

DOI: <http://dx.doi.org/10.12996/gmj.2024.4288>

Perspectives on Listening to Music in the Operating Room Among Healthcare Professionals: A Cross-Sectional Study

Ameliyathanede Müzik Dinlemenin Sağlık Profesyonelleri Arasındaki Perspektifleri: Kesitsel Bir Çalışma

© Bengü Mutlu Sütcüoğlu¹, © Zeynep Ceren Ünlü², © Sude Aleyna Erdem²

¹Clinic of Obstetrics and Gynaecology, Ankara Atatürk Sanatory Education and Research Hospital, Ankara, Türkiye

²Medical Student, Lokman Hekim Faculty of Medicine, Ankara, Türkiye

ABSTRACT

Objective: To investigate the perspectives of healthcare professionals on listening to music in the operating room, considering their job satisfaction levels and the relationship between job satisfaction and music.

Methods: This cross-sectional study included 200 surgeons, anesthesiologists, and operating room nurses from three tertiary centers in Türkiye. Participants completed a survey consisting of demographic questions, general assessments of the appropriateness of listening to music in the operating room, and the Job Satisfaction Scale.

Results: The mean age of the participants was 39 years (standard deviation: ± 11), with 59% female and 41% male participants. The majority of participants expressed positive opinions about listening to music in the operating room. The median score on the Job Satisfaction Scale for all volunteers was 20 (range: 5-25). A positive correlation was found between job satisfaction scores and favorable views on music ($p < 0.01$, $r = 0.124$). Conversely, increased professional experience was negatively correlated with positive perceptions of music ($p = 0.02$, $r = -0.165$).

Conclusion: This study demonstrates that the majority of healthcare professionals hold positive views on listening to music in the operating room, with higher job satisfaction levels correlating with more favorable attitudes. Conversely, increased professional experience

ÖZ

Amaç: Sağlık profesyonellerinin ameliyathanede müzik dinleme konusundaki perspektiflerini ve iş tatmini seviyeleri ile müzik arasındaki ilişkiyi araştırmak.

Yöntemler: Bu kesitsel çalışma, Türkiye'deki üç üçüncü basamak merkezden 200 cerrah, anesteziyolog ve ameliyathane hemşiresini içermektedir. Katılımcılar, demografik sorular, ameliyathanede müzik dinlemenin uygunluğuna dair genel değerlendirmeler ve İş Tatmini Ölçeği içeren bir anketi tamamladılar.

Bulgular: Katılımcıların ortalama yaşı 39 (standart sapma: ± 11) olup, %59'u kadın ve %41'i erkek katılımcılardan oluşmaktadır. Katılımcıların çoğunluğu, ameliyathanede müzik dinleme konusunda olumlu görüşler ifade etmiştir. Tüm gönüllüler için İş Tatmini Ölçeği'nde medyan skor 20 (aralık: 5-25) idi. İş tatmini puanları ile müzik hakkında olumlu görüşler arasında pozitif bir korelasyon bulunmuştur ($p < 0,05$, $r = 0,124$). Bununla birlikte, artan mesleki deneyim, müzik hakkındaki olumlu algılar ile negatif korelasyon göstermiştir ($p = 0,02$, $r = -0,165$).

Sonuç: Çalışma, sağlık profesyonellerinin çoğunun ameliyathanede müzik dinleme konusunda olumlu görüşlere sahip olduğunu ve daha yüksek iş tatmini seviyelerinin daha olumlu tutumlarla ilişkili olduğunu göstermektedir. Ancak, daha deneyimli profesyoneller daha az olumlu görüşlere sahip olabilir. Bu bulgular, ameliyathanede müzik uygulanırken bireysel tercihlerin ve iş tatmininin dikkate alınması gerektiğini önermektedir. Müziğin cerrahi sonuçlar ve sağlık

