

Evolving the Role of Orthodontic Assistants in the Digital Age:

A Global Study on the Impact of DentalMonitoring

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Abstract

As the role of dental assistants evolves alongside digital transformation in orthodontics, understanding how new technologies like DentalMonitoring™ (DM) impact their daily experience is critical. This study surveyed over 180 DentalMonitoring Coordinators (DMCs) globally to explore how DM affects their perception of work, sense of purpose, stress levels, and job satisfaction. The results offer a unique window into how clinical innovation is reshaping not just patient care, but also the lives of those behind the dashboard.

Key Findings:

- **Perception of DM improves significantly after implementation:** The median perception score increased from 6/10 before implementation to 8/10 just three months later. By the time of the survey, 100% of responses were 8 or above, with a mean score of 9.1, indicating strong and consistent satisfaction once the system was fully adopted.
- **Initial fears faded with experience:** Before implementation, DMCs were most concerned about learning the system (35 responses) and increased workload (34). However, post-implementation feedback showed improved perception, workflow, and patient impact, confirming that early concerns were largely overcome with hands-on experience.
- **DM enables role evolution:** DMCs reported strong positive impacts on autonomy (83%), professional growth (94%), and work purpose (77%), indicating that DM helps shift the assistant role toward a more empowered and valued position.
- **Familiarity boosts positivity:** Longer experience with DM was associated with higher satisfaction and a stronger sense of contribution.
- **Time investment remains manageable:** 60% of DMCs spent 30 minutes or less per day per 100 patients, even when managing large caseloads.

Introduction

Orthodontic practices worldwide are struggling to recruit and retain clinical staff, while simultaneously facing uncertainty around which benefits or working conditions would most improve team satisfaction and engagement. A recent study by Serrano et al. explored the expectations of orthodontic staff and found that while full-time employment, a positive work environment, and health benefits are highly valued, staff decisions to stay or leave often hinge on deeper factors. Staff reported leaving roles due to life changes, limited opportunities for growth, lack of respect, and poor communication or management. Conversely, they were more likely to stay when offered strong benefits, workplace flexibility, supportive relationships, a sense of independence, and access to modern technology.¹ While orthodontists are becoming more attuned to these expectations, a gap remains between what staff need and what is consistently provided.

In parallel, research focusing on dental assistants highlights that job satisfaction is shaped not only by workplace structure but also by deeper psychological and professional factors. Elements such as the dentist's personality, ability to balance personal and professional life, perceived quality of service, and the preservation of self-respect significantly influence how dental assistants view their roles.^{2,3}

Broader organizational psychology literature reinforces these findings, emphasizing a range of both direct and indirect contributors to job satisfaction. Among the most crucial direct factors was recognition. When team members feel that their work is appreciated and contributes to a greater objective, it elevates both the perceived value of their role and their motivation to stay.⁴ Similarly, when employees see room for personal and professional growth, they are more likely to find daily tasks fulfilling.⁵

Purpose and meaning at work have also been closely tied to happiness and retention. Employees who perceive their work as meaningful are more satisfied and less likely to consider leaving their jobs.⁶ This sense of meaning is often driven by two key ingredients: feeling appreciated and understanding how one's work serves a larger purpose.⁷ Autonomy, defined as having

control over one's responsibilities and time, is another central pillar of meaningful work.⁸

DentalMonitoring™ (DM) may represent a transformative opportunity for modern orthodontic practices. As an AI-driven remote monitoring platform, DM consists of three interconnected components: a patient-facing mobile app, a clinical dashboard, and a cloud-based AI system for automated image analysis. With this shift in how treatment is delivered and monitored, a new role has emerged within orthodontic teams: the DentalMonitoring Coordinator (DMC) (**Figure 1**).

DMCs are responsible for managing the DM dashboard on a daily basis. Their tasks include reviewing clinical notifications, responding to patient messages, escalating urgent cases to the orthodontist, and handling the scheduling of clinical interventions. This role marks a fundamental shift in the scope of the orthodontic assistant, evolving from a traditionally passive function into a proactive, central role in both treatment management and patient communication. In some cases, this transformation has even enabled DMCs to perform some of their duties remotely, something previously unimaginable in orthodontic settings.

