Comparative Evaluation of Factors Influencing the Perception of Young versus Middle Aged Patients for Orthodontists

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ABSTRACT

Background: This study aims to evaluate the preferences of young and middle-aged participants regarding the orthodontists′ physical appearance, sex, treatment protocols, language used for communication and the person doing the treatment.

Methods: Total sample of 268 participants divided as-Group I (18-25 years; n=134) and Group II (26-35 years; n=134) and were asked to rate the photographs of 1 male and 1 female orthodontist according to the 7-point Likert scale for different variables like attire, spectacles etc. and were also asked to choose according to the sex of the orthodontist, language, treatment procedure and person doing the treatment. The Fischer Freeman Halton test was used to test significant difference between the groups. Statistically significant difference was set at P<0.05.

Results: For female orthodontist, Group I chose white coat with nametag plus vaccinated and PPE kit (62.7%) and Group II chose PPE (57.6%). For male orthodontist, Group I chose white coat with nametag plus vaccinated (71.6%) and Group II chose PPE kit (54.5%). Conclusion: The orthodontists' attire, looks, vaccination status and way of communication contributed to the preferred choices for both the groups. Both groups wanted their treatment done without extraction by their female orthodontists, communicating with a smile in their native language. The hair color and appearance of hair for female orthodontists and a clean shave or beard for male orthodontists play an important role in their preferred orthodontists for their treatment.

KEYWORDS: orthodontists, attire, perception, spectacles, young group, middle aged group

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INTRODUCTION

The presence of a dental professional is crucial for making a positive first impression and cultivating a stronger and more successful relationship. As a result, a patient's choice can be influenced by sex and apparel.[1] The doctor's first impression on a patient or relative during the initial visit is critical in the establishment of this relationship, and the doctor's appearance is one of the important factors that influence the first impression.[2] Other characteristics, such as neatness or facial expression, were

also found significant and had the ability to outweigh the impact of apparel.[3]

The patient and the doctor do not only share medical information during the first professional experience, but also establish faith and trust in the therapeutic interaction in the future. The apparel, in general, is a powerful medium of nonverbal communication.[4]

Some doctors tend to wear white coats to project an aura of cleanliness, discipline, and superiority, while others dress more casually in the hopes of breaking down walls, strengthening collaboration, and building a more equitable physician–patient partnership.[5]

According to surveys, patients prefer doctor wearing formal clothing, such as a white coat and a nametag that is easily visible. Non-traditional hairstyles, hair colour, and facial hair on men were all causes that lowered a patient's trust in his or her doctor.[6] The treatment protocol chosen by dentist also play an important role in their relationship. It has been shown that when given the same patient data, some doctors chose to extract the teeth and others prefer not to.[7]

Gender stereotypes can contribute to a number of generalisations that have an impact on patients' views. Females have been described as being more likely than males to be loving, submissive and vocal.[8]

The goal of this study was to find out what patients thought about orthodontists' look, dress and also to check the preference of the orthodontist according to sex, the language used for communication, treatment protocol and the person doing the treatment. Several variables that have not been evaluated in any previous study in dentistry have been included in this study, which will help orthodontists have a better understanding of their patients′ preferences, which can further help them in better communication and maintaining a healthy relationship as the orthodontic treatment lasts longer.

MATERIAL AND METHODS

The power analysis was used to calculate the sample size,[1] and used less than 5% significance threshold and an 80 percent sample power to yield a minimum variance of 20% between the variables. The sample size calculated was 268 participants. A questionnaire form was used and distributed to 290 participants but the forms which were inaccurately filled were excluded from the study, so the total sample consisted of 268 participants. The participants were divided into 2 groups depending on their age-Group I (18 to 25 years old, mean age of 22.5 years, n=134), and Group II (26 to 35 years old, mean age of 30.5 years, n=134). Both groups comprise of equal number of male (67) and female (67) participants.

The inclusion criteria for participants were patients seeking orthodontic care at a dental college. The study excluded a participant who did not require orthodontic treatment. The approval was taken from the Institutional Ethical Committee (TMDCRC/IEC/20-21/OD02) and written informed consent was obtained from the participants. A separate consent form was given to the models used in this survey.

Two orthodontists, 1 male and 1 female, with a mean age of 26.2 years, were chosen by the experts to participate in this study as models. Photographs of male and female orthodontists were obtained and organised into sets based on various features. Set 1 to 5 comprised of pictures of female orthodontist in different attire (white coat with nametag plus vaccinated, white coat with nametag plus non-vaccinated, personal protective equipment (PPE) kit, formal, casual, scrub, ethnic clothing) as seen in Figure 1a, with and without spectacle (Figure 1b), open and half tied back hair (Figure 1c), black hair and coloured hair (Figure 1d), and with and without a smile (Figure 1e). Set 6 to 10 comprised of pictures of male orthodontist in different attire (white coat with nametag plus vaccinated, white coat with nametag plus

