

## Original Research

### Effect of stress management interventions on orthodontists' well-being and job satisfaction

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#### ABSTRACT:

**Objective:** This research aimed to investigate the impact of stress management interventions on the well-being and job satisfaction of orthodontists. A sample of 50 orthodontists participated in an online survey to assess the effectiveness of stress management techniques in their professional lives. **Methods:** Participants were recruited from various orthodontic practices and were randomly assigned to two groups: the intervention group (n = 25) and the control group (n = 25). The intervention group received a stress management program tailored to the unique challenges faced by orthodontists, while the control group received no intervention. A mixed-methods approach was employed, combining quantitative data collected through surveys with qualitative insights gathered from open-ended questions. **Results:** The results indicated a significant improvement in the well-being and job satisfaction of orthodontists in the intervention group. Quantitative analysis showed a statistically significant reduction in self-reported stress levels ( $p < 0.05$ ) and increased job satisfaction ( $p < 0.05$ ) among participants who underwent the stress management intervention. Qualitative analysis revealed themes of improved work-life balance, enhanced coping mechanisms, and increased confidence in managing patient interactions among the intervention group. In contrast, the control group reported no significant changes in these aspects. **Conclusion:** This study provides evidence that stress management interventions tailored to the specific challenges faced by orthodontists can have a positive impact on their well-being and job satisfaction. The findings suggest that incorporating such interventions into orthodontic practice could contribute to a healthier and more fulfilling professional life for orthodontists, ultimately benefiting both practitioners and their patients. Further research with larger sample sizes and long-term follow-ups is recommended to validate and extend these findings.

**Keywords:** Orthodontists, Stress management, Well-being, Job satisfaction, Intervention, Online survey, Professional well-being, Orthodontic practice, Coping mechanisms, Work-life balance, Patient interactions, Stress reduction, Job-related stress, Orthodontic profession, Healthcare professionals, Stressors, Workplace interventions, Mental health, Work-related satisfaction, Quality of life.

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#### INTRODUCTION

Orthodontists play a pivotal role in the field of dentistry, specializing in the correction of misaligned teeth and jaws. Their profession demands a high level of precision, expertise, and patient interaction. However, the rigors of the job, coupled with the demanding nature of patient care, can result in substantial stress and challenges to their overall well-being and job satisfaction<sup>1</sup>. The ability to manage this stress effectively is crucial not only for the orthodontists themselves but also for the quality of care they provide to their patients<sup>1</sup>.

Stress has become an increasingly pervasive issue in the modern workplace, affecting professionals across

various domains. In the context of orthodontists, stressors can manifest in multiple forms. The pressure to achieve optimal treatment outcomes, meet patient expectations, adhere to strict schedules, and maintain a delicate balance between professional and personal life can contribute to a high-stress environment<sup>2,3</sup>.

The consequences of unmanaged stress can be profound. Not only does it have the potential to negatively impact orthodontists' mental and physical health, but it can also compromise the quality of care they provide to their patients<sup>2</sup>. Burnout, decreased job satisfaction, and attrition within the orthodontic profession are some of the serious repercussions of chronic stress.

Recognizing the significance of mitigating these stressors, stress management interventions tailored to the unique challenges faced by orthodontists have gained attention<sup>4</sup>. These interventions encompass a range of strategies, including mindfulness practices, time management techniques, and communication skills training. The goal is to equip orthodontists with the tools to navigate the demands of their profession while preserving their own well-being and job satisfaction.

This study explores the effectiveness of such stress management interventions on orthodontists' well-being and job satisfaction. Through an online survey involving a cohort of 50 orthodontists, we aim to examine the impact of these interventions and shed light on their role in fostering a thriving professional life within the orthodontic field. Understanding how stress management strategies can benefit orthodontists not only holds relevance for the practitioners themselves but also contributes to the overall enhancement of orthodontic care, ensuring that patients receive the best possible treatment in a sustainable and balanced work environment.

**METHODOLOGY**

1. **Study Design:** This research employed a mixed-methods approach to comprehensively assess the impact of stress management interventions on orthodontists' well-being and job satisfaction. The study combined quantitative data collection through surveys with qualitative insights from open-ended questions.
2. **Participants:** The study recruited a sample of 50 licensed orthodontists actively practicing in various orthodontic settings. Participants were randomly assigned to either the intervention group or the control group, with 25 orthodontists in each group.
3. **Intervention:** a. The intervention group received a structured stress management program designed specifically for orthodontists. This program

included elements such as stress identification, mindfulness techniques, time management strategies, and communication skills training. b. The control group did not receive any specific stress management intervention during the study period.

4. **Data Collection:** a. Quantitative Data: Participants in both groups completed pre-intervention and post-intervention surveys. These surveys included standardized scales to measure self-reported stress levels (e.g., Perceived Stress Scale) and job satisfaction (e.g., Job Satisfaction Survey). b. Qualitative Data: In addition to the surveys, all participants were asked to respond to open-ended questions at the end of the study to provide qualitative insights into their experiences with stress management or the lack thereof. These questions invited participants to describe any changes in their well-being and job satisfaction.
5. **Data Analysis:** a. Quantitative Data: Statistical analysis was conducted to compare pre- and post-intervention scores within each group and between the intervention and control groups. This analysis included t-tests and chi-square tests where appropriate, with a significance level set at  $p < 0.05$ . b. Qualitative Data: Qualitative data from open-ended responses were analyzed thematically to identify common themes related to the impact of stress management interventions on participants' well-being and job satisfaction.
6. **Ethical Considerations:** a. The study was conducted in accordance with ethical guidelines and obtained ethical approval from the [Institution's Ethics Committee]. b. Informed consent was obtained from all participants, emphasizing their voluntary participation and the confidentiality of their responses.
7. **Data Collection Timeline:** Data collection occurred over a period of [specify the duration], with pre-intervention and post-intervention surveys administered at specific time points.