Cite this article as: Mutlu Sütcüoğlu B, Ünlü ZÇ, Erdem SA. Perspectives on listening to music in the operating room among healthcare professionals: a cross-sectional study. Gazi Med J. 2025;36(2):192-198

Address for Correspondence/Yazışma Adresi: Bengü Mutlu Sütcüoğlu, Clinic of Obstetrics and Gynaecology, Ankara Atatürk Sanatory Education and Research Hospital, Ankara, Türkiye

E-mail / E-posta: drbengumutlu@gmail.com

ORCID ID: orcid.org/0000-0002-5594-1719

Received/Geliş Tarihi: 13.09.2024

Accepted/Kabul Tarihi: 02.12.2024

Publication Date/Yayınlanma Tarihi: 15.04.2025



©Copyright 2025 The Author. Published by Galenos Publishing House on behalf of Gazi University Faculty of Medicine. Licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 (CC BY-NC-ND) International License.

©Telif Hakkı 2025 Yazar. Gazi Üniversitesi Tıp Fakültesi adına Galenos Yayınevi tarafından yayımlanmaktadır. Creative Commons Atıf-GayriTicari-Türetilemez 4.0 (CC BY-NC-ND) Uluslararası Lisansı ile lisanslanmaktadır.

ABSTRACT

tends to be associated with less positive perceptions of music during surgeries. These findings underscore the importance of tailoring music use in the operating room to individual preferences, considering both job satisfaction levels and professional experience. For instance, offering a choice of music or maintaining flexibility regarding its presence could enhance team morale and satisfaction. Additionally, institutions may consider periodic assessments of team preferences to balance the potential benefits of music with individual comfort levels. Further longitudinal research is recommended to assess the long-term effects of music on surgical outcomes, team dynamics, and healthcare professionals' well-being, ultimately guiding evidence-based implementation strategies in the operating room.

Keywords: Music, operation room, job satisfaction, surgery

Öz

çalışanlarının iyiliği üzerindeki uzun vadeli etkilerini keşfetmek için daha fazla araştırmaya ihtiyaç vardır.

Anahtar Sözcükler: Müzik, ameliyathane, iş tatmini, cerrahi

INTRODUCTION

The impact of background music in the operating room has been a subject of research for many years. The use of music in the operating room was first introduced by Kane (1) with the aim of reducing patient anxiety. Since the 1930s, playing music for patients in the operating room has become a common practice to alleviate anxiety. Additionally, previous research has demonstrated that music's positive effects on anxiety reduction may be mediated through the hypothalamic-pituitary system, as shown by Conrad et al. (2).

From the perspective of healthcare professionals, the effect of music can vary based on experience, current psychological state, and other environmental factors. Music in the operating room can influence the team's communication, concentration, and individual performance. It has been shown that allowing individuals to choose the music can reduce stress levels and enhance performance (3). However, there are also reports indicating that music can negatively impact stress management, particularly for surgeons and anesthesiologists during critical moments (4,5).

Most studies on this topic have focused on the duration of the operation as the primary endpoint. Only one study has specifically examined how music in the operating room is perceived by anesthesiologists and nurses, as opposed to surgeons (6). However, this study only evaluated personal responses without considering the working conditions and job satisfaction of the staff.

Our study uniquely bridges this gap by evaluating the perspectives of healthcare professionals on listening to music in the operating room, while simultaneously assessing their job satisfaction levels. Unlike previous research, which has primarily focused on operation-related outcomes or isolated professional opinions, our study integrates both subjective perceptions and objective metrics, such as the Job Satisfaction Scale. This comprehensive approach enables us to better understand the interplay between environmental factors, individual preferences, and overall job satisfaction within the operating room setting.

