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How did the COVID-19 pandemic affect audience's attitudes in webinars?

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Abstract

Introduction: Following the COVID-19 pandemic, the face-to-face meetings are delayed to a future date, which is still not clear. However, seminars, meetings and conferences are necessary for updating our knowledge and skills. Web-based seminars (webinars) are the solutions to this issue. This study aimed to show the participant behaviour when webinars present at the COVID-19 pandemic era.

Methods: From December 2017 to July 2020, 58 webinars were broadcasted via the Uropedia, electronic library of SUST. Data of all webinars were collected with the YouTube analytics and application of the Uropedia. Data of streaming webinars included participant behaviours such as content views, engagement time, total unique attendees, average engagement time and the number of audience to leads. Data were split into two groups; group-1 is webinars before COVID-19 (before March 2020) and group-2 is the webinars during COVID-19.

Results: Total broadcast time and total page view number were found to be 112.6 hours (6761 minutes) and 15 919, respectively. The median participant age was 40.1 y. Median content view and median engagement time were found to be 261.0 and 12.2 minutes, respectively. Comparison of two groups revealed a significant increment in the content views (group-1; 134.0 range = 86.0-87.0 and group-2; 414.0 range = 296.0-602.0, $P < .001$) and the number of the unique attendees (group 1; 18.0 range = 10.0-26.0 and group-2; 57.0 range = 27.0-100.0, $P < .001$) following COVID-19. However, the median engagement time of the audience did not seem to change with the COVID-19 pandemic (group-1; 11.5 range = 10.0-13.3 minutes and group-2; 13.2 range = 9.4-18.1 minutes, $P = .12$).

Conclusion: The webinars are effective ways to share information and have many advantages, including low cost, reaching a high number of audiences. Audience number and page visits seemed to increase following the COVID-19 pandemic. However, this era did not seem to affect the critical attitude of the audience, which is engagement time.

What's known

- The education methods are evolving to digital over time. Webinars are also the most important part of education.
- Webinars play an important role for healthcare professionals to keep themselves up to date, especially after social isolation because of the pandemic.
- Studies have also shown that webinars satisfy the audience.

What's new

- Although the audience's satisfaction with the webinars is shown in the studies, their real behaviours are still uncertain in the literature, such as which topics they are more interested in, how long they watched and after what time they leave.
- In our study, we showed the change in audience behaviour and interest in webinars during the pandemic era for the first time in the literature.
- We also made suggestions for planning future webinars.

1 | INTRODUCTION

Coronavirus disease 2019 (COVID-19) infection is a life-threatening respiratory disease and first appeared in Wuhan, China, and spread worldwide in few months and became a pandemic.[1] All countries and communities are collaborating their effort to slow down the spread of infection. Undoubtedly, the pandemic's most negative impact has been and continues to be on the healthcare system and healthcare workers. All elective treatments were delayed, and the healthcare system began to struggle with the pandemic. As an effect of this, of course, all doctors started to spend their energies on this pandemic.

As another aspect of the work, all kinds of collective organisations are postponed as well as in the medical field. However, even if practical training is interrupted, theoretical training is important for physicians to update their knowledge and, more importantly, to keep their motivation high in these challenging pandemic conditions. Web-based seminars (webinars) are the solutions to this issue. The face-to-face online meetings are provided with advantages such as talking with mentors and taking answers to your questions on the area with the personal touch and social activities. The webinars have several advantages, such as no requiring travel, reducing cost and watching at home comfort using different mobile devices. The technological advantages started to shifted education into digital fields.

Our association (Society of Urological Surgery) developed an application called Uropedia in 2017 (Figure 1). Uropedia is an online library for urologists compatible with the mobile ecosystem, including mobile phones, tablets and Android TV. We share surgical techniques, videos of seminars, annual meetings and a summary of changes on guidelines such as COVID-19 recommendations in this application. There is also a textbook prepared by our association, through which we can access theoretical information through this app.

During the pandemic, webinars are increased all over the world. They are reduced costs and more comfortable, but the satisfaction of participants is still debatable. The literature recently focuses on webinars. Nevertheless, no published study has examined participatory behaviour and we even did not yet know the efficacy of webinars.

In this study, we aimed to evaluate audiences' behaviours before and after COVID-19.