The aim of this study is to explore how orthodontic assistants perceive this new model of care and to evaluate the impact of DM on their work satisfaction, autonomy, sense of purpose, and overall professional fulfillment.

Materials & Methods

This was a cross-sectional survey study designed to assess the DMCs' experience and perception of DM. The objectives were to evaluate: (1) their initial sentiments and fears prior to DM implementation, (2) their perception during the implementation phase and at the time of the survey, and (3) the impact of DM on their daily work, sense of purpose, stress, and professional growth. The study also aimed to explore correlations between job satisfaction and various factors, including years of experience as an assistant, experience at the current practice, workload, recognition, interpersonal relationships, and overall well-being.

Participants were eligible if they had been using DM for at least one year and were actively managing at least 100 monitored patients. This threshold ensured respondents had sufficient exposure to DM to provide informed feedback. A total of 183 dental assistants globally were invited to participate. The survey was distributed anonymously using Google Forms.

The questionnaire consisted of 34 quantitative items, primarily structured as 5-point Likert scale questions

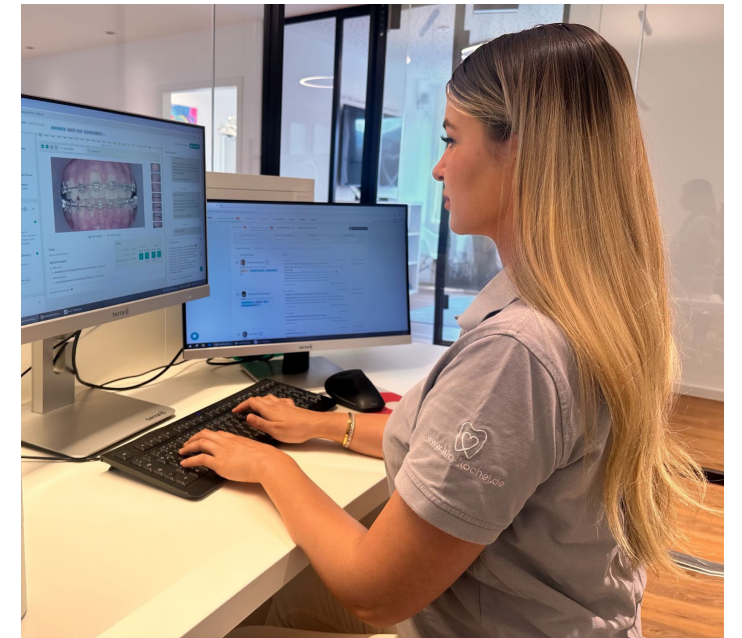


Fig. 1 - DMC managing the DM Dashboard

assessing agreement or satisfaction levels across various domains. A Likert scale is a psychometric rating scale used to measure attitudes or perceptions quantitatively, making it particularly relevant for capturing nuanced changes in perceptions and satisfaction, as explored in this study.⁹ Additionally, three questions assessing perception of DM at different time points (before implementation, at 3 months, and at the time of the survey) used a 10-point Likert scale to capture subtle shifts in sentiment over time. There was also one open-ended qualitative question inviting respondents to describe how their perception of DM had evolved. The full survey is available in the **Supplementary Materials** section.

Statistical Analysis

All statistical analyses were conducted using Python (SciPy and pandas libraries). To evaluate associations between variables, we used Spearman's rank correlation coefficient. Correlation coefficients (r) were interpreted alongside two-sided p-values, with $p < 0.05$ considered statistically significant. The strength of the correlations was interpreted according to commonly accepted thresholds, as shown in **Table 1**.¹⁰

Spearman r	Strength of Correlation
0.1 to 0.3 (or -0.1 to -0.3)	Low
0.3 to 0.5 (or -0.3 to -0.5)	Moderate
0.5 to 0.7 (or -0.5 to -0.7)	High
0.7 to 1.0 (or -0.7 to -1.0)	Very High

Tab. 1 - Spearman Correlation Coefficient Interpretation

Results

Descriptive statistics about the respondents

The survey was administered between May and June 2025. Invitations were distributed via email to all individuals meeting the previously described inclusion criteria. A total of 66 DMCs responded to the survey, which corresponds to a 36% response rate. The breakdown per country is presented in **Figure 2**. Respon-