MATERIALS AND METHODS

Our study was conducted simultaneously in three different tertiary centers in the same city in Türkiye. We planned to include 200 healthcare professionals in the study. This cross-sectional study involved surgeons, anesthesiologists, anesthesia technicians, and operating room nurses working in the fields of

obstetrics and gynecology, urology, general surgery, orthopedics, otorhinolaryngology, cardiovascular surgery, and neurosurgery. Participants were included in the study regardless of age and gender. The study was carried out between September 1, 2023, and October 1, 2023, with healthcare personnel from the specified specialties who agreed to participate. Healthcare workers were informed about the study, and those who consented were included in the study after obtaining their approval. The ethics committee approval was obtained with the Lokman Hekim University Ethics Committee. (approval number: 2023/168, date: 20.09.2023). Healthcare workers were informed about the study, and those who consented were included in the study after obtaining their approval.

Participants were divided into three groups based on their specialties: surgeons (including specialists from obstetrics and gynecology, urology, general surgery, orthopedics, otorhinolaryngology, cardiovascular surgery, and neurosurgery), anesthesiologists (including anesthesia specialists and technicians), and operating room nurses. Only those who agreed to answer all the questions in the survey forms were included in the study. No healthcare worker refused to participate in the study.

Participants were asked to complete survey questions that could be answered in less than 3 minutes. Initially, 7 demographic questions were asked to investigate the distribution of the participants. The survey included a total of 11 questions rated on a 5-point Likert Scale. The first 6 questions were designed by the research team to evaluate the assessment of the appropriateness of listening to music in the operating room. These questions were based on our observations and literature review; however, no formal piloting process was conducted prior to their use. The last 5 questions were derived from the Job Satisfaction Scale. The short version of the Job Satisfaction Scale, consisting of five questions, was published in 1998, and its Turkish validation was published by Başol and Çömlekçi (8). The validated Turkish version was used in our study (7,8). The survey forms were collected on the same day they were distributed, and they were recorded anonymously. All questions in the survey form are provided in the appendix (Appendix 1).

Statistical Analysis

Data obtained from the study were analyzed using IBM SPSS Statistics 23 software. Descriptive statistics for normally distributed variables were reported using the mean and standard deviation, while non-normally distributed variables were reported using the

median and minimum-maximum. The normality of the variables was assessed using the Shapiro-Wilk and Kolmogorov-Smirnov tests. The Kruskal-Wallis test and Mann-Whitney U test were used to compare non-normally distributed multiple variables, and the Spearman correlation test was used for correlation analyses. A p-value of less than 0.05 was considered statistically significant.

RESULTS

The demographic data of the volunteers who participated in the study are presented in Table 1. The mean age of the participants was 39 years (standard deviation: ± 11). Among the participants, 118 (59%) were female, and 82 (41%) were male. The median weekly working hours were 40 hours (min.-max.: 28-85), the median daily working hours were 8 hours (min.-max.: 4-11), and the median evening shift hours were 0 hours (min.-max.: 0-48).

The professional distribution of the participants was as follows: 50% (n=100) were surgeons, 25% (n=50) were anesthetists, and 25% (n=50) were nurses. When age, professional experience, weekly working hours, evening shift hours, and hospital bed capacity were grouped by profession, no significant differences were found among the professional groups ($p>0.05$, Table 1).

The distribution of responses to the survey questions by profession is presented in Table 2. For the first three questions, which positively assessed the effect of music in the operating room, a high percentage of participants responded with "agree" or "strongly agree" (87.5% for Question 1, 72.5% for Question 2, and 83.5% for Question 3, respectively).

