

Awareness Among Otorhinolaryngologists of Literature Resources: Survey Research

Kulak Burun Boğaz Hekimlerinin Bilgi Kaynaklarına Yönelik Farkındalığının Anket Yoluyla Değerlendirilmesi

Nurullah Ture¹, Yesim Tunc², Cemal Aksoy¹

¹Kutahya Health Sciences University,
Department of Otorhinolaryngology, Kutahya,
Turkey

²Kutahya Health Sciences University,
Department of Biostatistics, Kutahya, Turkey

Address correspondence to: Nurullah
Ture, Kutahya Health Sciences University,
Department of Otorhinolaryngology, Kutahya,
Turkey.
e-mail: nurullah.ture@ksbu.edu.tr

Geliş Tarihi/Received: 26 May 2022

Kabul Tarihi/Accepted: 15 August 2022

Öz

Amaç: Bu çalışmada, ulusal ölçekte kulak burun boğaz hekimleri arasında podcast farkındalığının ve kullanım sıklığının araştırılması amaçlanmıştır.

Hastalar ve Yöntem: Çevrimiçi anket türündeki çalışmamız, 2021-2022 yılları arasında 'Google forms' (Mountain View, CA) açık web adresi üzerinden yapılmıştır. Hedef kitle, ulusal ölçekteki her yaş ve deneyim seviyesinden kulak burun boğaz hekimleridir. Anketimiz yirmi sorudan oluşmaktadır.

Bulgular: Anket çalışmamızda, sorularımıza cevap veren kişi sayısı 112'dir. Bu 112 kişinin 92'si erkek (%82,1), 20'si kadın (%17,9)'dır. Kulak burun boğazla ilgili mesleki alanda podcast dinleyen %20,5 (n=23), dinlemeyen %79,5 (n=89) olarak izlendi. Pandemi öncesi en sık başvurulan kaynakların %40,2 (n=45) ile kitap ve %31,3 (n=35) ile e-kitap olurken, pandemi %30,4 (n=34) çevrimiçi toplantı ve %27,7 (n=31) e-kitap olduğu izlenmiştir. Pandemi öncesi ve pandemi dönemi başvurulan kaynakların sıklık karşılaştırılmasında istatistiksel anlamlı fark bulunmuştur (p<0,001).

Sonuç: Süregelen pandemi bilgi kaynaklarına başvuru sıklığını etkilemiş olmasına rağmen, podcast kullanımında anlamlı bir değişikliğe neden olmamıştır. Yazarlar, bu makalenin kulak burun boğaz alanında Türkçe podcast üretmek için bir farkındalık oluşturacağını umuyorlar.

Anahtar Kelimeler: Podcast, otolaringoloji, asenkron öğrenme, pandemi

Abstract

Aim: It was aimed to investigate podcast awareness and frequency of use among otorhinolaryngologists on a national scale.

Patients and Methods: This study was conducted via the open web address of 'Google forms' (Mountain View, CA) between 2021-2022. On a national scale, the intended audience consisted of otorhinolaryngologists of all ages and levels of experience. Our survey consisted of twenty questions.

Results: In our study, the number of people who answered our questions was 112 (92 men (82.1%), 20 women (17.9%). When asked if they had listened to podcasts about otorhinolaryngology, 23 people (20.5%) answered that they had listened and 89 people (79.5%) had not. When people want to learn about a topic in the field of Otorhinolaryngology before pandemic, the most frequently used literature resources are 40.2% (n=45) books and 31.3% (n=35) e-books. It was observed that the most frequently used literature sources in the pandemic were 30.4% (n=34) online meetings and 27.7% (n=31) e-books. There was a statistically significant difference between the frequency distribution of resources consulted before and during the pandemic (p<0.001).

Conclusion: Although the ongoing pandemic has affected the frequency of consulted to literature resource, it has not caused a significant change in podcast usage. The authors hope that this article will create an awareness for producing Turkish podcasts in the field of otolaryngology.