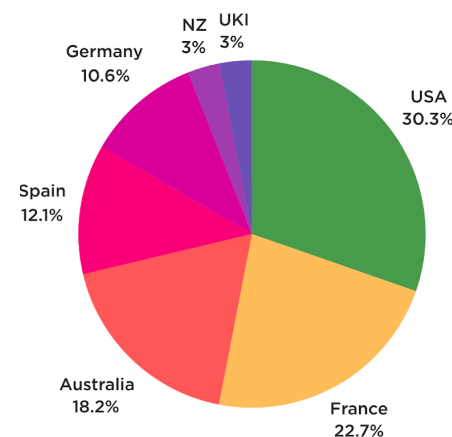


Fig. 2 - Country distribution of respondents

Most DMCs had been using DM for an extended period: 48.5% had more than 3 years of experience with the platform (**Figure 4**). Regarding clinical experience, over half of the respondents had worked

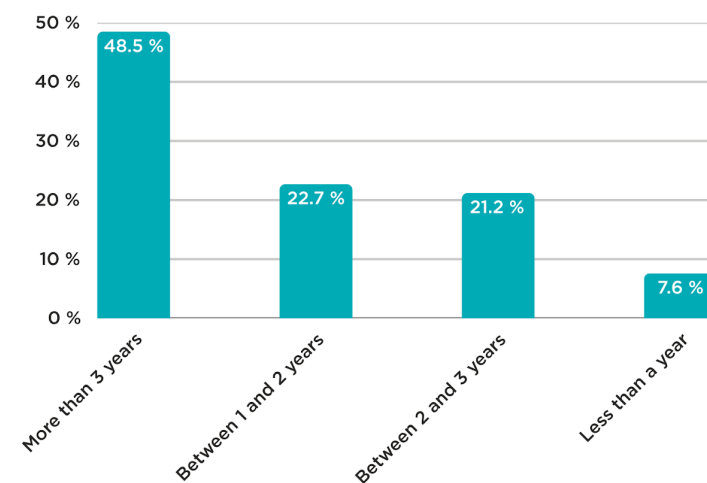


Fig. 4 - DM experience in years

Experience and Perceived Impact of DM

Early perceptions of DM revealed a wide range of opinions, as shown by the broad distribution of responses at the time of initial implementation (**Figure 6**). This variability highlights the initial uncertainty and skepticism among some DMCs before the implementation phase. However, within just a few months, the range

of respondents represented a diverse international group, with the largest proportions based in the United States (30.3%), France (22.7%), and Australia (18.2%). When asked who first introduced them to DM, 53% reported that it was their doctor, followed by 40.9% who cited the DM team (**Figure 3**).

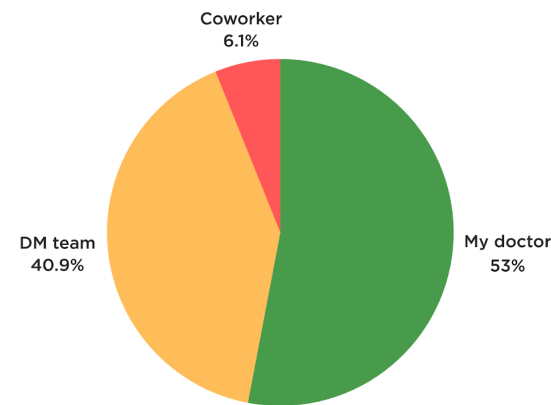


Fig. 3 - Who introduced you to DM

in their current practice for more than 5 years, and 53.8% reported more than 10 years of experience as a dental assistant (**Figure 5**).

