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SPECIAL ISSUE PAPER

Cultural consonance in leisure activities and self-rated health in six cities in China

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The purpose of this study is to examine leisure constraints, a new variable termed *cultural consonance in leisure* (CCL), and leisure satisfaction as possible mediators in the relationship between socioeconomic status (SES) and self-rated health in six large cities in China. The hypothesis is that SES has a negative relationship with leisure constraints, that leisure constraints negatively influence CCL, that CCL positively affects leisure satisfaction, and that leisure satisfaction positively affects self-rated health. Structural equation modelling is used to evaluate the hypothesised relationships, and all but one of the relationships is supported. The results suggest that CCL may be a valuable construct to employ in future studies of constraints, leisure satisfaction and health.

Keywords: China; cultural consonance; leisure constraints; leisure satisfaction; self-rated health

Numerous studies have shown that low socioeconomic status (SES) is related to premature morbidity and mortality worldwide (Williams, 1998). For example, longitudinal health-related research programmes conducted among British civil servants since 1979, known as the Whitehall Studies, showed that morbidity and mortality were consistently higher among those in lower employment grades even after individual risk factors such as blood pressure, exercise, smoking and obesity were controlled (Marmot, 2004). The reason was not obvious. As Link and Phelan (2006) indicated, “Disease does not flow directly from income, educational, or occupational status into the body” (p. 72). Similarly, Oakes and Rossi (2003) pointed out “Although SES is not itself a causal factor, understanding the linkage between SES and health can provide clues to the actual mechanisms involved” (p. 770).

Leisure may have an important role in this relationship. It has been directly related to *lifestyle diseases* such as obesity, stress and depression (Iwasaki, 2007). It improves mood (Ortega-Smith, Mowen, Payne, & Godbey, 2004) and contributes to general health and well-being (Mannell, 2007). Both leisure participation and leisure satisfaction correlate with health (Mroczek & Spiro, 2005) and leisure constraints negatively affect leisure participation, leisure satisfaction, emotional well-being and health (Spiers & Walker, 2008). These characteristics of leisure suggest that leisure constraints and leisure satisfaction may be among variables mediating the SES–health relationship.

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Cultural consonance in leisure (CCL), a variable we are introducing here, may also mediate the relationship between leisure constraints and health. Cultural consonance refers to the degree to which the beliefs and, especially, behaviours of individuals match cultural norms for those beliefs and behaviours in respective cultures. Dressler, Balieiro, and Dos Santos (1998) have shown that cultural norms regarding the possession of material goods and the ability to participate in leisure activities that informants agree form part of a successful lifestyle are positively related to indicators of their physical and mental health. Dressler (2004) argued that “lower cultural consonance is a function of low socio-economic status; furthermore, cultural consonance mediates the association of socio-economic status and health outcomes” (pp. 28–29). We feel, therefore, that CCL, not considered together with material possessions, is likely to mediate the SES–health relationship both directly and indirectly by influencing satisfaction with leisure.

Unfortunately, our understanding of leisure and its effects on other aspects of life, including health, is almost entirely based on research conducted in the West, principally in English-speaking countries. Roberts (2010), for example, claimed, “Over the last 40 years, contributions to leisure studies has become less diverse, specifically more Anglophone” (p. 164). Partly in response to this problem, our study is part of a larger project commissioned in 2004 by the World Leisure Organization with the goal of examining aspects of leisure in urban China in an effort to increase the scope of leisure research both there and worldwide. Dong and Chick (2012) provide a descriptive account of the results of the project, including the survey that forms the basis for the present study.

In our study, we examined hypotheses based on survey data gathered in six large cities in China. The survey included questions regarding a set of leisure activities and a set of leisure constraints, informant participation in the activities and measures of leisure satisfaction, self-rated health and demographics. We used fundamental social cause theory (FSCT; Link & Phelan, 1996) as a framework for the study. According to FSCT, variables that follow from individuals’ rank in the local social system mediate the persistent, but indirect, relationship between SES and health. We proposed that leisure constraints, CCL and leisure satisfaction are among the many variables that reflect social rank. Therefore, we hypothesised the following:

H1: SES negatively affects leisure constraints. Individuals of higher SES will regard leisure constraints as less important.