Key words: Podcast, otolaryngology, asynchronous learning, pandemic

Cite this article as: Ture N, Tunc Y, Aksoy C. Awareness Among Otorhinolaryngologists of Literature Resources: Survey Research. Selcuk Med J 2022;38(3): 114-120

Disclosure: None of the authors has a financial interest in any of the products, devices, or drugs mentioned in this article. The research was not sponsored by an outside organization. All authors have agreed to allow full access to the primary data and to allow the journal to review the data if requested.



"This article is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/) (CC BY-NC 4.0)"

INTRODUCTION

Otorhinolaryngologists must continuously improve their skills, to to acquire and maintain expertise in their field. Even though traditional methods of study, such as books and articles, have continued to be useful, Internet-based learning has become increasingly prevalent over the past decade (1). A study of residents and medical students reported that 58% of them preferred using only electronic learning methods (2). It is evident from the increasing of online courses, video images, and podcasts that the amount of professional knowledge is expanding exponentially and changing constantly (1). Podcasts have been found to be an effective method for modern medical education (3). However, few studies have investigated the use and effects of podcasts in specific fields (4, 5).

A study of residents in emergency medicine found that more than 80% reported listening to podcasts on a regular basis (6). It has been reported that approximately three-quarters of residents in otorhinolaryngology (ENT) listen to ENT podcasts (7). According to Malka et al., podcasts in the field of ENT can facilitate rapid dissemination of content knowledge and current trends (8). Reports have also indicated that podcasts significantly increase the recall of medical information when compared to traditional means (9).

Several international studies that have examined the reasons for and frequency of the use of podcasts in the field of ENT (7, 8, 10). However, it has not been possible to identify a study that has focused on understanding the awareness and usage characteristics of podcasts among otorhinolaryngologists on a national scale. The present study aims primarily to determine the level of awareness and frequency of podcast use among otorhinolaryngologists, as well as to encourage the creation of Turkish language podcasts in the field of ENT.

PATIENTS AND METHODS

This study was approved by the ethics committee of Kutahya Health Sciences University's non-interventional clinical research, with number 2021/10-03. A preliminary study was conducted to clarify the questions in our study, and 10 otorhinolaryngologists were asked to respond to this. After receiving feedback from the otorhinolaryngologists who filled out the questionnaire, necessary corrections were made and the questionnaire was put into its final form.

This study was carried out on the open web

address of "Google forms" (Mountain View, CA) between 2021-2022. The target audience was otorhinolaryngologists of all ages and levels of experience. There were twenty (20) questions, and it took about 10 minutes to complete the survey. The survey was open to participation for three months. A call for participation was made from the KanalKBB news source, and the link address was shared three times over KanalKBB. Each participant had the right to complete the survey only once. Participants were not given the right to see the answers of others, which were obtained from "Google forms".

The participants were asked to provide the following information: Email addresses, ages, genders, academic titles, how long they had worked in medicine, and the characteristics of the hospitals where they worked. They also answered questions about their use of the literature: their first sources (books, journals, podcasts, electronic books, or online meetings), the frequency of their applications to literature sources (once a week, once a month, or once a year), the literature sources they had used most frequently during the pandemic (online meetings, podcasts, books, journals, or electronic books), the literature sources they would reference most frequently in the near future (books, journals, online meetings, podcasts, or e-books), whether their literature sources included information about podcasts (I know or have never heard of), whether they had ever listened to podcasts (I have listened or have not), whether they had listened to podcasts in the professional field (about ENT) (I have listened or have not), how many times they had listened to podcasts in the previous month (0, 1–3, 4–7, 8–11, or "12 or more"), for how many years they had used podcasts as a medical information transfer tool (0–2 years, 3–5 years, 6–8 years, 8–10 years, or 10 years or more), and their knowledge of the podcasts (easy to access, reproducible, web-based, reliable source of information, and paid content). The participants were asked questions about the following as well: for what parts of ENT certain podcasts will be most useful and able to be applied (in diagnosis, treatment, both diagnosis and treatment, or surgery-surgical techniques), whether podcasts will be used as a common information transfer tool in the future (strongly disagree, disagree, undecided, agree, or strongly agree), the usefulness of podcast-supported education for the professional development of ENT physicians (strongly disagree, disagree, undecided, agree, or strongly agree), and whether podcasts are

more useful than other key information transfer tools (strongly disagree, disagree, undecided, agree, or strongly agree) (Appendix 1).

