Exploratory Analysis of Institutional Integration of Students with LD in STEM

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Introduction

Institutional integration can present challenges for students with learning disabilities (LD), who can have difficulties communicating about their LD with faculty and peers. Institutional integration is contributed to by peer and faculty interactions, academic development, faculty concerns for teaching, and commitments to goals. Integration into the educational institution is an integral component to a successful undergraduate experience and a predictor for their persistence in higher education. [1]

Purpose

To explore campus integration of students with LD enrolled in a study implementing a comprehensive model of support.

Methods

Participants: Participants were undergraduate students with LD; N = 16 meetings attended by an average of n = 9 scholars; n = 15 completed at least the baseline and one repeated assessment using the Institutional Integration Scale (IIS)

Design: Multi-method analysis using content analysis of discussion data to inform interpretation of quantitative analysis of change in IIS scores.

Instrument and Statistical Analysis: IIS is a 20-item self-report instrument measuring domains of peer and faculty interaction, academic development, faculty concerns for teaching, and commitments to goals. SPSS software was used to run paired samples t-test.

Discussion Data:

Content analysis of the transcriptions of 16 group discussions held over a period of two consecutive academic years.

Analysis: Two researchers independently analyzed transcripts for content relating to individual IIS questions. Paired t-tests (p < 0.05) were used to assess IIS domain scores. Data was statistically analyzed through the five subdomains (peer group interaction, faculty concern for teaching, academic/intellectual development, faculty interaction, and goals).

Statistics were run comparing each subdomain score across three points: baseline, spring 1, and spring 2.

Results

• There was a significant difference in institutional integration scale scores in the peer group interaction domain for baseline and spring 2; t(9) = 4.26, p = 0.002.

• Baseline (mean = 18.33, SD = 6.15); Spring 2 (mean = 27.90, SD = 4.25)

• Faculty concern, faculty interaction, academic and intellectual developmental, and commitment to goals did not significantly improve from baseline.

• Some participants felt that their LD hindered their ability to interact with others on campus, while others described the importance of having a peer support system. Interactions with faculty varied, as some professors readily accommodated participant needs, whereas other professors were perceived as less understanding.

Discussion

• Through participation in a model of support, scholars were able to engage with other peers with LD which may have contributed to feelings of connectedness to the university environment.

• Scholars receive training about communicating for accommodations which may have facilitated their ability to seek peers that would support their academic and social needs.

• Due to LD being an invisible disability, scholars may not have been aware that there are other students on campus with similar differences and thus may have felt as if other students had different perspectives prior to engaging in a model of support.

• Having a mentor whom they met with regularly may have increased the scholars’ interpersonal skills and ability to effectively express their ideas.

• This study may be too underpowered to detect differences in 5 of 6 IIS domain scores.

Conclusion

Further research may include:

• Interaction between perceived institutional integration and overall quality of life.

• The degree to which the improvement in the peer interaction domain could be due to the mentorship component of the model of support.

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References