2 | MATERIALS AND METHODS

2.1 | Application and webinars

Our official website is "www.uropedia.com.tr" "*Uropedia*" is a web-based application which is compatible with mobile devices, including mobile phone and tablets (Figure 1). Uropedia shows videos of seminars and surgical techniques, webcasts of annual meetings, a summary of guidelines, synopsis, or abstract of interesting studies that are updating very often. In addition, courses on statistics and article preparation are organised on this platform in order to contribute to the development of residents and young experts. In order to keep this application up to date, a team of 15 people consisting of very dynamic and young urologists working with a 3-person software team and two assistants was established. A constant effort is made to keep the site up-to-date and to include accurate information by distributing work within a certain hierarchy scheme. Application is free for all urologists during the pandemic era and webinars were also free access Also, the webinars are announced and promoted using social platforms, (*including Facebook*, *Twitter*, *Instagram*) and WhatsApp groups. We share a brief of topics, "presenters" names and free access links of webinars before and the same day. The participants could watch the seminars and comment or ask questions by using the application. The webinars were included spotlighted updates of guidelines, live or semi-live surgeries from mentors, current topics such as the COVID-19 pandemic. All webinars were published any day of the week at a consistent time (6.45 PM to 8.30 PM EST).

2.2 | Data collecting

A total of 58 webinars were broadcasted from December 2017 to July 2020, via the Uropedia, the electronic library of SUST. Data of all

FIGURE 1 Uropedia application

webinars were collected with the YouTube analytics and application of the Uropedia. Data of streaming webinars included participant behaviours such as content views, engagement time, total unique attendees, average engagement time and the number of audience to leads. Data were split into two groups and compared each other; Group-1 is webinars before COVID-19 era (before March 2020) and Group-2 is the webinars during COVID-19 pandemic.

2.3 | Statistical analysis

Data were analysed using the IBM Statistical Package for the Social Sciences version 22 (IBM SPSS Statistics for Windows, Chicago, IL, USA). Normality of distribution of the variables was checked using the Shapiro–Wilk test and Q-Q plots. The means were used when normality distribution. The median was used for variables that did

not show normal distribution. The medians were compared using the Mann–Whitney *U* test. In the case of categorical data, the comparison was made using the chi-squared test. The *P* value <.05 was accepted as statistically significant.

3 | RESULTS

3.1 | Global data recorded in Uropedia

Total broadcast time was 112.6 hours (6761 minutes) broadcast. The median age of participants was 40.1 years. Median content view and median engagement were 261.0 (range = 122.0-414.0) minutes and 12.2 (range = 10.0-16.1) minutes (summarised in Table 1). The median time of audience leads was 90.5 (range = 82.0-106.0) minutes. A huge portion of participants was unsubscribed (average 87.5%) because of sending free access links.

TABLE 1 Data of overall webinars

Variable	Value	Min–Max
Median age (y)	40.1	
Duration of webinars (min)	102.0	77.0-119.0
Number of unique attendees	26.5	16.0-56.0
Peak engagement time (min)	56.5	40.0-86.0
Time of leads (min)	90.5	82.0-106.0
Engagement time (min)	12.2	10.0-16.1
Content views	261.0	122-414

Abbreviations: Max, maximum; Min, minimum.
*All data were express as median.

3.2 | Data recorded after the pandemia in Uropedia

When data split into two groups, the content views were significantly higher in group-2 than group-1 (134.0 range = 86.0-187.0 and 414.0 range = 296.0-602.0 in group-1 and group-2, respectively, $P < .001$) (see Figure 2). The median number of unique attendees was considerably higher in group-2 ($P < .001$). The engagement time duration was higher in group-2 (11.5 range = 10.0-13.3 minutes and 13.2 range = 9.4-18.1 minutes in group-1 and group-2, respectively); however, there was no significant difference between groups ($P = .12$). The time of leads was similar between groups (93 vs 87.5 minutes in group-1 vs group-2, $P = .23$). The peak engagement time was significantly earlier in group-2 (80.0 range = 60.0-100.0 minutes and 42.0 range = 32.0-45.0 minutes in group-1 and group-2, respectively, $P < .001$) (see in Table 2).