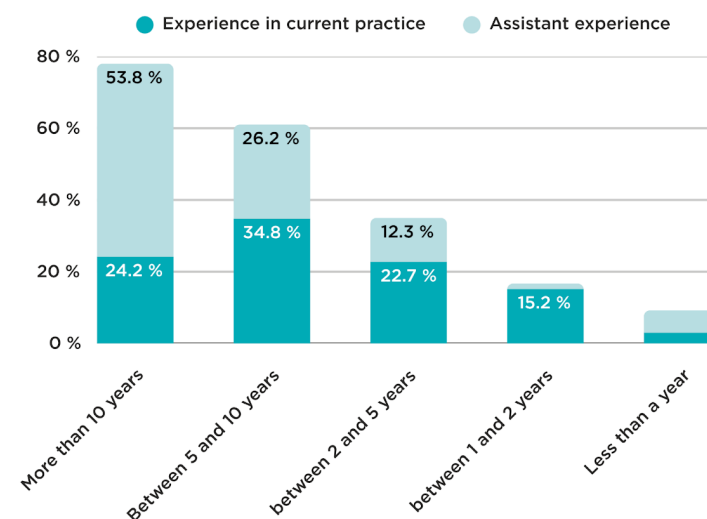


Fig. 5 - Years of experience as an assistant and in current practice

of perception scores narrowed significantly, and by the time of the survey, responses were highly clustered in the positive range. This shift reflects a clear trend: once familiar with the system, the vast majority of respondents reported a consistently positive experience with DM.

Evolution of Perception of DM Over Time

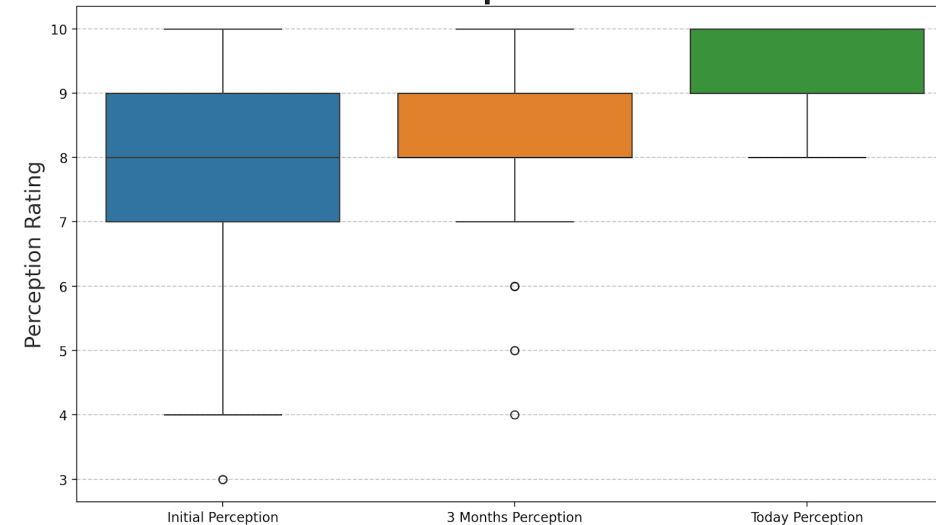


Fig. 6 - Evolution of perception of DM over time

These findings align with the reported initial fears. DMCs expressed early concerns about learning the system and the potential for increased workload (**Figure 7**). Other worries included a lack of technical skills and fears about how DM might disrupt patient relationships or workflows.

Despite this, a thematic analysis of qualitative responses generated from an open question (In your own words, how has your perception of DM changed since implementation?) revealed that many