H2: Leisure constraints negatively affect CCL. Individuals who perceive leisure constraints to be greater in importance will report being less able to engage in leisure activities agreed-upon as characteristic of a successful lifestyle.

H3: CCL positively affects leisure satisfaction.

H4: Leisure satisfaction positively affects self-reported health.

Literature review

This study is based on two theoretical foundations, FSCT and cultural consonance theory, which are addressed in the following. We also briefly examine the variables in the study.

Theoretical foundations

Link and Phelan (1996) developed FSCT in an attempt to explain the persistent relationship between SES and health. According to FSCT, the relationship between SES and health results from resources that are afforded by higher SES and constrained by lower SES. These include money, knowledge, power, and beneficial social connections (Phelan, Link, & Tehranifar, 2010). SES has been shown to relate both leisure constraints (Raymore, Godbey, & Crawford, 1994) and leisure satisfaction, which have been associated with mental and physical health (Spiers & Walker, 2008). Based on the literature reviewed, we argue that leisure constraints, CCL and leisure satisfaction should also be considered in the array of proximate health-related mediators in the SES–health relationship as described by FSCT. Anthropologists generally consider culture to be learned and shared knowledge, values, beliefs or, more generally, information. Cultural consonance theory and analysis is based on the concept of cultural consonance meaning that culture is an information that members of a coherent social group are in substantial, although not necessarily perfect, agreement (Romney, Weller, & Batchelder, 1986). Cultural consonance theory takes the next step and relates agreed-upon, or cultural level, information to individual level beliefs and behaviours. For example, Dressler (2012) and Dressler et al. (1998) found in studies in Brazil and in the southern USA that informants strongly agreed on the importance of possessing certain material items (e.g., TVs, refrigerators, autos) and engaging in particular leisure activities (e.g., reading or watching TV) to have what the informants regarded as a successful lifestyle. Dressler et al. then related this agreed-upon, or cultural level, information to the beliefs and behaviours of individuals. Individuals who exhibited the greatest cultural consonance (i.e., they varied least from their cultural standard in their own behaviour) had the best health indicators. One of our goals was to extend this line of research with respect to leisure distinct from the effects of material possessions.

Variables

SES is commonly used as a control variable in social science research. In line with FSCT, however, we used it in an explanatory sense. SES is generally operationalised as a combination of income and education, although occupational status is often taken into account as well. Regarding leisure, Howard and Crompton (1984) found that low SES was related to infrequent use of recreation facilities while Moore, Diez-Roux, Evenson, McGinn, and Brines (2008) determined that low income neighbourhoods in North Carolina, New York and Maryland were 4.5 times less likely to have commercial and public recreational facilities than high income areas. Raymore et al. (1994) found SES to be negatively related to the perception of intrapersonal, but not interpersonal and structural, constraints among a sample of adolescents.

Jackson (2000) defined *leisure constraints* as “factors that are assumed by researchers and/or perceived or experienced by individuals to limit the formation of leisure preferences and/or to inhibit or prohibit participation and enjoyment in leisure” (p. 62). Constraints can include gender, race, class, ethnicity, age, time availability, money, access to leisure sites, partners, health and cultural norms (Mannell & Loucks-Atkinson, 2005). Leisure constraints are typically thought to have negative effects on variables related to the quality of life such as leisure participation, leisure satisfaction, emotional well-being and physical and mental health (Spiers & Walker, 2008). In their recent review of hierarchical leisure constraints theory, Godbey, Crawford, and Shen (2010) cited



Figure 1. Path model with leisure-related variables hypothesised to mediate the relationship between SES and health.

numerous studies involving additional correlates of leisure constraints. We proposed that leisure constraints affect the relationship between shared cultural models of leisure and the ability of individuals to engage in activities consonant with those models.

