



# DEVELOPMENT OF A PSYCHOEDUCATIONAL SUPPORT GROUP PROGRAM FOR NEWLY BRACED SCOLIOSIS PATIENTS - A PILOT STUDY

Megan Glahn Castille<sup>1,2,3</sup>, Gabriel Breaux<sup>1</sup>, Kelly Moton<sup>1</sup>, Danielle Porter<sup>4</sup>, Whitney Howie<sup>4</sup>, Annisa Ahmed<sup>4</sup>, Robert McLaughlin<sup>1</sup>

<sup>1</sup>Baylor College of Medicine, Houston, Texas; <sup>2</sup>Align Clinic, The Woodlands, Texas; <sup>3</sup>Scolios-us, Metairie, Louisiana;

<sup>4</sup>Texas A&M University, College Station, Texas

## INTRODUCTION

Social support and counseling have been suggested to mitigate the psychological impact of scoliosis and bracing and improve treatment adherence. Psychoeducation, a strategic method of providing information, resources, and coping skills, is often used by mental health providers during counseling. A combination of psychoeducation and social support has not been previously studied in the scoliosis population. Therefore, the purpose of this study was to develop a psychoeducational support group program for adolescents receiving a scoliosis brace and to assess the program's feasibility and efficacy.

## METHOD

This pilot study was approved by the Baylor College of Medicine Institutional Review Board (H-51464). Participants were recruited at their initial orthotic evaluation appointment from February to September 2023, at which point informed parental consent and participant assent were obtained.

*Participants:* Participants were adolescents between ages 10 and 17, had an idiopathic scoliosis diagnosis, and were receiving a brace for the first time.

*Apparatus:* Several outcome measures, including the GAD-7, SRS-22r, BSSQ-Brace, were used to assess participants at brace delivery, before the first psychoeducational session, and after the fourth session. Adherence monitors were used, but have been excluded from data analysis due to unreliable readings. The study protocol is outlined in Figure 1.

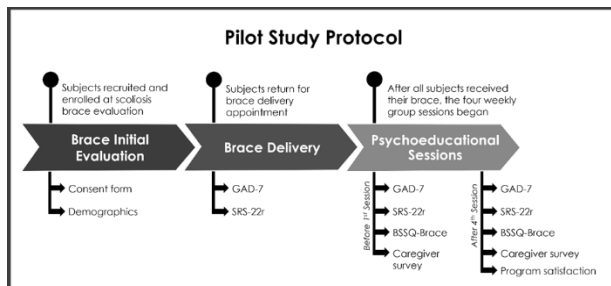


Figure 1. Study protocol. Abbreviations: GAD-7 = General Anxiety Disorder-7, SRS-22r = Scoliosis Research Society Score-22 revised, BSSQ-Brace = Bad Sobernheim Stress Questionnaire – Brace.

*Procedures:* A series of four online group-based psychoeducational sessions was conducted with three cohorts of participants. Topics covered included building community, fostering a strong sense of self, managing emotions, and coping with stress. The sessions were led by doctoral clinical psychology

students who were supervised by a clinical psychologist.

*Data Analysis:* Descriptive statistics, Friedman's test, and Wilcoxon signed-rank test were used to analyze responses.

## RESULTS

Ten participants completed the program. One was excluded from data analysis due to incomplete survey responses. Median age of participants was 11 (IQR: 2), and 8 were female. Group size ranged from 3-4 participants. Survey responses from all three data collection time points were compared using Friedman's test, and no significant differences were found. Eight participants found the sessions to be helpful or very helpful, and 8 reported that participating in a program like this is important or very important for someone new to bracing. Eight participants reported that they plan to use the strategies they learned to adhere to their prescribed brace treatment, and 8 were confident in their ability to make these changes.

Nine female parents completed the caregiver survey before the first and after the fourth session. One mother also had a scoliosis diagnosis. Although the decrease did not achieve statistical significance, absolute levels of parental perception of child stress were lower following the sessions ( $z = -1.77, p = .077$ ), as were perceptions of brace-related emotional outbursts ( $z = -1.63, p = .102$ ). Brace-related parental stress also trended downward ( $z = -1.41, p = .157$ ). All parents reported that they would recommend a program like this to a parent of a newly braced child.

## DISCUSSION

This innovative psychoeducational support group program was well-received by the participating adolescents and their parents. Participants found the program helpful and reported confidence in their ability to adhere to treatment. Limitations to this pilot study include the small sample size, which led to small cohort sizes, and the lack of adherence data.

## CONCLUSION

Psychoeducational support group programs show potential in helping adolescent scoliosis patients cope with their diagnosis and accept their brace.

## CLINICAL APPLICATIONS

Supporting adolescent scoliosis patients is a challenging but important task for clinicians. Psychoeducational support group programs are another tool clinicians can use to help patients feel emotionally supported.