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A MULTIVARIATE MODEL OF ADVENTURE PROGRAM PERCEPTIONS

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Continued interest in program evaluation and improvement has led to calls for additional multivariate research, better measurement tools, and more complex research designs (Roberts & Yerkes, 2000; Ewert & Sibthorp, 2000). Through multivariate studies, researchers and practitioners can better discern which components of adventure programs have the greatest explanatory power regarding program outcomes, and which variables interact to facilitate or impede the learning of programmatic objectives.

Recently, new instrumentation has been developed to better address the needs of adventure education research and evaluation. The Life Effectiveness Questionnaire (LEQ) was designed to measure eight domains that are possible outcomes for adventure programs and can also be used as a global index of Life Effectiveness (Neill, Marsh, & Richards, 1997). The Characteristics of the Experience Scale was designed to measure the students' perceptions of their experiences during the course along five domains: including Personal Empowerment and Learning Relevance (Sibthorp, 2001). Additionally, predisposing factor such as attitude towards attendance, expectations for learning, gender, and age remain possible sources of variation (e.g., Ewert, 1988; Herbert, 1998).

METHODS

The sample for this study consisted of 190 participants on Broadreach adventure programs during the summer (June-August) of 2001. Self-selected participants completed a pretest of the LEQ approximately three weeks before arriving at their course locations. At this same time data were collected on predisposing factors such as expectations for learning and attitude towards attendance. This initial sample was 55% female and had a mean age of 15.8 years. After course completion, the students were administered the LEQ (as a posttest) and the CES. A path analysis using LISREL 8.5 was used to examine the

hypothetical relationships between each of five observed variables.

RESULTS

Data were entered, cleaned, screened for univariate outliers, leaving a usable sample size of $N=122$. The model tested included five observed variables: expectations, perceptions of personal empowerment, perceptions of learning relevance, and the pre and posttest composite scores of the LEQ. Standardized path coefficients are reported in parentheses. The expectations variable significantly predicted both perceptions of personal empowerment (.24) and perceptions of learning relevance (.18). The LEQ pretest score (.39) and the perceptions of personal empowerment (.29) significantly predicted the LEQ posttest score. The hypothesized relationship between perceptions of learning relevance and the LEQ posttest score (.12) was not significant at $p < .05$. Overall, the model was acceptable but incomplete ($\chi^2 = 5.30$, $df = 3$, $p = .15$; RMSEA = .080).

DISCUSSION

The results support the importance of predisposing exceptions in the adventure experience (e.g., Ewert, 1988; Herbert, 1998), specifically that students with higher exceptions for learning hold more positive perceptions of both personal empowerment and learning relevance at course completion (as found by Sibthorp, 2001a). The developmental outcome measured by the LEQ at pretest was found to be significantly related to both the pretest LEQ score and the perceptions of personal empowerment on the course. This importance of student involvement in course decisions and responsibilities is a well-documented premise of outdoor experiential programs (e.g., Hastie, 1995; Schoel, Prouty, and Radcliffe, 1988). While additional research remains necessary to adequately assess which participant and program characteristics are most

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related to developmental outcomes, research such as this allows adventure education practitioners and researchers to better understand the complexities of the adventure experience.