CCL is a new term that we have introduced in this paper. Dressler (2012) defined cultural consonance as, “The degree to which individuals approximate, in their own beliefs and behaviors, the prototypes for belief and behavior encoded in shared cultural models” (p. 390). Culture consonance, therefore, refers to the match between culture and its prescriptions and proscriptions and the beliefs and behaviours of individual members of cultures. Dressler (2012) and Dressler et al. (1998) have shown in settings in both the USA and Brazil that indicators of mental and physical health (e.g., measures of depression and blood pressure) varied positively with cultural consonance in material possessions and leisure activities. When individuals were able to possess things and participate in leisure agreed-upon as important for a successful lifestyle, their health indicators were more positive.

Leisure satisfaction has long been a concern of leisure researchers as an outcome variable and as it relates to other important variables such as reduced levels of stress (Mausbach et al., 2012) and general health and well-being (Mannell, 2007). Since chronic stress adversely affects both mental and physical health (Marmot, 2004), we believe that leisure satisfaction may contribute importantly to self-rated health.

Self-rated health was another variable we operationalised for our study. DeSalvo, Bloser, Reynolds, He, and Muntner (2006) found that persons rating their health as poor had double the rate of mortality as those individuals who rated their health as excellent after adjusting for covariates such as depression, cognitive functioning, and SES. After controlling for objectively measured health status, Mossey and Shapiro (1982) determined that the risk of mortality among individuals who reported their health as poor was almost three times higher than those who claimed to be in excellent health. They also found that self-rated health correlated moderately ($r = 0.34$) with health status as rated by a physician.

In summary, our research was based on two theoretical foundations. First, FSCT provided a framework for considering a variety of SES-dependent resources as mediators in the SES–health relationship. We hypothesised that leisure-related variables are important mediators between SES and health. Second, cultural consonance theory (Dressler, 2012) provided a means for comparing culturally prescribed leisure activities with the activities that individuals report that they engaged in as well as provided a prediction about the effects of that comparison with self-reports of their health. The hypothesised relationships are illustrated in Figure 1.

Methods

Data for our study were based on a 2006 survey in six large cities (Beijing, Chengdu, Hangzhou, Qingdao, Shanghai, and Shenzhen) in China. The lists of leisure activities and

leisure constraints used in the survey were developed from ethnographic free listing conducted earlier in five of the six cities (Shenzhen was added later as an additional study site). The 176 free listing informants provided final lists of 89 activities and 37 constraints. Details of the free listing procedure and results are given in Dong and Chick (2012).

Variables and measurement

We operationalised SES as the sum of informant income measured in yuan¹ per month (collapsed into nine categories), and education, measured as highest level completed (collapsed into four categories), which provided a 12-point scale with a nearly normal distribution. We used the results of an exploratory factor analysis (EFA) of 37 leisure constraints found in earlier research (Dong & Chick, 2012). The eight constraints factors identified were *lifestyle* (e.g., lifestyle issues, social/cultural environment), *service quality* (e.g., crowding at leisure sites, safety at leisure sites), *personal* (e.g., lack of interest, not in the mood), *transportation* (e.g., no vehicle, lack of driving experience), *domestic* (e.g., busy with childcare, busy with care of elders), *financial* (e.g., no income, fees too high), *stress* (e.g., personal stress, life pressures) and *time* (e.g., lack of time, busy with job). Because constraints negatively affect leisure participation, we felt that they should lead to reduced CCL to the degree that individuals are able to participate in leisure activities that are culturally agreed-upon as important to a good lifestyle.

By summing all of the informants' importance ratings for each of the 89 activities, we created sample level importance values, which allowed us to rank the activities from most to least important. We correlated each informant's self-report of how frequently he or she participated in the activities with the agreed-upon importance values. Higher positive correlations indicated that individuals reported participating more frequently in activities that were agreed-upon as important, which indicated high CCL. Lower or negative values indicated low CCL.

We measured leisure satisfaction with a single item ("How satisfied are you with your current leisure lifestyle?") rated by survey informants on a 7-point Likert-type scale that ranged from *extremely dissatisfied* to *extremely satisfied* since we wanted a measure of global satisfaction rather than a summary of subscales. As Acock (2013) noted, when "measuring a concept, it is desirable for that concept to be unidimensional" because "when there is more than one dimension, a single score becomes difficult to interpret" (p. 1). Like our measure of leisure satisfaction, we assessed health using a single survey item with a 5-point Likert-type scale that included the categories *poor*, *fair*, *good*, *very good* and *excellent*. Single item measures of self-rated health have exhibited satisfactory test-retest reliability and validity when compared to objective measures of health in both developed and developing countries (Ericsson, Undén, & Elofsson, 2001).