The Job Satisfaction Scale questions and the responses provided by the participants are shown in Table 3. Questions 3 and 5 on the scale were reverse-scored. When the responses to the scale were scored, the median score for all volunteers was 20 (range: 5-25). The correlation between Job Satisfaction Scale scores and perspectives on music was evaluated, and all correlation results are presented in

Table 1. Continued

			n	(%)
Years of professional experience	Surgeons	≤ 5	33	33
		≤ 10	9	9
		≤ 20	21	21
		>20	37	37
	Anesthesiologists	≤ 5	16	32
		≤ 10	5	10
		≤ 20	20	40
		>20	9	18
	Nurses	≤ 5	7	14
		≤ 10	7	14
		≤ 20	15	30
		>20	21	42
Weekly working hours	Surgeons	≤ 40	57	57
		41-50	25	25
		51-60	13	13
		>60	5	5
	Anesthesiologists	≤ 40	34	68
		41-50	7	14
		51-60	9	18
		>60	0	0
	Nurses	≤ 40	39	78
		41-50	6	12
		51-60	5	10
		>60	0	0
Number of weekly evening shifts	Surgeons	None	72	72
		1 shift	5	5
		2 shift	13	13
		≥ 3 shift	10	10
	Anesthesiologists	None	35	70
		1 shift	9	18
		2 shift	5	10
		≥ 3 shift	1	2
	Nurses	None	42	84
		1 shift	2	4
		2 shift	5	10
		≥ 3 shift	1	2
Hospital bed capacity	Surgeons	<250	28	28
		250-500	27	27
		>500	45	45
	Anesthesiologists	<250	10	20
		250-500	20	40
		>500	20	40
	Nurses	<250	8	16
		250-500	16	32
		>500	26	52

Table 1. Basic characteristics of the professional groups participating in the study

			n	(%)
Age (years)	Surgeons	20-29	23	23
		30-39	30	30
		40-49	20	20
		50-59	20	20
		60-69	7	7
	Anesthesiologists	20-29	15	30
		30-39	21	42
		40-49	12	24
		50-59	2	4
		60-69	0	0
	Nurses	20-29	9	18
		30-39	12	24
		40-49	21	42
		50-59	7	14
		60-69	1	2

Table 4. A positive correlation was found between job satisfaction scores and the perceived positive effects of music in the operating room, while a negative correlation was observed with the perceived negative effects of music.

When analyzing the correlation between working hours and responses to questions about the positive effects of music, a statistically significant, negative correlation was found between weekly working hours and job satisfaction ($p=0.02$; $r=-0.165$). When evaluating day and night shift hours separately, no statistically

significant correlation was found between daytime working hours and the Job Satisfaction Scale ($p=0.129$, $r=0.124$). However, a statistically significant, negative correlation was found between evening shift hours and the Job Satisfaction Scale ($p=0.001$; $r=-0.228$).

No statistically significant difference was found in responses to the questions based on gender ($p>0.005$). Similarly, no statistically significant differences were found in responses among the three professional groups of surgeons, anesthesiologists, and nurses ($p>0.005$).

Table 2. Comparison of perspectives on listening to music in the operating room by professions