SPS statistical software (SPSS Inc., version 21.0, Chicago, IL, USA) was used for statistical analysis. Frequency distributions and percentages of categorical variables are provided. Cronbach's Alpha value (0.839) and reliability value were calculated in the part that was evaluated with a Likert scale. The Chi-square test was used for comparisons between qualitative variables. Continuity corrected Chi-square, Fisher exact probability test, Mc Nemar Bowker test, and likelihood ratio values were used when appropriate, according to the characteristics of the data. A value of $P < 0.05$ was considered to be significant.

RESULTS

There were 112 people who responded to our questions. Among these participants, 92 (82.1%) were men, and 20 (17.9%) were women. The age ranges of the participants were 17 people (15.2%) from 20-to-29 years of age, 50 people (44.6%) from 30-to-39, 20 people (17.9%) from 40-to-49, 15 people (13.4%) from 50-to-59, and 10 people (8.9%)

who were more than 60 years old. There were 13 professors (11.6%), 10 associate professors (8.9%), 12 faculty members (10.7%), 53 operator doctors (47.3%), and 24 residents (14.1%). Among those within the field of otorhinolaryngology, 25 people (22.3%) had worked in it for 1-to-5 years, 35 people (31.3%) for 6-to-10 years, 14 people (12.5%) for 11-to-15 years, nine people (8%) for 16-to-20 years, and 29 people (25.9%) had more than 20 years of experience in otorhinolaryngology. Demographic data is summarized in Table 1.

When asked "Do you know the podcast," 64 (57.1%) people replied "I do" and 48 (42.9%) reported that they had never heard of it. With regard to the question about how many times they had listened to podcasts in the past month, 33 people answered 1-to-3 times (29.5%), eight people answered 4-to-7 times (7.1%), six people answered 8-to-11 times (5.4%), three people answered (2.7%) over 12 times, and 62 people (55.4%) responded that they had never listened to podcasts. In response to the question about whether they had listened to podcasts about otorhinolaryngology, 23 individuals (20.5%) said that they had. However, 89 respondents (79.5%) said that they did not listen to podcasts.

When asked to respond to five true-or-false statements about their knowledge of podcasts, 61 respondents (54.5%) said that they are easily accessible, 59 (52.7%) stated that they are repeatable, 65 (58%) said that they are Internet-based, 12 (10.7%) responded that they are reliable information sources,

Table 1. Demographic Information

Total	112
Gender	Man= 92 (%82,1) Women=20 (%17,9)
Term of study	
1-5 Years	25 (%22,3)
6-10 Years	35 (%31,3)
11-15 Years	14 (%12,5)
16-20 Years	9 (%8,0)
>21 Years	29 (%25,9)
Age	
20-29 Age	17 (%15,2)
30-39 Age	50 (%44,6)
40-49 Age	20 (%17,9)
50-59 Age	15 (%13,4)
>60 Age	10 (%8,9)
Title	
Resident	24 (%21,4)
Operator Doctor	53 (%47,3)
Faculty member	12 (%10,7)
Associate professor	10 (%8,9)
Professor	13 (%11,6)
Institution	
University Hospital	36 (%32,1)
Training and Research Hospital	32 (%28,6)
Public Hospital	14 (%12,5)
Private Hospital	23 (%20,5)
Private Clinics	7 (%6,3)