Survey

The survey included questions regarding how important each of the activities were to informants, how important each of the constraints were to informants with both measured on 1–5 Likert-type scales (unimportant–important), and how frequently (never, occasionally, regularly) informants participated in each of the activities. Informants also provided their occupation, gender, highest level of schooling, income, age and marital status. The survey was first developed in English and then translated to Chinese (Mandarin) by two

native speakers who were also fluent in English. Discrepancies were resolved between the two translators. The survey was administered face-to-face to a total of 772 individuals who were approached at public locations such as bus stops, train stops, parks and shopping areas by researchers from the Asia Pacific Center for the Study of Leisure located in Hangzhou, People's Republic of China. A total of 371 females and 369 males were surveyed. All were over the age of 18 years with a median age of approximately 30 years. Sample characteristics, with the exception of education, approximated those reported in censuses² for the cities at the time of the survey except that sample members had considerably higher levels of educational attainment than average for urban Chinese. A detailed description of the sample is available from Dong and Chick (2012).

We used the Stata 13 statistical package for our analyses. Using Stata's structural equation modelling (SEM) routine, we constructed a path model based on Figure 1 using the eight factor scores from the EFA of the constraints items in place of the single item, leisure constraints. This step permitted a preliminary examination of the paths from SES to the constraints as well as from the constraints to the remaining variables. We then generated a measurement model using confirmatory factor analysis of the leisure constraints and retained indicators that had factor loadings of 0.50 or greater. Finally, we developed a full structural model to test the hypotheses presented earlier and illustrated in Figure 1.

Results

Path and measurement models

Path analysis indicated significant paths from SES to lifestyle ($\beta = -0.11$, $z = -2.53$, $p = 0.012$), service quality ($\beta = -0.08$, $z = -1.89$, $p = 0.059$), transportation ($\beta = -0.27$, $z = -6.70$, $p = 0.000$), stress ($\beta = -0.16$, $z = -3.69$, $p = 0.000$) and financial constraints ($\beta = -0.34$, $z = -8.86$, $p = 0.000$). Paths from lifestyle ($\beta = -0.15$, $z = -1.99$, $p = 0.047$), service quality ($\beta = 0.17$, $z = 3.06$, $p = 0.002$) and financial constraints ($\beta = -0.13$, $z = -2.47$, $p = 0.014$) to CCL were significant. Paths from CCL to leisure satisfaction ($\beta = 0.19$, $z = 4.89$, $p = 0.000$) and leisure satisfaction to self-rated health ($\beta = 0.17$, $z = 4.44$, $p = 0.000$) were both significant. The significant paths from SES to leisure constraints were negative, as expected, but only two of the three paths from constraints to CCL were negative. Unexpectedly, the path from service quality constraints to CCL was positive. Based on the path analysis, we dropped the personal, transportation, domestic, stress and time leisure constraints and retained lifestyle, service quality and financial constraints for further analysis.

We examined the measurement model for the three remaining leisure constraint factors using the maximum likelihood with missing values (MLMV) option in Stata's SEM routine. Fit statistics ($\chi^2(41) = 120.657$, $p < 0.000$; root mean square error of approximation (RMSEA) = 0.051; and comparative fit index (CFI) = 0.978) were very good, based on recommendations by Hu and Bentler (1999).

Structural equation model

Based on the results of the path analysis and measurement model analysis we ran a full SEM with SES predicting lifestyle, service quality and financial constraints, the constraints predicting CCL, CCL predicting leisure satisfaction and leisure satisfaction predicting self-reported health using the MLMV option. The values for RMSEA (0.072)

and CFI (0.910) were satisfactory with a coefficient of determination (CD) of 0.154. While the paths from service quality ($\beta = 0.139$, $z = 2.96$, $p = 0.003$) and financial constraints ($\beta = -0.131$, $z = -3.28$, $p = 0.001$) were significant, the path from lifestyle constraints to CCL was not ($\beta = -0.017$, $z = -0.34$, $p = 0.736$). Therefore, we removed lifestyle constraints from the model. The final structural model is shown in Figure 2.

