An Assessment of Preference between Online Versus Physical Conferences Amongst Nigerian Dentists

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ABSTRACT

Objective: To assess the preferences of conference attendees from the six geopolitical regions of Nigeria regarding virtual and physical conferences.

Methods: This study was conducted among registered attendees of a virtual conference made up of dentists practising in Nigeria. Questionnaires were sent 24 hours after the conference via an online platform web-link. They were self-administered and sought to investigate the benefits/challenges of virtual and physical meetings/conferences, experiences regarding the virtual conference and their preferences.

Results: Sixty-seven of the participants filled the questionnaire giving a response rate of 73.6% with the predominant age group being 30 to 39 years (44.8%). Sixty-six (97.1%) of them had attended physical conferences while two-thirds of the participants were attending a virtual conference for the first time. Many (46.2%) preferred the face to face (physical) conferences though majority of the participants agreed that the virtual conference was more convenient, economical, and safe. Challenging factors for most people included navigating the virtual platform and not being able to visit novel places.

Conclusion: Though conference attendees rated the virtual conference well, the preference for physical conference attendance was higher. Hybrid conferences – a mix of both the physical and virtual – would be most beneficial.

Keywords: online, physical conference, virtual, dentists, Nigeria

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INTRODUCTION

Man, by nature is a social animal;[1] therefore, whether in academics or other activities, irrespective of gender, age or social status, man does not live in seclusion. No one is self-sufficient. There is interdependence and man is purposeful in his interactions as seen when a group of people with common interests come together and share ideas and effort.

Individuals, especially professionals, update their knowledge and continuously improve their skills to allow expert debates on topics of mutual concern. There are various fora where these can take place and they include meetings, symposia, workshops, conferences and congresses. Conferences are meetings which are convened by a group of people with common concerns, interacting, networking, and presenting their findings with the view of exploring latest ideas and technologies and improving their practices.[2,3,4]

Conferences can be face to face, virtual or hybrid.[4,5] Face to face conferences are more conventional and were described by McCarthy et al as, "a social space provided for people to present their work, learn about others' work and interact informally with one another".[3] Virtual conference was described by Anderson and Anderson as "a structured, time delineated, professional education or event that is organized and attended on the internet by a distributed population of presenters and participants who interact synchronously and/or asynchronously by various communication and collaboration tools."[6] A hybrid conference is a mixture of both the face to face and virtual.

Virtual communication is becoming more popular, as the advances in hardware and software programs coupled with more affordable, available and accessible bandwidths have resulted in decreased costs.[7] Real-time interactions on various platforms have increased making virtual communication more individualized and appealing.[7]

Communication takes place via these various platforms[2] which include teleconferencing, web conferencing and video conferencing. The introduction of virtual technology in conferences, which were hitherto face to face/physical meetings, have benefits and challenges. Several benefits include time management, increased productivity, safety, reduction of travel stress,[8] and overcoming travel restrictions because of family commitments, health reasons, etcetera.

Conversely, it may also come with challenges such as lack of physical interaction, feeling of unreality and distractions. In a poll, clients were asked why they preferred virtual to physical meetings. The top six reasons were: accessibility from any part of the world, economical, interactive, engaging, timeliness and trackable records.[9]

Academic conferences had been conducted as face-to-face meetings involving travel, physical interactions, sightseeing, and etcetera. However, with the advent of the highly infectious coronavirus disease (COVID-19) caused by the novel coronavirus-SARS-CoV-2 which was officially reported in December 2019 and declared a pandemic in March 2020. There have been restrictions or outright cancellations of mass gatherings.

COVID-19 – which manifests with a myriad of symptoms such as fever, cough, fatigue and difficulty in breathing – could result in mild to severe illness. The alarming spread of the infection is reduced or prevented by physical distancing, good respiratory and hand hygiene practices.[10] Most conferences that were scheduled to hold in the year 2020 were either cancelled or changed to virtual conferences as a result of lockdowns or restrictions in the numbers of persons in gatherings. Conferences in Nigeria followed this global trend including the Biennial conference of the Nigerian Association of Paediatric Dentistry (NAPD).