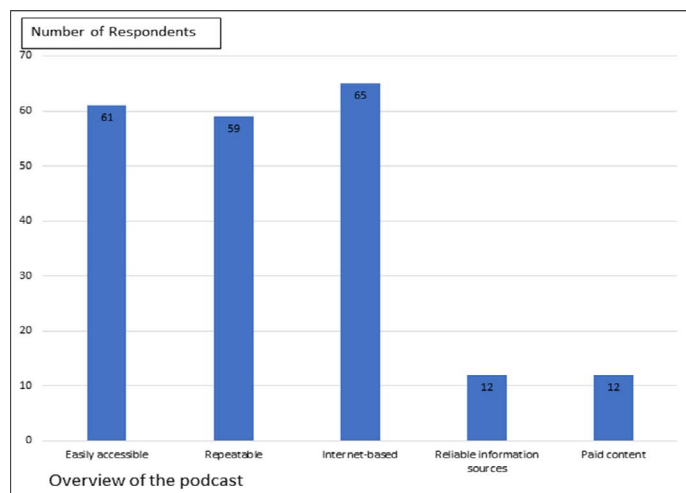


Figure 1. Answers to questions regarding the features of podcasts

Table 2. Answers to questions relating to education and the increased usefulness of podcasts in the near future

	Strongly agreed	Agreed	Undecided	Disagreed	Strongly disagreed
Q-Is podcast-based education helpful to otorhinolaryngologists' professional development?	17 (15.2%)	65 (58%)	21 (18.8%)	5 (4.5%)	4 (3.6%)
Q-Are podcasts more useful than other literature tools (books, journals, or online meetings)?	9 (8%)	13 (11.6%)	53 (47.3%)	29 (25.9%)	8 (7.1%)
Q-Will podcasts become a common tool for information sharing in the near future?	21 (18.8%)	42 (37.5%)	36 (32.1%)	10 (8.9%)	3 (2.7%)

and 12 (10.7%) stated that they include paid content (Figure 1).

In response to the question about whether podcast-based education is helpful for the professional development of otorhinolaryngologists, 65 (58%) respondents agreed, and 21 (18.8%) respondents were undecided (Table 2). Based on the otorhinolaryngologists' responses after being asked whether the "podcast is more useful than other literature tools (books, journals, online meetings), 53 people (47.3%) said they were undecided, and 29 (25.9%) disagreed (Table 2).

When asked if podcasts will become a common tool for sharing information in the near future, 37.5% (n=42) responded that they agreed, and 32.1% (n=36) were undecided (Table 2).

With regard to how frequently they referred to literature resources, 48 respondents (42.9%) answered once a week, and 40 respondents said they did so (35.7%) daily (Table 3). In response to the question about which area of ENT could benefit from podcasts, 73 people (65.2%) answered that these would be useful for diagnosis and treatment, and 33 people (29.5%) cited surgery-surgical techniques

(Table 3). For the question regarding how long the podcast has been used as a medical transmission tool, 47 people (42%) responded that they had been using it for 0-to-2 years, and 34 (30.4%) indicated 3-to-5 years (Table 3).

In response to the question about the most frequently consulted source in otolaryngology before the pandemic, 45 people (40.2%) said books, 35 people (31.3%) e-books, 25 people (22.3%) journals, five people (4.5%) online meetings, and two people (1.8%) cited podcasts (Figure 2). When asked what resource was most frequently consulted during the pandemic period, 34 people (30.4%) said online meetings, 31 people (27.7%) e-books, 26 people (23.2%) journals, 18 people (16.1%) books, and three people (2.7%) cited podcasts (Figure 2). There was a statistically significant difference between the resources consulted before the pandemic and those to which people referred during the pandemic using the Mc Nemar Bowker test ($p < 0.001$).