The fit indices for the final model were good ($\chi^2(42) = 124.887$, $p = 0.000$; RMSEA = 0.051; CFI = 0.970; CD = 0.143) and all paths were significant. The paths from SES to both financial and service quality constraints were negative, supporting hypothesis 1. The path from financial constraints to CCL ($\beta = -0.132$, $z = -3.32$, $p = 0.001$) was also negative, indicating that greater importance attributed to financial constraints predicted lower CCL. This finding supported hypothesis 2. However, the path from service quality constraints to CCL was positive ($\beta = 0.132$, $z = 3.18$, $p = 0.001$), which was contrary to hypothesis 2. The paths from CCL to leisure satisfaction ($\beta = 0.187$, $z = 4.89$, $p = 0.000$) and from leisure satisfaction to self-rated health ($\beta = 0.172$, $z = 4.44$, $p = 0.000$) were positive and supported hypotheses 3 and 4. The indirect effect of financial constraints on self-rated health was weak, although significant ($\beta = -0.002$, $z = -3.28$, $p = 0.001$), while the indirect effect of CCL was somewhat stronger ($\beta = 0.018$, $z = 4.80$, $p = 0.000$). No other indirect effects were significant. The model accounted for 14.28% of the total variance.

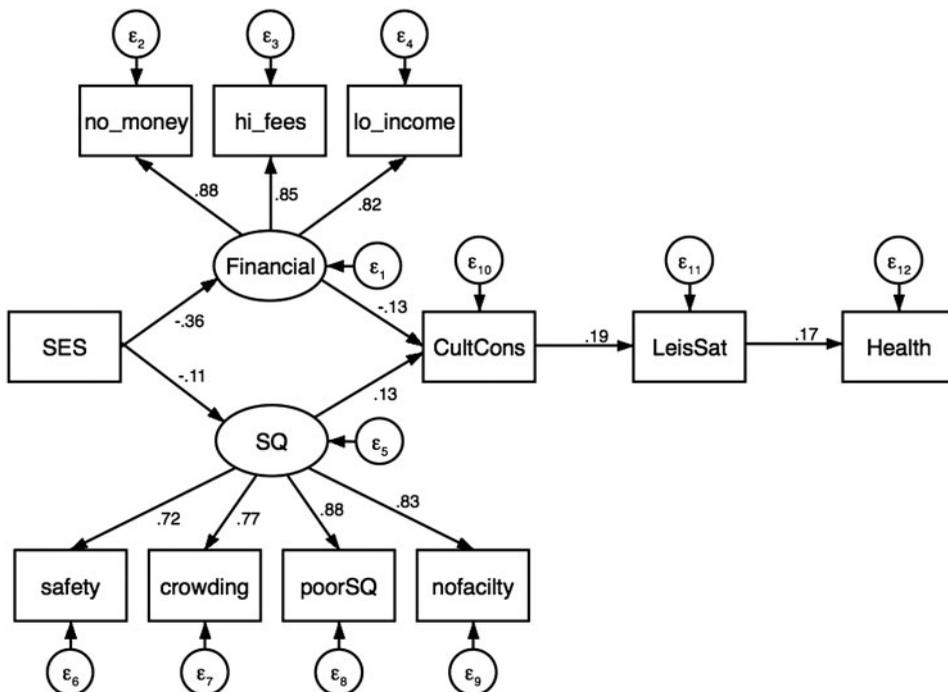


Figure 2. Final structural model relating SES, leisure constraints, cultural consonance in leisure and leisure satisfaction to self-rated health.