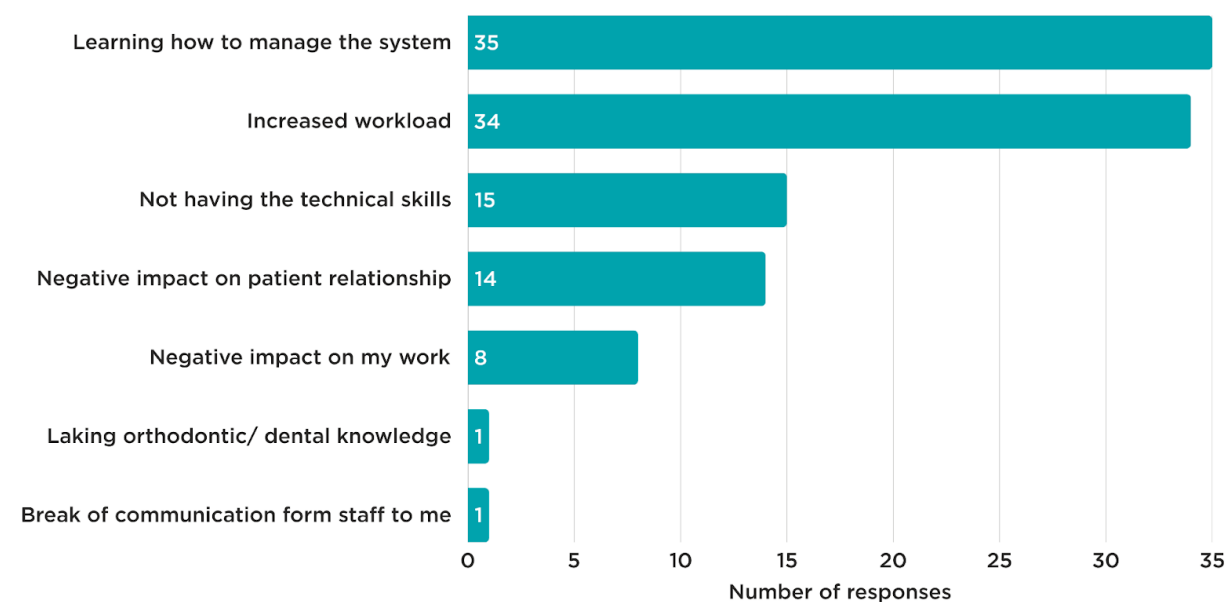


Fig. 7 - Initial fears prior to implementing DM

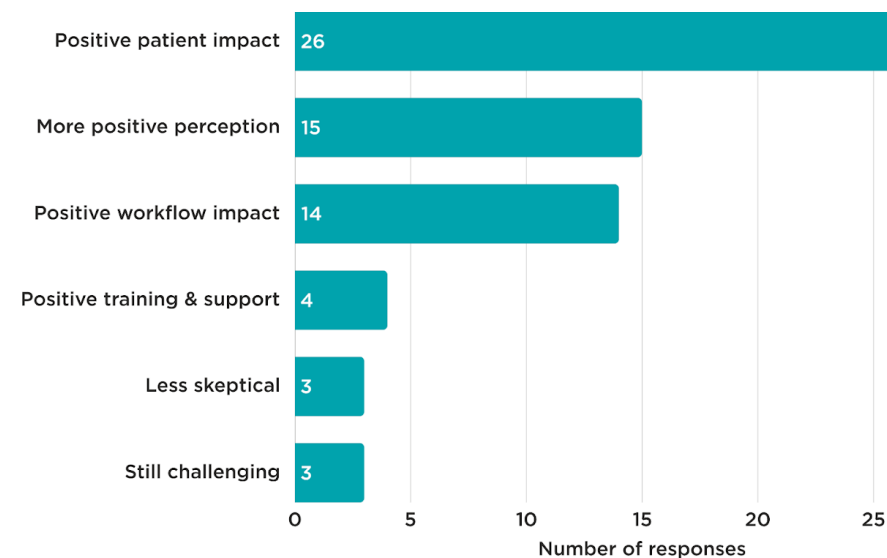


Fig. 8 - How they perceive DM today (thematic analysis)

DMCs now view DM as having a positive impact on patient care, workflow efficiency, and their overall attitude toward the technology (**Figure 8**). These improvements in perception suggest that early fears, while common, often gave way to appreciation of the benefits once DM was integrated into daily routines.