NAPD is a society of specialists, trainees and other health workers involved in paediatric dental care in Nigeria. This national association meets regularly for general meetings and biennial conferences. Scientific presentations, symposia, workshops, and community outreaches that relates to paediatric dental care are conducted. To ensure the conference held in year 2020, the mode of the Nigerian Association of Paediatric Dentistry (NAPD) biennial conference had to be scheduled virtually instead of the traditional face to face conference. This study set out to investigate the experience and preferences of dentists regarding physical and virtual conferences. This would aid future planning of national and international conferences to maximise benefits of both forms of conferences and to support the exchange of ideas among researchers.

The purpose of this study was to assess the experiences and preferences of the attendees of the virtual conference in Nigeria as well as compare virtual and physical meetings in terms of attendees' expectations and realities.

MATERIALS AND METHODS

This cross-sectional study was carried out among the attendees of the NAPD conference. It was made up of Nigerian dentists who registered and attended the 2020 NAPD virtual conference. This was also a pilot study.

Selection criteria

Inclusion criteria

Nigerian dentists who registered and attended the 2020 NAPD virtual conference.

Exclusion criteria

1. Dentists who registered but did not attend the conference.
2. Dentists who did not consent to participate in the study.

Sampling methodology

A convenience sampling technique was used to select the participants based on the selection criteria highlighted above. The use of the convenience sampling technique was based on the limited size of the study population available for the study.

Data collection: The study involved Nigerian dentists practising in the six geopolitical zones in Nigeria. Questionnaires were sent 24 hours after the 2-day conference had ended via a web-link to their personal emails, which helped to preclude multiple entries by participants. The questionnaires were self-administered and sought to find out the benefits/challenges of virtual and physical meetings/conferences, their experiences regarding the NAPD virtual conference and their preferences for physical or virtual conference. Additional items included demographic characteristics of the dentists (age, sex, cadre, and years of practice).

Ethical consideration

Ethical approval was sought and obtained from the Research and Ethics committee of the University of Port Harcourt Teaching Hospital. Electronic consent was also sought and obtained.

Data analysis

The information collected was analyzed using IBM SPSS Version 21 for Windows. Descriptive statistics were used to determine the mean age and gender distribution while association of categorical variables were done using chi-square. A 5-point Likert scale ranging from strongly disagree, disagree, neither agree nor disagree, agree and strongly agree was used to assess participants' preferences. This was further recategorized into agree, disagree and indifferent for ease of analysis. Results were expressed in the form of tables, pies, and bar charts. The level of significance for all statistical tests was set at $p \leq 0.05$.

RESULTS

A total 67 of 91 registered participants (73.6%) who consented to the study met the inclusion criteria and filled the survey. Table 1 shows the demographic characteristics of the participants who completed the online survey with the most predominant age group being 30-39 (44.1%) and the majority (67.6%) being the female gender. Majority of the participants were specialists with only two dental officers in attendance. Among the specialists in attendance, majority (86.6%) were paediatric dentists. In terms of practice years, Table 1 shows 34.3% of the participants had practised for between 6-10 years followed by those who had practiced for between 16-20 years (16.4%).

Almost all the participants 98.5% had attended a physical conference at one time or the other while about 58.2% had attended a physical conference of the NAPD. Majority had also attended virtual meetings, but for about two-thirds of the participants, the just concluded conference was their first virtual scientific conference (Figure 1). The most popular reason given for attending a conference was for educational purposes (76.1%) while coercion was the least 1.5% (Figure 2). Most participants 41.8% reported being busy and not getting time off duty as the reason for not attending conferences (Figure 3).

With regards to their preference, most (46.2%) preferred physical conferences to virtual conference (Figure 2). Regarding virtual conference, majority agreed that safety (86.6%), being economical (85.1%), convenience (82.1%) and professional connections (86.6%), were very beneficial while navigating the virtual platform and the inability to visit new places were the most challenging factors (Table 2).