4 | DISCUSSION

Since stepping into the digital world technological advances provide new education platforms and webinars are starting to gain popularity for health professionals (HP). While this process would take a decade if the COVID-19 pandemic did not exist, the adaptation to digitalisation took place very quickly within 1 y as the pandemic affected the whole world. Update and information-sharing meetings, which are very important for all healthcare professionals, especially physicians, were naturally affected by this process. After physical seminars are stand overdue to the COVID-19 pandemic for social distancing, the webinars are essential for overcoming social distance for reaching information.

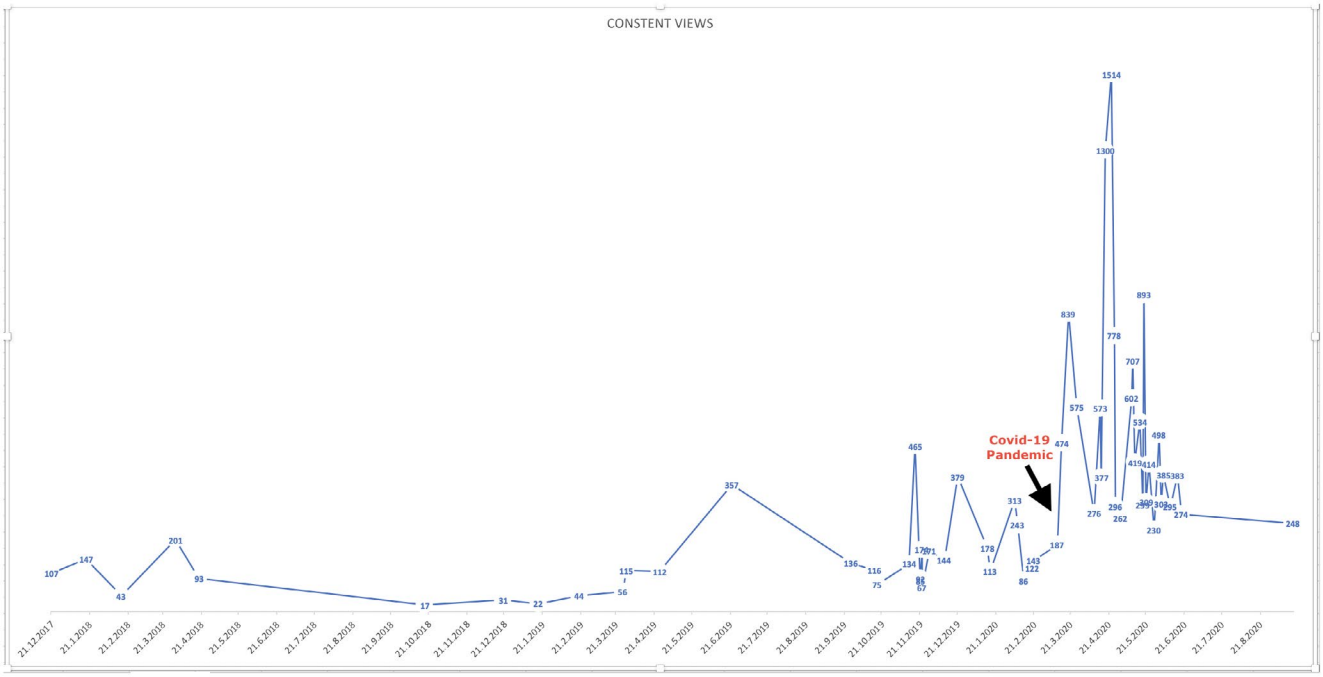

FIGURE 2 Change in content views during the timeline

TABLE 2 Comparison of two groups

	Groups				
	Before COVID-19 pandemic (Group-1)		While COVID-19 pandemic (Group-2)		
Variable	Value	Min–Max	Value	Min–Max	*P* value
Duration of webinars (min)	102.0	79.0-131.0	102.0	75.0-117.0	
Number of unique attendees	18.0	10.0-26.0	57.0	27.0-100.0	**<.001**
Peak engagement time (min)	80.0	60.0-100	42.0	32.0-45.0	**<.001**
Time of leads (min)	93.0	88.0-105.0	87.50	78.50-108.0	.23
Engagement time (min)	11.4	10.0-13.3	13.20	9.4-18.1	.12
Content views	134.0	86.0-187.0	414.0	296.0-602.0	**<.001**

Abbreviations: Max, maximum; Min, minimum.

