

# Coping with Scoliosis: The UK Experience

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## Abstract

The aim was to identify patterns of coping with stress employed by people with scoliosis (PwS) and their parents. A sample of 167 PwS and their parents from the UK completed a questionnaire that assessed stress and coping, body image, acceptance of scoliosis, health locus of control, quality of life and pain. PwS and their parents reported differential patterns of stressors, coping styles and functional coping. Back pain (quality of life) and the Pain Rating Index – Miscellaneous (MPQ) were significantly associated with functional coping. The results should form the basis of a multidisciplinary service for PwS and their families.

## 1. Introduction

Scoliosis is defined as a three-dimensional lateral curvature of the spine that primarily develops and is treated during childhood and adolescence. Scoliosis is reported to impact negatively upon mental health [1], psychosexual functioning [2], body image [3], physical activities and social events [4], and parent-child relationships [5].

Coping with stress is a crucial dimension of psychosocial functioning as it may mediate the entire spectrum of psychosocial problems experienced by PwS. The coping response to stressors is composed of two inter-related components: (a) coping style (behaviours, emotions, or cognitions similar in their action) and (b) coping function (the psychological function a person assigns to their coping styles). Reliance upon emotion and avoidance coping is associated with poor psychosocial outcomes [6]. Therefore, the current research focuses on how PwS and their parents in the UK cope with life stress.

## 2. Methods

A sample of 167 PwS (n = 126) and their parents (n = 41) from the UK completed a questionnaire that included the following instruments: Functional Dimensions of Coping Scale (to assess stressors, coping style and coping function [approach, emotional regulation, reappraisal, and avoidance]); Iowa Body Image Scale, Acceptance of Scoliosis Scale, Quality of Life Profile for Spine Deformities, Multi-dimensional Health Locus of Control Scale, and the McGill Pain Questionnaire.

### 3. Results

The two most frequently reported stressors for PwS were health (scoliosis related) and work issues. Conversely, for parents, health of others (scoliosis related) and health (significant others: non scoliosis) were ranked first and second respectively. Emotional social support was the most frequently reported coping style for PwS and their parents. Relaxation and optimism were ranked second by PwS and their parents respectively.

Linear regression revealed that for PwS education stressors were negatively associated with approach ( $\beta = -.24, p < .05$ ); social interaction stressors were positively associated with both emotional regulation ( $\beta = .22, p < .05$ ) and reappraisal ( $\beta = .23, p < .05$ ); and activities and instrumental activities of daily living stressors were positively associated with reappraisal ( $\beta = .27, p < .05$ ). None of the stressor categories were associated with coping functions for parents of PwS.

Linear regression revealed significant associations between coping styles and functions for PwS but not parents of PwS. Emotional social support was negatively ( $\beta = -.32, p < .01$ ) and emotional release positively ( $\beta = .24, p < .05$ ) associated with approach functional coping. Relaxation was negatively associated with emotional regulation ( $\beta = -.21, p = 0.06$ ); however, this result was marginally significant at the  $\leq 0.05$  level). Reappraisal was positively associated with planning ( $\beta = .24, p < .05$ ). None of the coping styles were significantly associated with Avoidance. Additional, regression analyses (sample of PwS) revealed that the PRI (Miscellaneous) on the McGill Pain Questionnaire was positively associated with emotional regulation ( $\beta = .31, p < .01$ ). Back pain (Quality of Life Profile for Spine Deformities) was also negatively associated with Avoidance ( $\beta = -.31, p < .05$ ). For parents none of the coping functions were associated with psychosocial variables.

### 4. Discussion and Conclusion

The results of the current study revealed differential patterns of major stressors, coping styles and patterns of functional coping between PwS and their parents. Furthermore, these patterns of stress of coping are different from those of people without spinal deformities [7]. Given that approach-focused coping is associated with positive psychosocial outcomes, interventions (based on the results of the current study) should emphasise alternatives to relying upon emotional social support and strategies for venting anger and distress in a safe and positive manner. The results of the current study also suggest that reducing reliance upon coping styles that serve a function of emotional regulation could reduce the pain experiences of PwS. Psychological assessment of scoliosis should take into account the coping profiles of PwS and their parents as research suggests a congruent relationship between the patterns of coping employed by PwS and their family members [8]. Patient education strategies should be developed to impact positively upon outcomes such as compliance with treatment and medical advice; anxiety and distress; psychosocial functioning; pain experiences; satisfaction with healthcare; and participation in shared decision-making with physicians. Future work will establish guidelines for the multidisciplinary management of scoliosis that emphasise patientcentred services and the involvement of families in treatment.

## 5. References

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