There was no statistically significant difference between socio-demographic characteristics and attendance in previous virtual (online) meetings (Table 3). There was a statistically significant relationship between socio-demographic variables and having attended a virtual conference (Table 4). Also, there was a statistically significant difference between the socio-demographic characteristics and the preference between physical and virtual conference attendance among the different professional status (p=0.001) (Table 5).

Other benefits of attending the virtual conference were the ability to multitask, improved technical skills and less stress compared to a physical

conference while the benefits of previous physical face to face conference attendance included real-time response, entertainment value and opportunity for holidays. However, there was no statistically significant difference between socio-demographic characteristics and attendance in previous virtual meetings and/or conferences (Tables 3 and 4).

The participants rated their experiences in the virtual conference using a simple Likert scale and majority was between 70 and 89; only one participant rated his/her experience below 50. More specialists, females, participant in the 30-39 age group and participants that had practice years of between 6-10 years rated their conference experiences higher than their counterparts. In addition, more specialists preferred physical conferences to virtual conferences compared to registrars, but these were not statistically significant (Tables 5 and 6).

Table 1: Socio-demographic characteristics of the participants.

Characteristics	Frequency	Percentage
Age (Years)		
20-29	3	4.5
30-39	30	44.8
40-49	21	31.3
50-59	8	11.9
60-69	5	7.5
Gender		
Male	21	31.3
Female	46	68.7
Status		
Consultant	27	39.7
Senior Registrar	18	26.5
Junior Registrar	20	29.4
Dental Officer	2	2.9
Specialty		
Paediatric Dentistry	58	86.5
Oral &Maxillofacial Surgery	3	4.5
Orthodontics	2	3.0
Preventive Dentistry	1	1.5
Restorative Dentistry	1	1.5
Not indicated	2	3.0
Years of practice		
≥5	8	11.9
6-10	23	34.3
11-15	9	13.4
16-20	11	16.4
21-25	5	7.5
26-30	6	9.0
31-35	1	1.5
35-40	4	6.0

Table 2: The rating of the benefits and challenges of Virtual conferences as perceived by the participants.

BENEFITS	Agree n (%)	o Disagree n (%)	Indifferent n (%)
Safety	58 (86.6)	0	9 (13.4)
Economical	57 (85.1)	2 (3.0)	8 (11.9)
Convenience	55 (82.1)	0 (0.0)	12 (17.9)
Connection	58 (86.6)	1 (1.5)	8 (11.9)
Time management	45 (67.2)	8 (10.4)	15 (22.4)
Ease of communication	39 (58.2)	10 (14.9)	18 (26.9)
CHALLENGES			
Internet connectivity	32 (47.8)	22 (32.8)	13 (19.4)
Navigate the virtual platform	55 (82.1)	1 (1.5)	11 (16.4)
Social interaction	46 (68.7)	7 (10.4)	14 (20.9)
Visit to new places	54 (80.6)	3 (4.5)	10 (14.9)
Realness	26 (38.8)	20 (29.9)	21 (31.3)

Table 3: The relationship between socio-demographic characteristics and attendance in a previous Virtual (online) meeting

Variable	Responses on Virtual meeting		p-value
Age group	Yes	No	
	n (%)	n (%)	
20-29	3 (100.0)	0 (0.0)	
30-39	26 (86.7)	4 (13.3)	
40-49	19 (90.5)	2 (9.5)	0.86
50-59	8 (100.0)	0 (0.0)	
60-69	4 (80.0)	1 (20.0)	
Gender			
Female	40 (87.0)	6 (13.0)	
Male	20 (95.2)	1 (4.8)	0.81
Professional Status			
Specialist	26 (96.3)	1 (3.7)	

Senior resident	16 (88.9)	2 (11.1)	
Junior resident	18 (90.0)	2 (10.0)	1.00
Dental Officer	2 (100.0)	0 (0.0)	
Years of practice			
≤5	8 (100.0)	0 (0.0)	
6-10	21 (100.0)	0 (0.0)	
11-15	7 (77.8)	2 (22.2)	
16-20	11 (100.0)	0 (0.00)	0.72
21-25	4 (80.0)	1 (20.0)	
26-30	5 (83.3)	1 (16.7)	
31-35	1 (100.0)	0 (0.00)	
36-40	4(100.0)	0 (0.0)	

