

An Experimental Evaluation on the Effectiveness of a Web-based Training Program in Functional Behavioral Assessment and Interventions with Special Education Schools in Singapore

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KEY IMPLICATIONS

- Using web-based training as a viable alternative to provide instruction to school personnel in behavioral support.
- Building capacity among school personnel in Functional Behavior Assessments (FBA) and behavioral intervention to better manage challenging behavior observed among students in the classroom.

BACKGROUND

Currently, of the 5500 children who attend Special Education (SPED) schools in Singapore, 40% have Autism Spectrum Disorder (ASD), 40% have Intellectual Disabilities (ID), and the remaining have other disabilities. There is, thus, a high possibility that special educators in SPED schools have students with ASD and/or ID in their classrooms. As these conditions are often associated with elevated levels of challenging behaviors, special educators are likely to encounter challenging behaviors in their classrooms on a frequent basis. With an increasing number of students being diagnosed with ASD, coupled with the extension of the Compulsory Education Act to children with moderate to severe special needs which takes effect in 2019, there is an urgency to build the capacity of special educators.

FOCUS OF STUDY

The primary aim of this study was to evaluate participant outcomes of a web-based instructional program in FBA and behavioral interventions, which could potentially be a more cost-effective and efficient training method. A secondary aim of the study was to validate a dependent measure, specifically the Ability in Behavior Assessment and Intervention (ABAIT) scale, to measure knowledge in FBA and behavioral interventions across school personnel in Singapore.

KEY FINDINGS

Results indicated that both training methods or instructional modalities were effective and exhibited significant gains in enhancing participants' knowledge of FBA and behavioral interventions. Nevertheless, the face-to-face workshop produced greater gains in participants' knowledge than did the web-based program. Similarly, the face-to-face training group showed more significant increases in their perceived confidence in applying FBA and behavioral intervention procedures when compared to the website training group. Additionally, the ABAIT scale was found to be a valid and reliable measure that could be used to collect competency data from school personnel

in function based behavioral assessments and interventions within the Singapore context. This is the first study in Singapore to explore and compare training methods for special educators in behavior supports.

SIGNIFICANCE OF FINDINGS

Results of this study showed that the training program and its components (relevant course content, the use of case study examples, brief practice activities) were effective in enhancing participants' knowledge of FBA and interventions across both instructional modalities (face-to-face workshop and web-based instruction). Hence, a potential contribution of this study is the development of a web-based training program that could provide a platform for online training to school personnel in behavior supports in Singapore. A secondary contribution of this study was the development and validation of the ABAIT scales that could be used in the international and Singapore context to evaluate competency among school personnel in different areas of behavioral support.

POPULATION

For phase 1 of the study, 292 special educators across five SPED schools participated in the study. For phase 2 of the study, data on 104 special educators from four SPED schools and one EIPIC centre were included in the analysis.

RESEARCH DESIGN

The study was completed across two phases:

- a. Phase 1 focused on the validation of the ABAIT scale
- b. Phase 2 focused on evaluating the effectiveness of the teacher training program in FBA and behavioral interventions across the two instructional modalities (face-to-face workshop vs. web-based instruction).

For phase 1, the psychometric properties of the ABAIT scale was established in terms of its validity and reliability. For phase 2, a randomized control trial was conducted whereby participants were randomly assigned to attend either a traditional face-to-face workshop ($n = 55$) or web-based instruction ($n = 49$).

Pre- and post-test data were gathered from all participants across two dependent measures within the content area pertaining to behavior assessments and interventions: (1) a competency-based scale (i.e. the ABAIT scale) and (2) a perceived skills inventory (Skills and Needs Inventory in Functional Behavior Assessments and Interventions, or the SNI-FBAI). These outcomes were used to evaluate the effectiveness of the training program across both instructional modalities – face-to-face and web-based training.

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