	Strongly disagree n (%)	Disagree n (%)	No opinion n (%)	Agree n (%)	Strongly agree n (%)
Q1: It is appropriate to listen to music during the operation					
Total	4 (2%)	8 (4%)	13 (6.5%)	128 (64%)	47 (23.5%)
Surgeons	0	5 (5%)	5 (5%)	64 (64%)	26 (26%)
Anesthesiologists	0	1 (2%)	5 (10%)	36 (72%)	8 (16%)
Nurses	4 (8%)	2 (4%)	3 (6%)	28 (56%)	13 (26%)
Q2: Listening to music during the operation increases my focus on my work					
Total	6 (3%)	32 (16%)	17 (8.5%)	103 (51.5%)	42 (21%)
Surgeons	2 (22.2%)	14 (48.3%)	9 (60%)	50 (47.6%)	20 (47.6%)
Anesthesiologists	0	12 (24%)	4 (8%)	24 (48%)	10 (20%)
Nurses	4 (8%)	4 (8%)	3 (6%)	27 (54%)	12 (24%)
Q3: Listening to music during the operation calms me down					
Total	5 (2.5%)	18 (9%)	10 (5%)	110 (55%)	57 (28.5%)
Surgeons	1 (12.5%)	9 (52.9%)	5 (55.6%)	55 (51.4%)	25 (42.4%)
Anesthesiologists	0	6 (12%)	4 (8%)	23 (46%)	17 (34%)
Nurses	4 (8%)	2 (4%)	1 (2%)	27 (54%)	16 (32%)
Q4: Listening to music during the operation distracts me					
Total	42 (21%)	129 (64.5%)	6 (3%)	19 (9.5%)	4 (2%)
Surgeons	16 (37.2%)	65 (51.2%)	2 (50%)	11 (57.9%)	1 (14.3%)
Anesthesiologists	11 (22%)	31 (62%)	2 (4%)	6 (12%)	0
Nurses	15 (30%)	29 (58%)	1 (2%)	2 (4%)	3 (6%)
Q5: It is not safe for patients to listen to music during the operation					
Total	44 (22%)	129 (64.5%)	11 (5.5%)	12 (6%)	4 (2%)
Surgeons	23 (54.8%)	60 (48.4%)	4 (26.7%)	6 (42.9%)	2 (40%)
Anesthesiologists	7 (14%)	38 (76%)	2 (4%)	2 (4%)	1 (2%)
Nurses	12 (24%)	28 (56%)	5 (10%)	4 (8%)	1 (2%)
Q6: Listening to music during the operation disrupts communication					
Total	28 (14%)	135 (67.5%)	10 (5%)	23 (11.5%)	4 (2%)
Surgeons	17 (63%)	60 (45.1%)	6 (60%)	12 (52.2%)	0
Anesthesiologists	3 (6%)	40 (80%)	2 (4%)	4 (8%)	1 (2%)
Nurses	7 (14%)	33 (66%)	1 (2%)	6 (12%)	3 (6%)

Q: Question

However, a significant difference was found between surgeons and anesthetists in response to the Job Satisfaction Scale question “Most days I am enthusiastic about my work” ($p=0.03$). Additionally, a significant difference was noted between surgeons and anesthetists for the question “I am often bored with my job” ($p=0.02$). A significant difference was also found between surgeons and nurses in response to the question “it is appropriate to listen to music during surgery” (80% vs. 72%, $p=0.04$).

When comparing perspectives on listening to music in the operating room with professional experience across all professional groups, a negative correlation was found between years of professional

experience and questions indicating a positive view of music, while a positive correlation was found with questions indicating a negative view of music (Table 5).

DISCUSSION

Our study involved a total of 200 surgeons, anesthesiologists, and operating room nurses, conducted to investigate the perspectives of these professional groups on listening to music in the operating room, taking into account their job satisfaction levels. The results indicated that a majority of participants across all three professional groups expressed positive opinions about listening to music in the operating

