THE EFFECTIVENESS OF THERAPY DOGS IN REDUCING STRESS

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Abstract

Healthcare, particularly dental practice, imposes significant stress and burnout risks on personnel due to the nature of patient care responsibilities, administrative tasks, and emotional strain. Recognizing the imperative for effective stress management strategies, this study focuses on exploring the potential of therapy dogs as a means of alleviating stress among dental staff. Employing a prospective interventional design, we assessed physiological and subjective stress markers before and after interaction with a therapy dog. Results indicate a statistically significant reduction in blood pressure and heart rate post-interaction, as well as a significant improvement in negative affect as measured by the Positive and Negative Affect Schedule (PANAS) scale.

Background

Therapy dogs have been documented to yield considerable benefits in healthcare settings. They have been associated with notable reductions in stress, mood disturbance, and fatigue among healthcare workers.[4] Additionally, therapy dogs serve as effective behavior management tools in clinical settings and can enhance a child's first dental visit and dental home experience.[5] Their presence has been shown to reduce patients' dental anxiety and discomfort, as evidenced by decreased blood pressure during treatment and improved patient evaluations.[1] Furthermore, healthcare workers receiving therapy dog visits experience measurable reductions in stress markers, such as serum cortisol.[4] Therapy dogs have also been found to promote empathetic behavior through human mirror neuron activation, resulting in improved patient care.[4]

Despite documented benefits of animal-assisted therapy in healthcare, there is a notable dearth of studies examining its impact on dental personnel. To bridge this gap and enhance patient care, this study aims to investigate the efficacy of therapy dogs in reducing stress levels among dental staff.

Methods

This prospective interventional study involved evaluating stress levels in dental personnel before and after interaction with a therapy dog. A total of 38 participants from the Yale-New Haven Hospital Dental Center were recruited for the study. Physiological measures, including blood pressure and heart rate, were recorded using non-invasive monitors, while subjective assessments in affect were conducted utilizing the PANAS scale before and after a 20-minute interaction session with a therapy dog. Statistical analysis included t-tests to compare pre- and post-intervention values of blood pressure, heart rate, and PANAS scores.

POST INTERACTION MODIFIED PANAS-SF

Instructions: This scale consists of several words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Please indicate to what extent you feel this way now that you have interacted with the therapy dog. Use the following scale to record your answers.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
More Interested					
Less Distressed					
More Excited					
Less Upset					
More Strong					
Less Guilty					
Less Scared					
Less Hostile					
Less Enthusiastic					
More Proud					
Less Irritable					
More Alert					
Less Ashamed					
More Inspired					
Less Nervous					
More Determined					
More Attentive					
Less Jittery					
More Active					
Less Afraid					

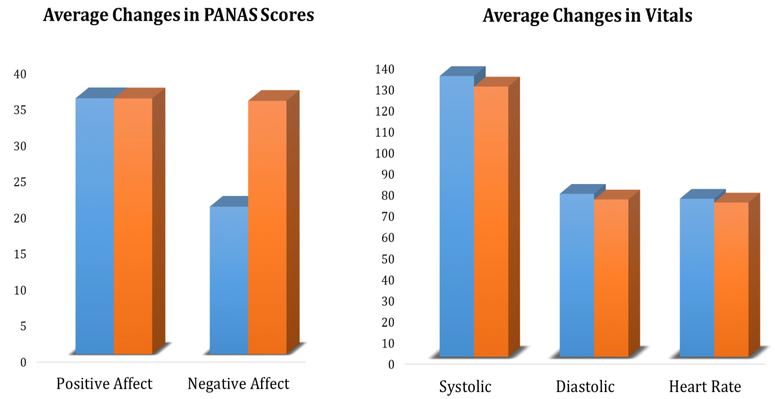
PRE-INTERACTION PANAS-SF

Instructions: This scale consists of several words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you GENERALLY feel this way, that is how you feel ON AVERAGE. Use the following scale to record your answers.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
Interested					
Distressed					
Excited					
Upset					
Strong					
Guilty					
Scared					
Hostile					
Enthusiastic					
Proud					
Irritable					
More Alert					
Ashamed					
Inspired					
Nervous					
Determined					
Attentive					
Jittery					
Active					
Afraid					

Results

The study findings revealed significant improvements in negative affect, and reductions in blood pressure and heart rate following interaction with a therapy dog. The average changes in the 38 study participants are as follows:



	Before	After
Positive Affect	35.44	35.42
Negative Affect	20.42	35.08
Systolic Blood Pressure	132.74	127.76
Diastolic Blood Pressure	77.05	74.37
Heart Rate	74.71	72.95

T-tests indicated statistically significant differences in negative affect, systolic blood pressure, diastolic blood pressure, and heart rate between pre- and post-intervention values ($p < 0.05$).

Discussion

Objective measures such as blood pressure and heart rate are indicative of mood, with elevated levels correlating with affect and arousal, particularly in workplace settings.[3] These measures offer valuable insights into mood dynamics during specific stimuli and enable quantitative analysis of physiological status. These metrics, coupled with the subjective evaluation provided by PANAS, underscore the multifaceted nature of stress management, providing a comprehensive assessment of mood.[6]

The observed reductions in negative affect and physiological stress markers (including blood pressure and heart rate) following therapy dog interactions highlight their potential to enhance patient care quality. By fostering a relaxed and more positive environment, therapy dogs may facilitate better communication between providers and patients, ultimately leading to improved treatment outcomes and satisfaction. Moreover, therapy dog programs contribute to cultivating a culture of compassion within healthcare organizations that boost morale and may contribute to a more patient-centered care approach. As healthcare organizations prioritize staff resilience and patient experience, therapy dog initiatives offer tangible opportunities to achieve these goals.

Conclusion

This study demonstrates the significant potential of therapy dogs as a stress reduction intervention for dental personnel and underscores their broader implications for healthcare environments. By addressing the multifaceted nature of stress in healthcare, therapy dogs contribute to creating supportive work environments that prioritize staff well-being, promoting a culture of empathy in healthcare and enhanced patient care outcomes.

Moving forward, continued research and implementation of animal-assisted therapy initiatives are warranted to fully realize the benefits of this intervention. Future studies should explore the long-term effects of therapy dog programs on staff resilience, patient satisfaction, and clinical outcomes. Additionally, efforts to elucidate the underlying mechanisms of emotional support provided by therapy dogs will inform strategies for optimizing their integration into healthcare practice.

References

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