Table 4: The relationship between socio-demographic variables and having attended any Virtual (online) conference

Variable	Responses on Virtual Conference		p value
	Yes	No	
Age group			
20-29	3 (100.0)	0 (0.0)	
30-39	22 (73.3)	8 (26.7)	
40-49	12 (57.1)	9 (42.9)	0.27
50-59	3 (37.5)	5 (62.5)	
60-69	2 (40.0)	3 (60.0)	
Gender			
Female	28 (60.9)	18 (39.1)	
Male	14 (66.7)	7 (33.3)	0.90
Status			
Specialist	14 (51.9)	13 (49.1)	
Senior resident	10 (55.6)	8 (44.4)	

Junior resident	17 (85.0)	3 (15.0)	0.17
Dental Officer	1 (50.0)	1 (50.0)	
Years of practice			
≤ 5	7 (87.5)	1 (12.5)	
6-10	17 (73.9)	6 (26.1)	
11-15	6 (66.7)	3 (33.3)	
16-20	5(45.4)	6 (54.6)	0.29
21-25	3 (60.0)	2 (40.0)	
26-30	2 (33.3)	4 (66.7)	
31-35	0	1 (100.0)	
36-40	2 (50.0)	2 (50.0)	

*p< 0.05 is statistically significant

Table 5: The relationship between socio-demographic characteristics and their preference between physical and virtual conferences attendance

Variable	Response on preference			
Age group	Physical conference	Virtual Conference	Either physical or virtual conference	P value
20-29	2 (66.7)	0 (0.0)	1 (33.3)	
30-39	8 (26.7)	9 (30.0)	13 (43.3)	
40-49	9 (42.9)	6 (28.6)	6 (28.6)	0.47
50-59	6 (75.0)	2 (25.0)	0 (0.0)	
60-69	2 (40.0)	1 (20.0)	2 (40.0)	
Gender				
Female	19 (41.3)	12 (26.1)	15 (32.6)	
Male	8 (38.1)	6 (28.6)	8 (33.3)	1.00
Status				
Specialist	14 (51.9)	7 (25.9)	6 (22.2)	
Senior resident	2 (100)	0 (0.0)	0 (0.0)	
Junior resident	6 (30.0)	3 (15.0)	11 (55.0)	0.12

Dental Officer	5 (27.8)	8 (44.4)	5 (27.8)	
Years of practice				
≤5	3 (37.5)	2 (25.0)	3 (37.5)	
6-10	9 (39.1)	6 (26.1)	8 (34.8)	
11-15	2 (22.2)	2 (22.2)	5 (55.6)	
16-20	4 (36.4)	3 (27.3)	4 (36.4)	0.89
21-25	2 (40.0)	3 (60.0)	0 (0.0)	
26-30	4 (66.7)	1 (16.7)	1 (16.7)	
31-35	1 (100)	0 (0.0)	0 (0.0)	
36-40	2 (50.0)	1 (25.0)	1 (25.0)	

*p< 0.05 is statistically significant

Table 6: The relationship between the socio-demographic characteristics and rated conference experience of participants

VARIABLE	RATED	CONFERENCE	EXPERIENCE			
Age group	40- 49	50-59	60-69	70-79	80-89	90-99	p value
20-29	1	1	0	0	1	0	
30-39	0	4	4	11	8	3	
40-49	0	3	2	8	4	4	
50-59	0	1	2	2	2	1	0.62
60-69	0	1	1	0	1	2	
Gender							
Female	1	8	2	15	14	6	
Male	0	4	3	6	4	4	0.77
Status							
Specialist	0	2	3	10	8	4	
Senior Resident	0	2	0	7	5	4	0.29
Junior resident	0	6	0	8	4	2	
Dental Officer	1	0	0	0	0	1	
Years of practice							