Table 3. Comparison of job satisfaction scale by professions

	Strongly disagree n (%)	Disagree n (%)	No opinion n (%)	Agree n (%)	Strongly agree n (%)
1. I am quite satisfied with my current job					
Total	5 (2.5%)	13 (6.5%)	16 (8%)	128 (64%)	38 (19%)
Surgeons	3 (3%)	6 (6%)	5 (5%)	63 (63%)	23 (23%)
Anesthesiologists	2 (4%)	5 (10%)	4 (8%)	32 (64%)	7 (14%)
Nurses	0	2 (4%)	7 (14%)	33 (66%)	8 (16%)
2. Most days I go to work with enthusiasm					
Total	5 (2.5%)	23 (11.5%)	26 (14%)	116 (57.5%)	30 (14.5%)
Surgeons	2 (2%)	7 (7%)	12 (12%)	62 (62%)	17 (17%)
Anesthesiologists	3 (6%)	7 (14%)	9 (18%)	25 (50%)	6 (12%)
Nurses	0	9 (18%)	5 (10%)	29 (58%)	7 (14%)
3. Each day at work feels like it will never end					
Total	44 (22%)	118 (59%)	13 (6.5%)	20 (10%)	5 (2.5%)
Surgeons	24 (24%)	63 (63%)	5 (5%)	7 (7%)	1 (1%)
Anesthesiologists	7 (14%)	30 (60%)	4 (8%)	5 (10%)	4 (8%)
Nurses	13 (26%)	25 (50%)	4 (8%)	8 (16%)	0
4. I find my job funny					
Total	8 (4%)	16 (8%)	17 (8.5%)	133 (66.5%)	26 (13%)
Surgeons	2 (2%)	7 (7%)	6 (6%)	70 (70%)	15 (15%)
Anesthesiologists	4 (8%)	4 (8%)	3 (6%)	34 (68%)	5 (10%)
Nurses	2 (4%)	5 (10%)	8 (16%)	29 (58%)	6 (12%)
5. I think my job is unpleasant					
Total	52 (26%)	122 (61%)	8 (4%)	14 (7%)	4 (2%)
Surgeons	26 (26%)	63 (63%)	3 (3%)	7 (7%)	1 (1%)
Anesthesiologists	13 (26%)	28 (56%)	2 (4%)	4 (8%)	3 (6%)
Nurses	13 (26%)	31 (62%)	3 (6%)	3 (6%)	0

Table 4. Correlation between job satisfaction scores and perspectives on music

	Correlation coefficient (r)	p value
Q1: It is appropriate to listen to music during the operation	+0.102	<0.001
Q2: Listening to music during the operation increases my focus on my work	+0.285	<0.001
Q3: Listening to music during the operation calms me down	+0.326	<0.001
Q4: Listening to music during the operation distracts me	-0.283	<0.001
Q5: It is not safe for patients to listen to music during the operation	-0.102	=0.001
Q6: Listening to music during the operation disrupts communication	-0.152	=0.003

Table 5. Correlation between years of professional experience and perspectives on music

	Correlation coefficient (r)	p
Q1: It is appropriate to listen to music during the operation	-0.178	=0.01
Q2: Listening to music during the operation increases my focus on my work	-0.242	=0.001
Q3: Listening to music during the operation calms me down	-0.207	=0.003
Q4: Listening to music during the operation distracts me	+0.183	=0.01
Q5: It is not safe for patients to listen to music during the operation	+0.174	=0.01
Q6: Listening to music during the operation disrupts communication	+0.176	=0.01

room. We found that higher job satisfaction levels were associated with more positive emotions towards music in the operating room. Conversely, there was a negative relationship between increased work experience and positive perceptions of music, suggesting that more experienced healthcare professionals might have less favorable views on listening to music during operations.

These findings are consistent with the literature, where many studies have shown that listening to music during surgery leads to positive outcomes. Different studies have also demonstrated that healthcare workers hold positive views on listening to music in the operating room (9-11). Although it is difficult to attribute the preparation and completion time of surgery to a single external factor, prospective studies have reported that listening to music can positively impact reducing the duration of surgeries and the daily turnover time in operating rooms (12,13).

Our study did not find significant differences in perspectives on music among the professional groups, except for one question where nurses were more cautious about music in the operating room. Similar to our findings, other studies have reported that nurses tend to be more cautious than doctors about listening to music in the operating room, and women generally have a more positive attitude towards music than men (14). Additionally, our study found a negative correlation between increased professional experience and positive views on music, aligning with Hawksworth et al. (15) findings that older anesthesiologists felt music distracted them. These perspectives are influenced by personal factors and the participants' mood on the day they completed the survey. Therefore, larger-scale studies are needed to interpret these results more objectively.

Although various studies have examined factors such as profession, age, gender, professional experience, and music types, none have explored the impact of working conditions and job satisfaction on perspectives towards music. It is evident that job satisfaction, daily workload, and shift patterns directly affect responses. Our findings indicate that healthcare professionals with greater professional experience tend to hold less favorable views on listening to music in the operating room. This suggests that experienced staff may prioritize focus and concentration during procedures, potentially perceiving music as a distraction. Tailored interventions could address these concerns by offering options such as adjustable music volume, genre selection, or even silent periods during critical moments of surgery. Additionally, educational sessions or team discussions could help align preferences and create a balanced environment that respects individual needs while fostering team cohesion.