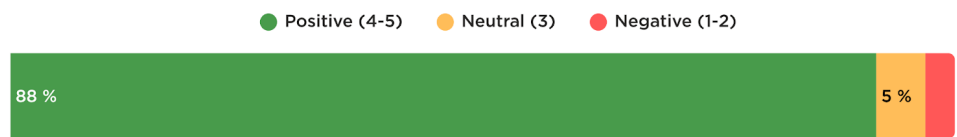


Fig. 9 - Training satisfaction

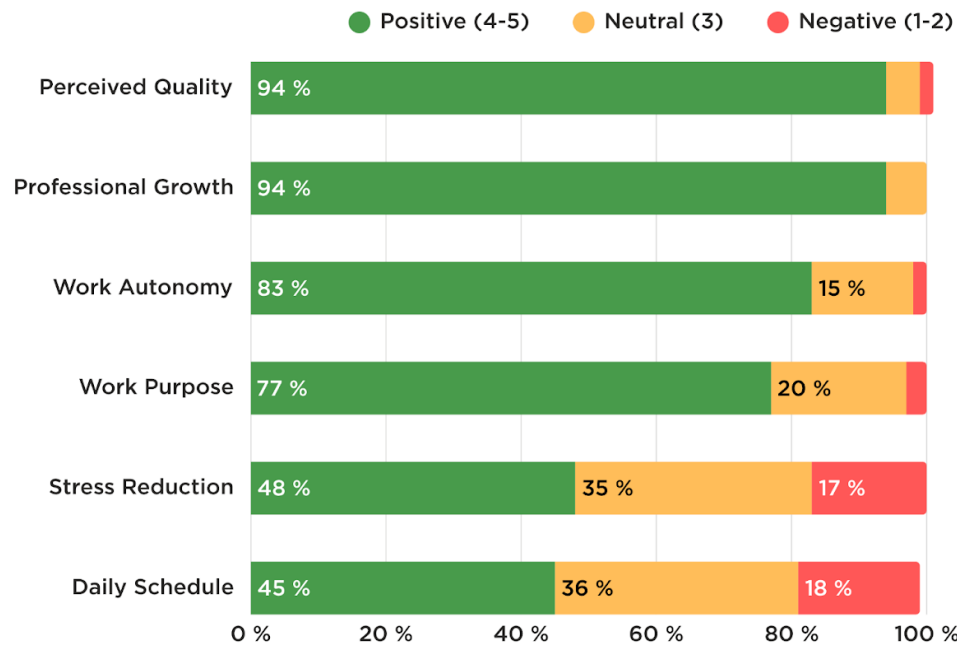


Fig. 10 - Impact of DM on perceived quality, growth, autonomy, etc.

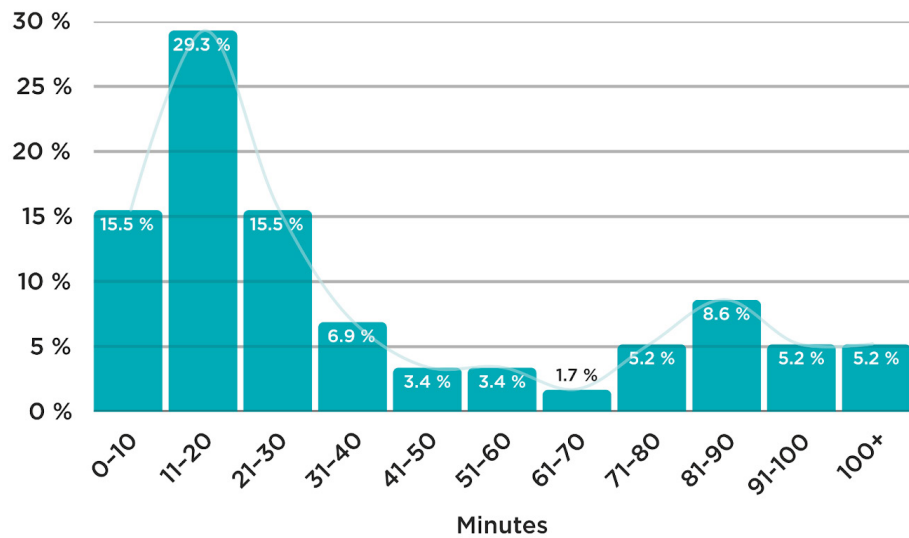


Fig. 11 - Average time spent managing DM per 100 patients (in minutes)

Training appears to have played an important role in this transition. A large majority of respondents (88%) rated the training they received from the DM team as positive, indicating that adequate onboarding helped reduce friction and build confidence **(Figure 9)**.

Questions 12-17 asked the respondents to rate the measurable impact of DM on 6 professional metrics. Respondents reported significant benefits in several key areas. Perceived quality of care and professional growth were the most positively affected dimensions (94% each), followed by work autonomy (83%) and work purpose (77%). Perceptions of stress reduction (48%) and daily schedule management (45%) were more mixed, which may reflect the reality that some DMCs are responsible for managing very large patient volumes, often exceeding 800 patients, resulting in a considerable time investment **(Figure 10)**.