Assessment of preference between online and physical conferences

≥5	1	3	0	2	2	0	
6-10	0	6	0	10	5	2	
11-15	0	2	1	2	2	2	
16-20	0	0	1	5	4	1	0.43
21-25	0	0	0	1	1	3	
26-30	0	1	1	2	2	0	
31-35	0	0	0	0	1	0	
36-40	0	0	1	0	1	2	

*p≤0.05 is statistically significant

Figure 1: The distribution of attendance at meetings and conferences by respondents

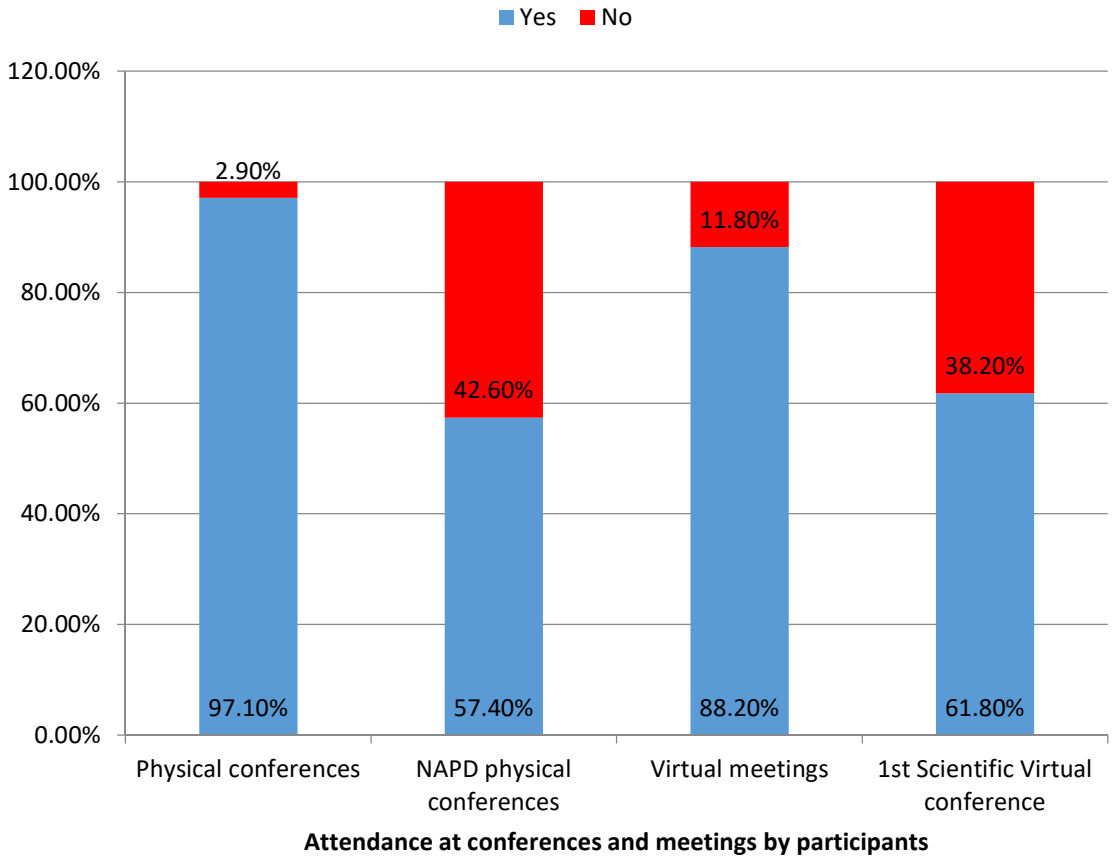


Figure 2: The preference of the respondents on the type of conference

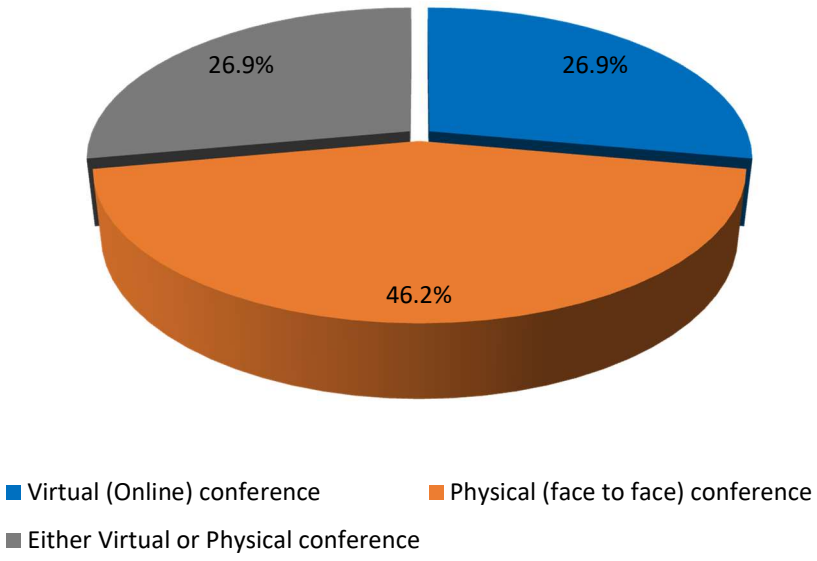
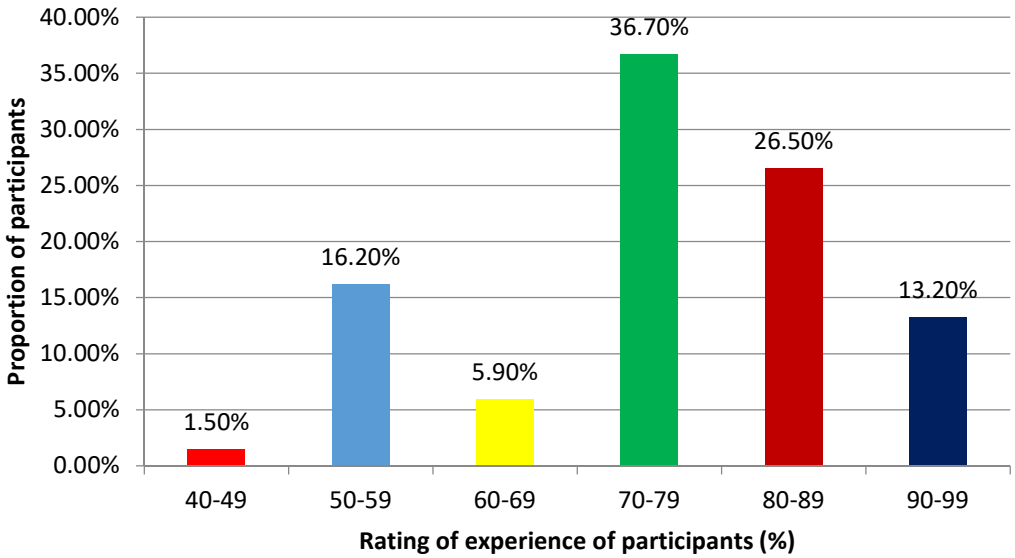


Figure 3: The rating of the experience at the scientific virtual conference



DISCUSSION

Conferences are a long-standing tradition in professional circles. Conferences have played a role in building knowledge (formal and informal) and maintaining social networks.[12] With the outbreak of the coronavirus, there was increased uptake in the use of online medium to conduct scientific conferences. In this cross-sectional study, the

experiences and preference of virtual versus physical conferences in Nigeria was assessed. There was a 73.6% response rate and about 26.4% non-response bias which is highly acceptable as it was a unimodal form of data collection (online survey).[13]

Among those who attended this NAPD conference, the most predominant age group was the 30- to 39-year-old age group, and most participants were females and specialists. This may have been because the conference was specialty based. And the high female participation in this study, is in keeping with another study[14] which reported; child oral health and preventive dentistry[14] as female-dominated specialties.