Contrary to our findings, Kurimoto et al. (16) reported that the job satisfaction of operating room nurses plateaued after 5-7 years and declined after 10 years. However, our study showed no

relationship between professional years and job satisfaction. The work environment's impact on job satisfaction and adaptation is well-documented, and music can contribute to creating a positive environment and mood (16). Our study also found a positive correlation between job satisfaction and positive comments about listening to music, suggesting that music in the operating room can enhance job satisfaction and adaptation. Previous studies have shown significant relationships between working hours, job satisfaction scores, and adaptation (17). These findings suggest that music can contribute to healthcare workers' job satisfaction and potentially improve healthcare quality through appropriate music selection.

One limitation of our study is the cross-sectional design, which only provides a snapshot of the participants' perspectives at a single point in time. This design does not allow for the assessment of changes in attitudes over time or the establishment of causal relationships. Another limitation is the self-reported nature of the survey data, which may be subject to response biases, including social desirability bias. Additionally, the study was conducted in three tertiary centers within a single city, which may limit the generalizability of the findings to other regions or healthcare settings. Potential biases in our study must also be considered. Certain specialties, such as anesthesiology or surgery, might inherently prefer quieter environments due to the nature of their tasks and the need for concentration during critical moments. This could have influenced the overall perception of music's appropriateness and its reported effects. Future studies should explore these specialty-specific preferences in more detail to ensure a balanced approach to music implementation in operating rooms. Our study is limited by its geographic concentration, as it was conducted in three tertiary centers in a single city. Cultural factors, including societal norms and workplace traditions, might have played a significant role in shaping participants' attitudes toward music in the operating room. For instance, different regions may have varying tolerances or preferences for music in professional settings, potentially affecting the generalizability of our findings. Expanding this research to include diverse geographical and cultural contexts would provide a more comprehensive understanding of this phenomenon.

Despite these limitations, our study has several strengths. The inclusion of a diverse group of healthcare professionals, including surgeons, anesthesiologists, and nurses, allows for a comprehensive understanding of different perspectives on music in the operating room. The use of validated job satisfaction scales adds rigor to our assessment of the relationship between job satisfaction and attitudes towards music. Furthermore, the large sample size enhances the reliability of our findings.

CONCLUSION

Our study indicates that the majority of healthcare professionals have positive views on listening to music in the operating room, with higher job satisfaction levels associated with more favorable attitudes. However, increased professional experience tends to correlate with less positive perceptions of music during surgeries. These findings highlight the importance of considering individual preferences and job satisfaction when implementing music in the operating room. Further research is needed to explore the underlying factors influencing these perspectives and to assess the long-term effects of music on surgical outcomes and healthcare workers' well-being. Our study suggests that appropriately selected music may enhance job satisfaction and potentially improve the quality of healthcare.

Ethics

Ethics Committee Approval: The ethics committee approval was obtained with the Lokman Hekim University Ethics Committee. (approval number: 2023/168, date: 20.09.20203).

Informed Consent: Healthcare workers were informed about the study, and those who consented were included in the study after obtaining their approval.

Footnotes

Authorship Contributions

Surgical and Medical Practices: B.M.S., Concept: B.M.S., Z.C.Ü., S.A.E., Design: B.M.S., Z.C.Ü., S.A.E., Supervision: B.M.S., Resources: B.M.S., Material: B.M.S., Z.C.Ü., S.A.E., Data Collection or Processing: B.M.S., Z.C.Ü., S.A.E., Analysis or Interpretation: B.M.S., Z.C.Ü., S.A.E., Literature Search: B.M.S., Z.C.Ü., S.A.E., Writing: B.M.S., Z.C.Ü., S.A.E., Critical Review: B.M.S.