In response to the question about their beliefs regarding the most frequently used source of literature in the near future, 60 people (53.6%) answered e-books, 20 (17.9%) online meetings, 18

Table 3. Answers to questions about the frequency and the areas of ENT for which medical transmission tools are used

	Daily	Once a week	Once a month	Once a year	
Q-Regarding the frequency of referral to literature resources	40 (35.7%) respondents	48 (42.9%) respondents	21 (18.8%) respondents	3 (2.7%) respondents	
Q-Concerning which areas of ENT could benefit from the podcast	Diagnosis and treatment 73 (65.2%) respondents	Surgery-surgical techniques 33 (29.5%) respondents	Diagnosis 30 (26.8%) people	Only treatment 10 (8.9%) people	
Q-About how long the podcast has been used as a medical transmission tool	0-2 years 47 (42%) people	3-5 years 34 (30.4%) people	6-8 years 10 (8.9%) people	8-10 years 8 (7.1%) people	>10 years 13 (11.6%) people

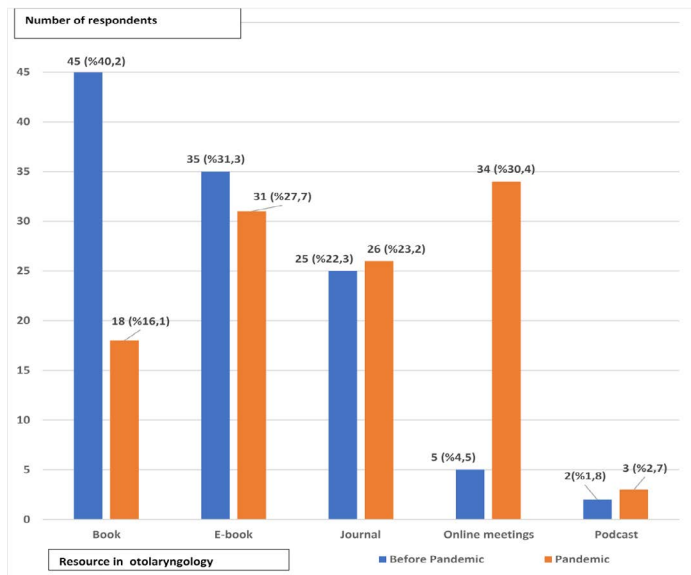


Figure 2. The frequency with which literature sources were consulted before and during the pandemic

(16.1%) journals, seven (6.7%) books, and seven (6.7%) podcasts. There was no significant difference between the age groups with regard to the distribution of podcast information ($p=0.408$). In addition, there was no significant difference between the genders in terms of podcast awareness ($p=0.593$).

DISCUSSION

The podcast is an online audio program to which people listen via subscription. Because of the ease of use, convenience, and repeatability of podcasts, they have become an increasingly popular asynchronous educational method (4). A podcast provides listeners with a unique opportunity to take part in learning while they are also engaging in their daily routine activities (exercise, commuting, etc.), regardless of the time of day or night or where they are. According to the literature, this opportunity to learn is frequently selected by those in areas such as emergency medicine and internal medicine. Podcasts are also employed in surgical branches of medicine, such as orthopedics, obstetrics, and anesthesia (11).

In the past ten years, there has been an increase in the amount of podcast content that is available in the field of ENT (8). However, in spite of the increasing interest in podcasts at the global level, no study has been found that quantifies the opportunity, advantages, awareness, and contributions of

podcasts to continuing education on a national scale. This is the first study that has been conducted on the podcast at the national level.

We received 121 responses to our online questionnaire from otolaryngologists, including 82.1% ($n=92$) males and 17.9% ($n=20$) females. Most of the participants in our study (59.8%) were aged from 20 and 39. With regard to their titles, the group with the highest number of responses was the operator doctors 47.3% ($n=53$). According to Vanstrum et al.'s study (7), 73 otolaryngology residents were included in the study, and their median age was reported as 30 years.

According to study by Riddell that investigated the use of podcasts by emergency room residents, 65.5% ($n=233$) of the 352 participants were male, and 33.4% ($n=119$) were female (12). There were more male than female participants, as was the case in our study, which provides the first national data of titles and age groups.

There were 64 people (57,1%) who were aware of podcasts, while 48 (42,9%) were not. Another study that reported on a national scale in the United States found that 55% of participants, approximately 155 million people, had listened to podcasts at least once (13). The level of recognition, which is very similar to that of the literature, is expected to increase over time.