The participants in this study had a high attendance rate at conferences as 97% of them had attended a physical conference previously which was the norm, in pre-COVID-19. The most common reason for attendance at conferences is for educational purposes. In contrast, the reasons for non-attendance of physical conferences include but not limited to being busy and the difficulty in getting time off work. About two-thirds of participants had never attended a virtual conference and being a recent development made necessary by the COVID-19 pandemic, thus embracing virtual conferences has presented its own benefits and challenges. Such benefit include the reduced burden of long distance travels which was reported in some previous studies.[15-17] This study would highlight these challenges and benefits and report ways in which conferences can be better organized to minimize these shortcomings and maximize the benefits of both physical and virtual conferences

More of the study participants preferred physical conferences to virtual conference, with the inability to visit new places and face to face interactions being the major challenge. This is in tandem with a recent study which stated that the need for social interaction is important in developing or maintaining personal relationships which in turn facilitates creativity and networking.[17] Other benefits of physical conferences given by study participants included real-time responses to questions and comments by speakers, entertainment and opportunity for holidays that are missed during virtual conferences.

Those who preferred virtual conferences felt its benefits included its safety (attending from the comfort of their homes or offices), being economical (zero cost for transportation and accommodation), convenience and professional connections made while navigating the platform. This may also account for the high turnout in attending virtual conferences as the time spent commuting, especially for clinicians with very busy schedules, is eliminated.[15,16] Some other benefits of attending a virtual conference given by study participants included the ability to multitask, improved technical skills and less stress when compared with having to attend a physical conference.

Although it has been documented that participant concentration is similar on remote platforms and face to face learning, learners are less productive and take longer via remote platforms.[18-20] Multitasking could be categorized in various terms. Some reports have documented napping while waiting for the next session and doing other things on a device during lectures.[21] Some participants also opted for a hybrid type which would be physical but with the ability to also participate virtually. This gives room for alternatives and also accommodates everyone's preference.

Many participants rated their virtual conference experience between 70 and 89 which was high and statistically significant. Also, of note was the difference in rated experience of virtual conferences as, professional status and age groups showed that specialists as well as the 30-39-years-old age groups had better experiences at the virtual conference. This was not statistically significant and no studies were found to compare with at this time.

Specialists were also found to have attended more virtual conferences and preferred physical conferences compared to those in training although this was not statistically significant. The reason for this may include more experience in the field of specialty; the networks they have garnered from attending physical conferences which they might have missed at virtual conferences; new ideas they could have gotten from one-on-one discussions with colleagues; the ability to attend conferences without distractions.

The findings show the continued importance of physical conferences which has tremendous benefits despite the outlined shortcomings. However, given the current global situation of the pandemic and the necessity of sharing knowledge and ideas, alternatives abound. The virtual conference fills a gap and is most likely here to stay; thus, to balance these benefits and challenges with a combination of virtual and physical (hybrid) conferences may be the way to go in future.

There is need for in-depth research on choices between virtual and physical conferences to aid planning of conferences. Other forms of conferences or alternatives could be investigated to create a balance and meet attendees' needs such as virtual hands-on workshops to improve clinical practice.

Limitations of study

The response rate of participants may have been more if they were given physically. For the convenience of the respondents, the questionnaire was streamlined so as not to burden them; thus, less information was sought.

CONCLUSION

Physical conferences were the most preferred form of conference attendance. Attendees rated the virtual conference experience highly, and even though the virtual conference was convenient, social interaction and networking was a challenge. While virtual conferences provided a 'new normal' during the pandemic, a mix of virtual and physical conference attendance (hybrid) would seem the best option for future conferences to maximize participation and increase the audience reach to pass on knowledge.