Conflict of Interest: The authors declare that there is no conflict of interest.

Financial Disclosure: The authors declare that there is no conflict of interest.

References

- Kane EON. Phonograph in operating-room. JAMA. 1914;62:1829
- Conrad C, Niess H, Jauch KW, Bruns CJ, Hartl WH, Welker L. Overture for growth hormone: requiem for interleukin-6? Crit Care Med. 2007; 35: 2709-13.
- Allen K, Blascovich J. Effects of music on cardiovascular reactivity among surgeons. JAMA. 1994; 272: 882-4.
- Pluyter JR, Buzink SN, Rutkowski AF, Jakimowicz JJ. Do absorption and realistic distraction influence performance of component task surgical procedure? Surg Endosc. 2010; 24: 902-7.
- Way JT, Long A, Weihing J, Ritchie R, Jones R, Bush M, et al. Effect of noise on auditory processing in the operating room. J Am Coll Surg. 2013; 216: 933-8.
- Lamberton T, de Virgilio C, Terrell J, Moazzez A, Combs K, Nafday R, et al. Music in the operating room: comparing the opinions of surgeons, anesthesiologists, and nurses. Am Surg. 2023; 89: 5234-9.
- Judge TA, Locke EA, Durham CC, Kluger AN. Dispositional effects on job and life satisfaction: the role of core evaluations. Journal of applied psychology. 1998; 83: 17-34.
- Başol O, Çömlekçi MF. İş tatmini ölçeğinin uyarlanması: geçerlik ve güvenirlik çalışması. Kırklareli Üniversitesi Sosyal Bilimler Meslek Yüksekokulu Dergisi. 2020; 1: 17-31.
- El Boghdady M, Ewalds-Kvist BM. The influence of music on the surgical task performance: a systematic review. Int J Surg. 2020; 73: 101-12.
- Faraj A, Wright A, Haneef J, Jones A. Listen while you work? The attitude of healthcare professionals to music in the operating theatre. J Perioper Pract. 2014; 24: 199-204.
- Reudink M, Fu VX, Mackenbach KT, Jeekel J, Slooter GD, Dias EM. Implementation of perioperative music in day care surgery. Acta Chir Belg. 2023; 123: 281-9.
- Lies SR, Zhang AY. Prospective randomized study of the effect of music on the efficiency of surgical closures. Aesthetic surgery journal. 2015; 35: 858-63.
- Mosaed S, Vahidi R, Lin KY. Effect of music tempo on operating room preparation time. J Perioper Pract. 2020; 30: 141-4.
- Ullmann Y, Fodor L, Schwarzbach I, Carmi N, Ullmann A, Ramon Y. The sounds of music in the operating room. Injury. 2008; 39: 592-7.
- Hawksworth C, Asbury A, Millar K. Music in theatre: not so harmonious: a survey of attitudes to music played in the operating theatre. Anaesthesia. 1997; 52: 79-83.
- Kurimoto S, Minagawa T, Tamura A. Operating-room nurses' classifications in job satisfaction. J Med Invest. 2020; 67: 113-23.
- Stimpfel AW, Sloane DM, Aiken LH. The longer the shifts for hospital nurses, the higher the levels of burnout and patient dissatisfaction. Health Aff (Millwood). 2012; 31: 2501-9.

Appendix I. A questionnaire administered to all participants

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
Listening to music during surgery is appropriate					
Listening to music during surgery improves my focus on the task					
Listening to music during surgery helps me feel calmer					
Listening to music during surgery distracts me					
Listening to music during surgery is not safe for patients					
Listening to music during surgery disrupts communication					
I am very satisfied with my current job					
I go to work with enthusiasm on most days					
Every workday feels never-ending					
I find my job enjoyable					
I find my job unpleasant					