Regarding the average time spent managing DM, the median daily time investment was approximately 25 minutes per 100 patients, with the most commonly reported range being 11-20 minutes. Notably, 60% of respondents spent 30 minutes or less **(Figure 11)**. These findings are consistent with previously published data. In a study by Hansaa et al., it was reported that DMCs spent an average of 1 minute per patient per week, which equates to approximately 25 minutes per day per 100 patients in a four-day workweek.¹¹

Correlations between key variables

To better understand which factors were most closely associated with DMCs’ experiences, a series of Spearman correlation analyses were conducted **(Table II)**. Several statistically significant relationships emerged.

Variable 1	Variable 2	Spearman r	Strength	p-value	Significance
Appreciated by Doctor	Work Enjoyment	0.6	Strong	0.000	Significant
Appreciated by Doctor	Value of Work	0.5	Moderate	0.000	Significant
Appreciated by Doctor	Work Purpose	0.3	Moderate	0.007	Significant
Appreciated by Team	Work Purpose	0.3	Moderate	0.011	Significant
Appreciated by Team	Work Enjoyment	0.3	Moderate	0.020	Significant
DM Experience	Current Perception	0.3	Moderate	0.029	Significant
DM Experience	Value of Work	0.3	Moderate	0.046	Significant
Appreciated by the Team	Value of Work	0.3	Moderate	0.046	Significant
Intro by DR	Initial Perception	-0.3	Moderate	0.024	Significant
Training Satisfaction	3mo Perception	0.2	Weak	0.048	Significant

Tab. II - Significant Spearman Correlations Between Key Variables

The strongest observed correlation was between feeling appreciated by the doctor and work enjoyment ($r = 0.6$, $p < 0.001$), suggesting that emotional recognition plays a key role in shaping daily satisfaction. Appreciation from the doctor was also moderately correlated with feeling that one’s work is valuable ($r = 0.5$), and with a sense of purpose ($r = 0.3$).

A similar trend was observed for team appreciation, which correlated significantly with work purpose ($r = 0.3$), enjoyment ($r = 0.3$), and value of work ($r = 0.3$). These findings highlight the importance of interpersonal dynamics within the practice in shaping DMCs’ motivation and professional fulfillment.

Longer experience with DM was significantly associated with a more positive current perception of the platform ($r = 0.3$), as well as a stronger sense that the

work they do is valuable ($r = 0.3$). This suggests that familiarity with the system may enhance its perceived benefit.

Interestingly, training satisfaction showed a significant, though weaker, correlation with perception of DM after three months ($r = 0.2$, $p = 0.048$), emphasizing the importance of early support and onboarding.

Notably, there was also a significant negative correlation between being introduced to DM by the doctor and the initial perception of the platform ($r = -0.3$, $p = 0.024$). This suggests that when DM is introduced directly by the doctor, it may be perceived with more skepticism. In contrast, when DM is introduced by a coworker or a member of the DM team, the initial reception tends to be more positive.

Conclusion

As remote monitoring becomes more integrated into orthodontic care, understanding the experience of those managing these systems is essential. This study highlights the transformative effect of DentalMonitoring on the daily roles, satisfaction, and professional outlook of DentalMonitoring Coordinators. While initial uncertainty is common, consistent exposure to the platform is associated with more positive perceptions, a stronger sense of purpose, and greater engagement at work. Key drivers of satisfaction include recognition, autonomy, and the perceived value of one’s contribution to patient care. These insights can guide practices in optimizing staff experience and retention as they adopt new digital workflows.

References

1. Serrano E, Park JH, Bay C. Orthodontic assistant retention: Which benefit has the best prognosis for maintaining orthodontic staff? AJO- Clin Companion. 2024;4(3):174-181. doi:10.1016/j.xaor.2024.01.004

2. Factors Affecting Job Satisfaction and Their Correlation with Educational Standards among Dental Assistants. Accessed June 5, 2025. https://www.jstage.jst.go.jp/article/indhealth/52/4/52_2014-0005/_article/-char/ja/

3. Loretto NRM, Caldas Jr A de F, Coelho Junior LGT de M. Job satisfaction among dental assistants in Brazil. Braz Dent J. 2013;24:53-58. doi:<https://doi.org/10.1590/0103-6440201301944>

