

# **Overview and Conclusions Based on Recent Studies Utilizing The Leisure Diagnostic Battery**

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## **INTRODUCTION**

The various versions of the Leisure Diagnostic Battery (LDB) have been available for use by practitioners and researchers since 1984. Based on sales of the instruments and accompanying manual, the LDB appears to be a widely utilized leisure assessment instrument. In addition to its use as the assessment instrument of choice, the LDB is also increasingly used in a variety of research studies.

Several overview article's have appeared summarizing some of the early findings regarding the psychometric properties of the LDB (Ellis and Witt, 1984, 1986; Witt and Ellis, 1985, 1989). Additional research involving the LDB has also been reported in the literature and at conferences, while other research has been shared with the authors of the LDB through personal communication. These latter efforts have helped to provide further evidence of the psychometric soundness of the LDB and its applicability to research and assessment in a wide variety of settings.

Thus, the purpose of this paper is to update earlier published information by summarizing some of the more recent studies that have utilized the LDB, and to provide some analysis of the overall utility of the LDB as a assessment and/or research tool. Where appropriate, studies noted in earlier summary articles will also be included. The intent of the review is to suggest strengths and weaknesses of the LDB and suggest possible needs for upgrading the scales in the future.

## **APPLICATIONS OF THE LDB**

The LDB has been used in three types of studies. In the first instance, investigators have sought to establish norms for a particular group of subjects. In this case, investigators are usually trying to establish cut-off scores for determining clients who are candidates for intervention or remedial activities. A second group of studies have focused on differences in LDB scores for individuals differing on some psychological, sociological or other characteristic. Results of these studies help to evaluate the predictive and discriminant validity of the LDB. Most of these efforts have been based on a theoretical foundation linking differences in a particular trait or characteristic to differences in LDB scores. Finally, the LDB has been used as the dependent variable in several studies designed to show the efficacy of a particular intervention strategy such as leisure education or an institutional therapeutic recreation programme. In several cases, a single study has dealt with one or more areas of investigation.

## **NORMATIVE DATA GENERATION**

Almost all of the studies that have utilized one of the LDB scales have yielded data that are useful in establishing norms. With some gaps, data have been generated for junior high school students, college age students, adults, middle-age adults, and older adults. In addition, data for groups of individuals with a specific disability have also been generated (e.g. stutterers; severely physically disabled children and adults; suicidal females; various psychiatric populations; and special education students). Of particular interest is the similarity of means and standard deviations for similar groups of subjects. In addition, few differences in scores have been found that are related to age and/or sex.

One weakness of the data collection process is that no comprehensive study of norms across all age, sex, and disability groupings has been undertaken to date.

## **RELATIONSHIP OF LDB SCORES TO OTHER VARIABLES**

### Predictive Validity

Studies undertaken with the LDB have provided evidence of predictive validity. For example, in two studies that investigated the relationship of shyness to LDB scores, both yielded evidence that shy college students scored significantly lower on the short form of the LDB (Marr, 1988; Lee and Halberg, in press). Russoniello (1989) found a significant inverse relationship between LDB short form scores and depression. Earlier studies summarized by Witt and Ellis (1989) have found significant correlations between LDB scores and life satisfaction, leisure satisfaction, leisure attitudes, self esteem, and self concept. In a few cases, researchers have not found significant correlations. For example, Carpenter (1988) did not find a relationship between scores on a life experiences survey and short form scores on the LDB.

### Discriminant Validity

In a number of studies, researchers have compared LDB scores for two or more sub-groups within a sample. To date, in most of the studies the LDB has successfully discriminated between groups and yielded results in the hypothesized direction. In most cases, the differences were statistically significant. For example, differences have been found between moderately and seriously suicidal females (Malkin, 1988), minimally physically disabled and severely disabled individuals, older adults in independent living versus congregate versus nursing home environments, and alcoholics in treatment for substance abuse versus sober alcoholics.

## **THE EFFICACY OF TREATMENT OR LEISURE EDUCATION PROGRAMMES**

Several studies have been conducted to determine the effects of a designed intervention programme on aspects of a client's leisure functioning. One or more of the LDB scales have been included as one of the dependent variables. Zoerink (1988) studied the impact of a short-term leisure education programme utilizing values clarification techniques on the leisure functioning (LDB long form, version A) of four young people with Spina Bifida. Results were mixed with only one of the four showing improvement and one showing decrements in LDB scores. The short-term nature of the leisure education programme and the limited sample may have accounted for the inclusive results. Knop (1989) studied the impact of a leisure education programme on the perceived freedom in leisure scores (short form, version A) for subjects on an adolescent unit at a major medical centre. Mean post-test scores were significantly different for the experimental group versus a control group who did not participate in the programme.

Brown (1989) used several of the LDB long form scales (competence and control, version A) along with other instruments to study the effects of a self advocacy training programme for adults with severe physical disabilities from an adult day care centre. The experimental group showed positive changes in LDB scores while a matched control group did not show differences in post-test results. Albarron (1984) studied the impact of an attribution theory-based therapeutic recreation programme on scores on selected scales of the leisure diagnostic for a control and experimental group of spinal cord injured patients at a VA hospital. Overall, post-test scores were significantly different for the control group after

controlling for the pre-test scores.

## CONCLUSIONS

Data to date suggest that the LDB has strong psychometric properties that justify use of the various scales as assessment and research tools. Most data have given strong evidence for the validity of the LDB scales. In addition, the LDB seems to be increasingly used as a dependent variable in studies seeking to show the efficacy of therapeutic recreation services or leisure education interventions. However, since issues of reliability, validity, and applicability are ongoing concerns, ongoing efforts to assess these factors through future research involving the LDB should continue. In addition, there is the need to complete a comprehensive study that would yield normative data from a single sample.

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