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THE EFFECTS OF INTENTIONAL RECREATION PROGRAMMING ON INTERNALIZATION OF TYPE 1 DIABETES MANAGEMENT AMONG ADOLESCENTS

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This study, with the help of the Utah Association of Diabetes Educators, attempted to determine the effectiveness of using self-determination theory (SDT) at an adolescent diabetes camp to increase internalization of diabetes management. Existing evidence indicates that adolescents manage less than 20% of their diabetes, far less than needed (Anderson, 1985). Failure to manage and internalize behaviors for regulating glycemic levels can lead to a number of very significant problems (Bryden, Peveler, Stein, Neil, Mayou, & Dunger, 2001). This limited internalized behavior may be explained by SDT. Self-determination theory provides a basis for creating an autonomy-supportive environment while fostering competence, autonomy, and relatedness (Deci & Ryan, 2000).

The sample for this 6 ½-day study consisted of 134 participants from a Utah-based Teen Week (experimental group) and an Idaho-based Teen Week (comparison group) during the summer of 2003. Many aspects of the experimental camp used SDT as a framework (e.g., diabetes education). The questionnaire addressed the dependent variables of competence for diabetes management (CDM), autonomy for diabetes management (ADM), relatedness for diabetes management (RDM), and perception of an autonomy supportive camp staff. The instrument used was created from existing instruments (i.e., Treatment Self-Regulation Questionnaire).

Analysis of covariance (ANCOVA) tested the statistical significance of the first hypothesis that the experimental camp would have higher mean scores than a comparison group of campers not participating in a theory-based program. Blocked regression was used to assess the statistical significance of hypothesis two, that an autonomy supportive camp staff would be a significant predictor of post-camp perceptions of CDM, ADM, and RDM. Both analyses controlled for pretest scores.

The sample size was 87. The experimental group has 41 matched cases and the comparison group had 46 matched cases. The ANCOVA revealed significance ($p < .05$) means between the groups for the relatedness of diabetes management variable. Blocked regression for the experimental group's results indicates that perception of an autonomy supportive camp staff was a significant predictor of post-camp perceptions of CDM, ADM, and RDM. The regression equation combining both perceptions of an autonomy supportive camp staff and pre-camp perceptions of CDM, ADM, and RMD showed a significant increase in R^2 (ranging from .460 - .895, $p < .05$) over that of the regression equations with only pre-camp perceptions of CDM, ADM, and RDM (R^2 ranging from .246 - .845, $p < .05$). Thus, the participants' perceptions of autonomy support explained a significant amount of the variance in post-test scores of the dependent variables not accounted for by the pre-test scores.

Diabetes camp may be an avenue to target some of the self-management motivational difficulties with which adolescents are struggling. According to results, autonomy supportive camp

environments appear to be an important indicator of post-camp perceptions of self-determination. The literature indicates a need for more theory-based programming that address specific outcomes. With further research, practitioners and researchers can collaboratively design intentional recreation programs for adolescents with diabetes. Collectively, the recreation profession and diabetes camps could help adolescents to minimize complications due to their illness.

References

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