Discussion

The purpose of this study was to examine leisure constraints, CCL and leisure satisfaction as mediators of the SES–health relationship in six large cities in China. We used FSCT, a perspective specifically developed to help explain the persistent SES–health relationship, as a framework for the study. Our first hypothesis that SES would be negatively related to leisure constraints was partially supported as only five of the eight leisure constraints identified by Dong and Chick (2012) were significantly related to SES. All of the relationships were negative, as hypothesised. Not particularly surprising was that SES was negatively related to the perceived importance of financial constraints. Similarly, constraints related to transportation, stress and lifestyle seemed as though they would be more important to individuals of lower SES while constraints related to personal qualities (e.g., lack of interest), domestic concerns (e.g., childcare) and time, may not. We wondered, however, about both the relative lack and weakness of the relationships between SES and leisure constraints when we thought they should be more robust. Hence, we feel that the SES–leisure constraints relationship demands additional research both in the Anglophone world and elsewhere.

We hypothesised (H2) that leisure constraints would have a negative effect on CCL. This was borne out by financial constraints. Thus, the more importance attached to financial constraints, the less able individuals were to participate in leisure activities associated with a successful lifestyle, which seemed reasonable. Contrary to hypothesis 2, however, the relationship between service quality constraints and CCL was positive. This finding indicated that greater importance attributed to service quality constraints led to a better fit between the agreed-upon importance of leisure activities and individuals' engagement in them. This result was highly unintuitive and given the current information, we cannot explain it.

We hypothesised (H3) that higher levels of CCL would lead to greater leisure satisfaction and the results supported this position, although we expected the relationship to be stronger than it turned out to be. While this particular relationship has never been examined previously, we believed it was reasonable since people seemingly should be more satisfied when they are able to engage in forms of leisure that are regarded positively by the larger society.

We hypothesised (H4) that leisure satisfaction would relate positively to self-reported health. Our results provided significant, although modest, support. This result is intuitive and well supported in the literature (e.g., Mroczek & Spiro, 2005).

Examining the overall model is also worthwhile. The CD, a measure of how well the model fits the data, is analogous to the R^2 value in regression and equaled 0.14 in our case. While the maximum value of the CD is 1.0, no standards exist to indicate a strong versus a weak model. However, an R^2 of 0.14 equals a Pearson's r of 0.37, a medium effect size according to Cohen (1992). Because all of our hypotheses were supported, at least to some extent, also suggested that FSCT provided a reasonable starting point for addressing the effects of SES on leisure-related variables and their effects on health.

We feel, therefore, that our study contributes to the development of theory in leisure studies, particularly through the addition of CCL to the repertoire of concepts that can be used as either outcome or predictor variables as well as to the roles of other leisure-related variables as mediators in the SES–health relationship. We also feel that since the SES–health gradient is ubiquitous cross-culturally (Phelan et al., 2010), FSCT offered a flexible framework for examining how leisure constraints, CCL, leisure satisfaction and possibly

other leisure-related variables relate to it. We believe this study makes a contribution to the nascent research on leisure in non-Western contexts, specifically in China as the world's most populous nation and likely soon to have the world's largest economy.

Nevertheless, all studies have weaknesses. Our total sample size is relatively large but it was spread across six very large cities in China and was not randomly chosen. Therefore, we cannot claim that it is representative. Moreover, none of our informants lived in smaller cities, towns or rural areas in China or were members of minority groups. Hence, our results may apply only to the six large cities where our surveys were administered. We recommend that intensive ethnographic research is required to sustain an adequate programme of research on leisure in China's complex society. While self-reports of health have shown substantial validity and reliability, objective measures of physical health would be useful in conjunction with self-reports. Including measures of mental health would improve future research as well. Finally, we recommend continued examination of CCL as a predictor, and probable source, of reduced stress, greater happiness, higher quality of life, and as we have shown here, higher satisfaction with leisure and more positive perceptions of one's own health.

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Notes

1. Yuan is a synonym for the renminbi, the currency of the People's Republic of China.
2. China Statistic Yearbook (2005): Bulletin of Beijing 2005 Census, Bulletin of Shanghai 2005 Census, Bulletin of Hangzhou 2005 Census, Bulletin of Chengdu 2005 Census, Bulletin of Qingdao 2005 Census, Bulletin of Shenzhen 2005 Census.

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