social relationships, and environment, and these life domains are affected by subdomains of a running event. The results confirm that the bottom-up theory of life satisfaction can apply to a sporting event (i.e., running). Accordingly, event organizers need to identify the factors that can enhance runners' life domains and consider more diverse and interactive programs in a sporting event to satisfy overall QOL.

Conclusion

In sum, this study explored long-distance runners' QOL and tested a proposed structural model, and consequently showed that the bottom-up theory of life satisfaction is partially supported. The nature of the event was believed to be one of the reasons for the results. There is, however, no study without limitations. As the sample was drawn from a specific running event, it may preclude generalizing the results to other settings, studies with different populations, or different events, all of which might result in inconsistent findings with the current study. Accordingly, further research with various types of events and populations would help the findings generalizable. Also, this study used only the WHOQOL-BREF to measure the concept of QOL. Other subjective QOL measures may be used in future studies to examine the structural relationships among variables.

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