Although 45% ($n=50$) had listened to podcasts in the previous month, 55.4% ($n=62$) had not listened to them. In a study of 73 residents in the field of otolaryngology, 83% reported that they listened to podcasts at least once a month (7). Another study conducted on emergency room residents reported that the majority of them listened to podcasts at least once a month (88.8%; 316/356) (12). In addition, a study of 91 ENT residents reported that they listened to podcasts only 10% of the time that they spent learning (13). In response to the question about whether they had listened to podcasts about otolaryngology, 23 people (20.5%) responded in the affirmative, and 89 people (79.5%) responded negatively. Another study reported that three-quarters of the otolaryngology residents listened to podcasts regarding their field (7). Although podcasts are a preferred method of education at the international level, it has been found that the degree to which this method is preferred is still low at the national level. This is similar with regard to otolaryngologists, among whom the preference for podcasts on a national scale is low but is higher globally. This low rate may be due to the absence of

Turkish podcasts on ENT.

When asked about the validity of podcasts, 12 individuals (10.7%) answered that these are reliable literature. When podcast content is developed, information security needs to be taken into consideration, including reliability, content, and design evaluation, which is similar to other educational methods that use peer review. If podcasts can be standardized, it may be possible for them to become accredited as continuing medical education in the near future.

In our study, 72.4 percent of the participants responded that the podcast has been used as a medical communication tool for five years. However, our results show that the podcast is relatively new in the professional field in Turkey. In addition, since podcasts are a new method, further research is needed with regard to their use.

Podcast-supported education is considered by 63.2% (n=82) of the respondents to be a useful tool for otolaryngologists to maintain and develop their professional skills. Studies have reported that, when compared to classical literature sources, podcasts are effective and adequate methods for supporting the learning process (14). The results of our study are, then, consistent with the literature.

According to the results of our survey, 56.3% of the respondents believed that podcasts will be widely used to transfer information. In response to the question about what educational methods will be most common in the near future, e-books were the most frequently cited, with 53.6% (n=60), and podcasts were the least, with 6.3% (n=7). The podcast continues to rank low among educational methods (7). Many authors consider that the ability of the podcast to increase accessibility, the production of Turkish content, and the provision of high-quality information can add to and at times replace traditional learning methods. However, this will depend on podcasts providing the right information, as well as on professionalism, and universal accessibility (15).

With regard to the question about the areas of otorhinolaryngology where podcasts would be most useful, 73 respondents (65.2%) indicated that they would contribute to diagnosis and treatment, and 33 respondents (29.5%) cited surgery-surgical techniques. The literature contains reports that listening to podcasts affects clinical practice (7). However, further studies are needed to determine the levels of contribution and benefit. Otolaryngologists have also reported using podcasts to communicate

with patients (16).

Before the pandemic, 40.2% (n=45) used books as the first source of literature when learning about topics in otorhinolaryngology. However, during the pandemic period the most frequently used literature source, as cited by with 30.4% (n=45), was the online meeting. In addition, before the pandemic, 31.3% (n=35) used electronic books, while 27.7% (n=31) did so during the pandemic. Before the pandemic, 22.3% (n=25) of otolaryngologists consulted journals, while 23.2% (n=26) consulted these during the pandemic. Also, before the pandemic, 1.8% (n=2) listened to podcasts, but 2.7% (n=3) did so during the pandemic. There was a statistically significant difference between the frequency distribution of resources that were consulted before and during the pandemic ($p<0.001$). The coronavirus disease 2019 pandemic has not only affected our professional activities and social lives but also the frequencies in the use of otolaryngology literature. Our study provides the first data to be reported in the literature. Although the literature reports that the use of podcasts has increased with the pandemic (7), it also indicates that podcasting was not preferred in the pandemic period on a national scale, in spite of the great opportunity it offers for unprecedented learning conditions (10).