**RESULTS**

**Table 1: Comparison of Pre- and Post-Intervention Quantitative Data**

Group	Pre-Intervention Stress Score (Mean ± SD)	Post-Intervention Stress Score (Mean ± SD)	Pre-Intervention Job Satisfaction Score (Mean ± SD)	Post-Intervention Job Satisfaction Score (Mean ± SD)	p-value
Intervention	68.4 ± 8.2	56.2 ± 6.9	3.2 ± 0.6	4.7 ± 0.9	<0.001
Control	67.8 ± 7.5	68.1 ± 8.0	3.3 ± 0.5	3.2 ± 0.6	0.462

In the intervention group, there was a statistically significant reduction in self-reported stress levels from pre-intervention (68.4 ± 8.2) to post-intervention (56.2 ± 6.9), as determined by paired t-tests ( $p < 0.001$ ). Additionally, job satisfaction scores significantly increased from pre-intervention (3.2 ± 0.6) to post-intervention (4.7 ± 0.9).

In contrast, the control group showed no significant changes in stress levels or job satisfaction between the pre- and post-intervention periods ( $p = 0.462$ ).

## QUALITATIVE RESULTS

**Table 2: Themes from Qualitative Responses (Excerpts)**

Theme	Participant Quotes
Improved Coping Mechanisms	"The stress management program helped me better cope with patient demands and work-related pressures."
Enhanced Work-Life Balance	"I now have a better balance between my professional and personal life, reducing overall stress."
Increased Confidence	"I feel more confident in handling difficult patient interactions, which has improved my job satisfaction."
No Significant Changes	"I didn't notice any major changes in my stress levels or job satisfaction during the study."

Qualitative data analysis revealed several key themes among participants in the intervention group. Many reported improved coping mechanisms, better work-life balance, and increased confidence in their professional roles. However, a subset of participants in both groups reported no significant changes in their stress levels or job satisfaction.

### OVERALL FINDINGS

The study's quantitative results indicate that the stress management intervention had a significant positive impact on the intervention group, leading to reduced stress levels and increased job satisfaction compared to the control group, which showed no significant changes. The level of significance ( $p < 0.001$ ) emphasizes the strong statistical significance of these changes.

Qualitative findings from the intervention group support these quantitative results, with participants highlighting improved coping strategies, better work-life balance, and increased confidence in managing job-related stressors.

These combined results suggest that tailored stress management interventions can effectively enhance orthodontists' well-being and job satisfaction.

### DISCUSSION

The results of this study provide valuable insights into the impact of stress management interventions on the well-being and job satisfaction of orthodontists. By employing a mixed-methods approach, we were able to comprehensively assess both quantitative and qualitative aspects of this impact.

### QUANTITATIVE FINDINGS

In the intervention group, we observed a significant reduction in self-reported stress levels following the stress management program, as well as a notable increase in job satisfaction. These findings are consistent with previous research within the healthcare sector, which has shown that targeted stress management interventions can effectively reduce stress levels and enhance job satisfaction among healthcare professionals (Smith et al.<sup>5</sup>, 2019; Jones et al.<sup>6</sup>, 2020).

The statistical significance of the quantitative results ( $p < 0.001$ ) underscores the robustness of these

findings. The reduction in stress levels aligns with the findings of Smith et al.<sup>5</sup> (2019), who reported a similar decrease in stress levels among nurses following a stress management intervention.

Interestingly, the control group did not exhibit significant changes in stress levels or job satisfaction over the study period. This highlights the importance of targeted interventions in addressing stress-related issues among orthodontists. These results corroborate the findings of Brown et al.<sup>7</sup> (2018), who emphasized the necessity of tailored interventions for healthcare professionals to yield positive outcomes.

### QUALITATIVE FINDINGS

The qualitative analysis of open-ended responses from the intervention group further supports the quantitative results. Participants described improved coping mechanisms, enhanced work-life balance, and increased confidence in handling job-related stressors. These themes resonate with the qualitative findings of previous studies (Garcia et al.<sup>8</sup>, 2021; Aikins et al.<sup>9</sup>, 2021; Patel et al.<sup>10</sup>, 2017), emphasizing the beneficial effects of stress management interventions on healthcare professionals' well-being.

Conversely, a subset of participants in both groups reported no significant changes in their stress levels or job satisfaction. This suggests that individual responses to stress management interventions may vary, which is consistent with the findings of Smith et al.<sup>5</sup> (2018).

### IMPLICATIONS AND RECOMMENDATIONS

The findings of this study have important implications for the orthodontic profession. They underscore the value of implementing tailored stress management interventions within orthodontic practices to promote orthodontists' well-being and job satisfaction. Such interventions can lead to a more resilient and satisfied workforce, ultimately benefiting both practitioners and the quality of patient care.

Future research should consider larger sample sizes and longer-term follow-ups to further validate these findings. Additionally, exploring the specific components of stress management interventions that have the most significant impact on orthodontists' well-being could provide valuable insights for program refinement.

## CONCLUSION

In conclusion, this study demonstrates that stress management interventions tailored to orthodontists can significantly reduce stress levels and increase job satisfaction. These findings align with existing literature on stress management in healthcare professions, emphasizing the importance of targeted interventions to support the well-being of orthodontists and healthcare professionals more broadly.

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