4. Steger MF, Dik BJ, Duffy RD. Measuring Meaningful Work: The Work and Meaning Inventory (WAMI). J Career Assess. 2012;20(3):322-337. doi:10.1177/1069072711436160

5. Spencer DA. Developing an understanding of meaningful work in economics: the case for a heterodox economics of work. Camb J Econ. 2015;39(3):675-688. doi:10.1093/cje/beu074

6. Charles-Leija H, Castro CG, Toledo M, Ballesteros-Valdés R. Meaningful Work, Happiness at Work, and Turnover Intentions. Int J Environ Res Public Health. 2023;20(4):3565. doi:10.3390/ijerph20043565

7. Arieli D, Kamenica E, Prelec D. Man’s search for meaning: The case of Legos. J Econ Behav Organ. 2008;67(3):671-677. doi:10.1016/j.jebo.2008.01.004

8. Nikolova M, Cnossen F. What makes work meaningful and why economists should care about it. Labour Econ. 2020;65:101847. doi:10.1016/j.labeco.2020.101847

9. ArulM J, MisraSasi B. Measurement of Attitudes. In: ; 1977. Accessed June 10, 2025. <https://www.semanticscholar.org/paper/Measurement-of-Attitudes-ArulM-MisraSasi/c81098997d7e5ff7faef3a302ee8caf4430ef42d>

10. Classification for values of the Spearman’s rank correlation... ResearchGate. Accessed June 10, 2025. https://www.researchgate.net/figure/Classification-for-values-of-the-Spearman's-rank-correlation-coefficient-in-terms-of-the_tbl10_344407425

11. Hansa I, Katyal V, Ferguson DJ, Vaid N. Outcomes of clear aligner treatment with and without Dental Monitoring: A retrospective cohort study. Am J Orthod Dentofac Orthop Off Publ Am Assoc Orthod Its Const Soc Am Board Orthod. 2021;159(4):453-459. doi:10.1016/j.ajodo.2020.02.010

Supplementary Materials: Survey Questionnaire

How long have you been working in your current practice? (Range Input)	Do you feel like DM gives you more work autonomy? (Scale: 1 = Strongly Disagree to 5 = Strongly Agree)
How many years of total experience do you have as a dental assistant? (Range Input)	Do you feel that DM gives your work more purpose and meaning? (Scale: 1 = Strongly Disagree to 5 = Strongly Agree)
Your age range (Range Input)	Do you feel that DM is increasing the quality of service in your practice? (Scale: 1 = Strongly Disagree to 5 = Strongly Agree)
How long have you been using DM? (Range Input)	Do you feel like DM is decreasing your work stress? (Scale: 1 = Strongly Disagree to 5 = Strongly Agree)
Who introduced you to DM in the practice? (Multiple Choice)	Do you feel like DM is making your work days less busy? (Scale: 1 = Strongly Disagree to 5 = Strongly Agree)
Do you feel that you’ve received sufficient training on DM from the DM team? (Scale: 1 = Strongly Disagree to 5 = Strongly Agree)	How long do you spend daily managing the DM dashboard? (in minutes) (Open question)
Rate your initial perception of DentalMonitoring (DM) when you were first introduced to it (Scale: 1 = Very dissatisfied to 10 = Very satisfied)	How many patients do you manage on DM? (Open question)
What were your initial worries? (Multiple Choice)	I usually enjoy my work (Scale: 1 = Strongly Disagree to 5 = Strongly Agree)
How did you perceive DM 3 months after implementation? (Scale: 1 = Very dissatisfied to 10 = Very satisfied)	I feel appreciated by my co-workers (Scale: 1 = Strongly Disagree to 5 = Strongly Agree)
Rate your perception of DM today (Scale: 1 = Very dissatisfied to 10 = Very satisfied)	I feel appreciated by my doctor (Scale: 1 = Strongly Disagree to 5 = Strongly Agree)
In your own words, how has your perception of DM changed since implementation? (Open question)	
Do you feel that DM helped you grow on a professional level? (Scale: 1 = Strongly Disagree to 5 = Strongly Agree)	



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