Our study had a number of limitations. Although we tried to reach all ENT physicians registered within the KanakBB system, access remained restricted. In addition, the answers were based on statements and were therefore subject to human error. However, the study was conducted on the Internet, and the sample was randomly selected.

CONCLUSION

It has been observed that otolaryngologists throughout Turkey do not prefer using podcasts rather than other methods of learning. Even though the pandemic has affected the frequency with which otolaryngologists consult literature sources, the use of podcasts has not changed significantly. It is hoped that the content presented in this paper will encourage those in teaching positions at universities, colleges, and professional associations to produce ENT podcasts in Turkish.

Conflict of interest: Authors declare that there is no conflict of interest between the authors of the article.

Financial conflict of interest: Authors declare that they did not receive any financial support in this study.

Address correspondence to: Nurullah Ture, Kutahya Health Sciences University, Department of Otorhinolaryngology, Kutahya, Turkey.
e-mail: nurullah.ture@ksbu.edu.tr

REFERENCES

1. Tsai Do BS. Reflections on the changing platform of education for the budding otolaryngologist. *Otolaryngol Head Neck Surg* 2015;153(5):706-7.
2. Egle JP, Smeenge DM, Kassem KM, et al. The internet school of medicine: Use of electronic resources by medical trainees and the reliability of those resources. *J Surg Educ* 2015;72(2):316-20.
3. Malecki SL, Quinn KL, Zilbert N, et al. Understanding the use and perceived impact of a medical podcast: Qualitative study. *JMIR Med Educ* 2019;5(2):e12901.
4. Cho D, Cosimini M, Espinoza J. Podcasting in medical education: A review of the literature. *Korean J Med Educ* 2017;29(4):229.
5. Clarke CGD, Nnajiuba U, Howie J, et al. Giving radiologists a voice: A review of podcasts in radiology. *Insights Imaging* 2020;11(1):1-9.
6. Mallin M, Schlein S, Doctor S, et al. A survey of the current utilization of asynchronous education among emergency medicine residents in the United States. *Acad Med* 2014;89(4):598.
7. Vanstrum EB, Badash I, Wu FM, et al. The role of educational podcast use among otolaryngology residents. *Ann Otol Rhinol Laryngol* 2022:00034894211072996.
8. Malka R, Villwock J, Faucett EA, et al. Podcast-based learning in otolaryngology: Availability, breadth, and comparison with other specialties. *Laryngoscope* 2021;131(7):E2131-8.
9. Back DA, von Malotky J, Sostmann K, et al. Superior gain in knowledge by podcasts versus text-based learning in teaching orthopedics: A randomized controlled trial. *J Surg Educ* 2017;74(1):154-60.
10. Barnes JH, Choby G, Carlson ML. How to create a subspecialty podcast: Headmirror's ENT podcast series. *Med Educ* 2020;54(10):956-7.
11. Little A, Hampton Z, Gronowski T, et al. Podcasting in medicine: A review of the current content by specialty. *Cureus* 2020;12(1).
12. Riddell J, Swaminathan A, Lee M, et al. A survey of emergency medicine residents' use of educational podcasts. *West J Emerg Med* 2017;18(2):229.
13. Catalano DJ, Yin LX, Bisco SE, et al. Accuracy and misrepresentation of reported publications among otolaryngology residency applicants professional/personal. Professional and personal development. *Otolaryngol Head Neck Surg* 2021;165(1\suppl):P317-27.
14. Edmond M, Neville F, Khalil HS. A comparison of teaching three common ear, nose, and throat conditions to medical students through video podcasts and written handouts: A pilot study. *Adv Med Educ Pract* 2016;7:281.
15. Lin M, Thoma B, Trueger NS, et al. Quality indicators for blogs and podcasts used in medical education: Modified Delphi consensus recommendations by an international cohort of health professions educators. *Postgrad Med J* 2015;91(1080):546-50.
16. Abreu DV, Tamura TK, Sipp JA, et al. Podcasting: Contemporary patient education. *Ear Nose Throat J* 2008;87(4):208-11.