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Conflict of interest

The authors declare no conflict of interest

REFERENCES

1. Agarwal AK. Man Is a Social Animal. In: Legal Language and Business Communication. Palgrave Macmillan, Singapore 2019. https://doi.org/10.1007/978-981-13-7534-7_6 accessed 29/08/2020
2. Sousa BJ, Clark AM. Getting the Most Out of Academic Conference Attendance: Five Key Strategies. Int J Qualitative Methods. 2017; 16: 1–2.
3. McCarthy, JF, McDonald DW, Soroczak S, Nguyen DH, Rashid AM. Augmenting the social space of an academic conference. In Proceedings of the 2004 ACM conference on computer supported cooperative work pp 39-48 https://dl.acm.org/doi/10.1145/1031607.1031615
4. Sa MJ, Ferreira MF, Serpa S. Virtual and face to face academic conferences: comparisons and potentials. J Educ Social Res. 2019; 9:35-47.
5. Rubinger L, Gazendam A, Ekhtiari S, Nucci N, Payne A, Johal H, Khanduja V, Bhandari M. Maximizing virtual meetings and conferences: a review of best practices. Int Orthop. 2020; 23: 1–6.
6. Anderson L, Anderson T. Online conferences: professional development for a networked era. Charlotte, North Carolina: Information Age Publishing Inc. 2010
7. Durlach NI, Mavor AS. Virtual Reality: Scientific and Technological Challenges. National Research Council Committee on virtual reality research and development. National Academies Press, Washington DC. 1995. Pg. 247-303. https://doi.org/10.17226/4761
8. Dehoyos M. Physical versus virtual conference: a quick comparison. https://www.vfairs.com/physical-vs-virtual-conference-a-quick-comparison/ accessed 29/08/2020
9. Communiqué Conferencing, Inc. Five Reasons Why Conferences are going Virtual? https://www.communiqueconferencing.com/top-five-reasons-conferences-going-virtual accessed 29/08/2020
10. Carbone L. Conferences as Venues of Network Formation and Evolution: A Systematic Review 2018; accessed 29/08/2020
11. Endomba FT, Wouna DLA, Danwang C. Mental health during the coronavirus disease 2019 (Covid-19) pandemic: more is still to be done. Pan Africa Med J. 2020; 35(2):7. doi: 10.11604/pamj.2020.35.7.22605
12. Jones MLW. Collaborative virtual conferences: using exemplars to shape future research questions. CVE '00: Proceedings of the third International Conference on Collaborative virtual environments. 2000; 19-27. https://doi.org/10.1145/351006.351009
13. Fincham JE (2008). Response rates and responsiveness for surveys, standards, and the Journal. Am J Pharm Educ. 72(2): 43 doi: 10.5688/aj720243.
14. Chukwumah NM, Umweni AA. Gender disparity and the dental profession in Nigeria: a 10-year follow up study. Nig J Dent Res. 2017; 2: 20-25.
15. Charnel AM (2020). Will remote events be the new normal moving beyond the COVID 19 pandemic? Brit Med J Mil Health. 0:1 doi: 10.1136/bmjmilitary-2020-001595.
16. Fleming N (2020). What's on the agenda for post-pandemic meetings? Nature. Doi: 10.1038/d41586-020-02254-z

17. Hilbe W, Pircher A, Fureder T, Rumpold H, Gunsilius E, Bartsch R. Creating the new normal post coronavirus world-web communication replacing face-to-face interaction. Memo. 2020; 13: 245-246.
18. Fu Z, Zhou Y. Research on remote learning in multimodal interaction. In International Association of Societies of Design Research Conferences 2019. Manchester: IASDR, 2019. https://iasdr2019.org/uploads/files/proceedings/le-f-1252-Fu-Z.pdf
19. Aragon SR, Johnson SD, Shaik N. The influence of learning style preferences on student success in online versus face-to-face environments. Am J Distance Educ Educ. 2010; 16:227-244.
20. Strauss SG, McGrath JE. Does the medium matter? The interaction of task type and technology on group performance and member reactions. J Appl Psychol. 1994; 79:87-97.
21. Tanner J (2020). Virtual events are not the new normal- but hybrid events are. Frontier Enterprise. https://www.frontier-enterprise.com/virtual-events-are-not-the-new-normal-but-hybrid-events-are/ . Accessed October 5th, 2020