*All data were expressed as a median.

Bold values indicate statistical significance.

As far as we can reach and find, this study is the first of its kind in the literature, showing audience behaviours that will help planning future webinars. The webinars reached high view rates during the pandemic. The health information seminars were started to shift to online platforms and the pandemic process is accelerated. The early studies focused, especially on HP' satisfaction and patients' education.[2,3] The authors concluded that all learners intended to reduce their own cancer risk. Patients felt more knowledgeable, prepared and confident talking about cancer.[2,3] For HP, the studies generally use the surveys to investigate the results of webinars and showed that HP is satisfied and significantly improved their information, and they would deal with the webinar topics further.[3-5] The education of the processes that can be defined as the education of tomorrow have now been laid. Our study demonstrated that webinars are becoming the preferable site for reaching information. We explore that the mean watch time slightly increased when attractive topics or semi-live surgeries were broadcasted. However, it still does not exceed 20% of the whole broadcast period, which still seems too low.

The webinars are commonly promoting range from 60 to 120 minutes.[4] Our study supported that results, and when the webinars prolonged 90 minutes, the participants were started to leave. Additionally, the webinars shorter than almost 80 minutes, we did not investigate any significant fall pattern. Our study demonstrated that the time of leads was similar between groups and suggested that the webinars must be as concise and informative as much as it can be. We cannot interpret mean watch time, the number of the audience after breaks because our webinars had no break.

The webinars reached top page views at the pandemic period after social distancing dismiss page views nearly decreased before pandemic levels. Furthermore, our suggestion is the webinar's watch time increasing day by day because of becoming reconciled to broadcasts. The time of reaching maximum participants has come earlier in the pandemic era; however, median watch time was similar between groups. To our guess, watching broadcasts at a comfortable place with other visual stimulus force participants to leave from webinars. In addition, it is necessary to take into account the broadcasting problems because of technical problems and the signal limitations in the country's infrastructure. Nevertheless, we have to say that webinar is more professional and technical problems have rarely been occurring lately.

Recently, the adverse emotional effects of the pandemic have been discussed. Especially the long working hours of healthcare professionals, social separation from friends and constant infection also reduce employees' wellbeing.[6] It has been shown to reduce their academic achievement. Moreover, graduated healthcare professionals are willing to keep themselves updated because of changing treatment modalities and different approaches during the pandemic period. We also think that this increase in the audience depends on this in our study, but that webinars may not give the desired result because they cannot find what they want or are not satisfied with the presentations.

One of the important limitations of this study is the participants' satisfaction was not evaluated using questionnaires after webinars. Another limitation of the study is that a significant portion of the participants do not have sufficient demographic data due to the use of free access links.

5 | CONCLUSIONS

The webinars effectively share information and have many advantages, including low cost, reaching many HP. The participations of

webinars were higher in the pandemic era; however, the median watch time of broadcast was not different and too low. The webinars must be concise and assessing an interesting topic.

DISCLOSURE

There are no competing financial interests.

DATA AVAILABILITY STATEMENT

We can share our data with the journal for representing analysis and interpretation of the data. However, we do not want the readers to view or download our data.

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REFERENCES

1. Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* [Internet]. 2020;395:497-506.
2. Cueva M, Thomas MK. Reflecting on the importance of webinars in cancer education. *J cancer Educ*. 2017;32:417-418.
3. Chiswell M, Smissen A, Ugalde A, et al. Using webinars for the education of health professionals and people affected by cancer: processes and evaluation. *J cancer Educ*. 2018;33:583-591.
4. Ali SR, Dobbs TD, Whitaker IS. Webinars in plastic and reconstructive surgery training - a review of the current landscape during the COVID-19 pandemic. *J Plast Reconstr Aesthet Surg*. 2020;73:1357-1404.
5. Nadama HH, Tennyson M, Khajuria A. Evaluating the usefulness and utility of a webinar as a platform to educate students on a UK clinical academic programme. *J R Coll Phys Edinburgh*. 2019;49:317-322.
6. Atiomo W. Emotional well-being, cognitive load and academic attainment. *MedEdPublish*. 2020;1:9.

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