non-vaccinated, PPE kit, formal, casual, scrub, ethnic clothing) as seen in Figure 2a, with and without spectacle (Figure 2b), with beard and clean shave (Figure 2c), black hair and coloured hair (Figure 2d), and with and without a smile (Figure 2e). The photos were manipulated with Adobe Photoshop CS2, version 9.0 for variable like hair colour and are validated based on face validation. The interrater reliability was assessed by Crohn Bach's alpha. The analysis of its content and face validity by the language experts was assessed to the satisfaction of the subject experts. The test-retest reliability involved administering the questionnaires to a group of respondents and repeating the same with the same group at a later point in time (Cronbach's alpha = 0.82). With questionnaire participants were provided information outlining the goal of the study and promising confidentiality. The patient information leaflet also said that they were able to refuse to participate if they so desired. Each participant reviewed photos and was asked to rate both woman and man according to which orthodontist they would choose for treatment based on their preferences for various attires, spectacles, hair type, hair colour, beard and clean shave, and smile on the 7-point Likert Scale where 1 being extremely unattractive and 7 being extremely attractive. Separate questionnaire was used in which participants had to choose one option according to the sex of orthodontist (male or female orthodontist), language used to communicate (English or Native), procedure of treatment (with extraction or without extraction) and the type of person doing the treatment (orthodontist or assistant).

Figure 1a. Photograph of female orthodontist showing Set 1- White coat with nametag plus vaccinated, white coat with nametag plus non-vaccinated, PPE kit, formal, casual, scrub, ethical clothing.

Figure 1b. Set 2- With spectacle, without spectacles

Figure 1c. Set 3- Open hair, half tied back hair

Figure 1d. Set 4- Black hair, coloured hair

Figure 1e. Set 5- With smile, without smile

Figure 2a. Photograph of male orthodontist showing Set 6- White coat with nametag plus vaccinated, white coat with nametag plus non-vaccinated, PPE kit, formal, casual, scrub, ethical clothing.

Figure 2b. Set 7- With spectacle, without spectacle

Figure 2c. Set 8- With beard, clean shave

Figure 2d Set 9- Black hair, coloured hair

Figure 2e. Set 10- With smile, without smile

STATISTICAL ANALYSIS

The data obtained from the study was tabulated and entered in Microsoft excel sheet. Shapiro Wilk test was used for assessing the normality of data, which was found to be normally distributed. Frequency analysis of the ordinal data was performed and cross tabulated for frequency and proportion. Fischer Freeman Halton test is used to test significant difference between groups. All statistical analysis was done using Statistical Product and Service Solutions (SPSS) Statistics for Windows, Version 21.0. Armonk, NY: IBM Corporation. All statistical analysis was done at 95% Confidence interval and P value less than 0.05 was considered to be statistically significant.

RESULTS
For Female orthodontist

As seen in Table 1a for set 1, participants in Group I found white coat with name tag plus vaccinated as well as PPE kit extremely attractive (62.7%) , followed by ethnic clothing (20.9%), scrub (17.9%), formal (11.9%), casual (8.2%) and white coat with nametag plus non-vaccinated (7.5%) while Group II preferred PPE kit (57.6%) to be extremely attractive, followed by white coat with nametag plus vaccinated (56.1%) and scrub (23.1%), ethnic clothing (19.4%), formal (11.9%), casual and white coat with nametag plus non-vaccinated were equally preferred (9.7%).

Age Group		White coat with nametag plus vaccinated		White coat with nametag plus non-vaccinated		PPE Kit		Formals		Casuals		Scrub		Ethnic clothing	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
18-25 years	Extremely unattractive	6	4.5	1	0.7	4	3.0	3	2.2	5	3.7	4	3.0	13	9.7
	Very unattractive	2	1.5	3	2.2	2	1.5	5	3.7	13	9.7	9	6.7	15	11.1
	Slightly unattractive	2	1.5	8	6.0	5	3.7	12	9.0	13	9.7	11	8.2	10	7.5
	Neutral	3	2.2	15	11.2	10	7.5	41	30.6	38	28.4	18	13.4	21	15.7
	Slightly attractive	11	8.2	45	33.6	6	4.5	32	23.9	35	26.1	34	25.4	19	14.2
	Very attractive	26	19.4	52	38.8	23	17.1	25	18.7	19	14.2	34	25.4	28	20.9
	Extremely attractive	84	62.7	10	7.5	84	62.7	16	11.9	11	8.2	24	17.9	28	20.9
	Total	134	100	134	100	134	100	134	100	134	100	134	100	134	100
26-35 years	Extremely unattractive	2	1.5	4	2.9	1	0.7	1	0.7	5	3.7	2	1.5	6	4.5
	Very unattractive	2	1.5	1	0.7	7	5.2	6	4.5	5	3.7	7	5.2	12	9.0
	Slightly unattractive	0	0	11	8.2	5	3.7	9	6.7	11	8.2	7	5.2	10	7.5
	Neutral	2	1.5	14	10.5	9	6.7	37	27.7	39	29.1	25	18.7	23	17.1
	Slightly attractive	13	9.6	46	34.3	8	6.0	32	23.9	41	30.7	32	23.9	33	24.6
	Very attractive	40	29.8	45	33.7	27	20.1	33	24.6	20	14.9	30	22.4	24	17.9
	Extremely attractive	75	56.1	13	9.7	77	57.6	16	11.9	13	9.7	31	23.1	26	19.4
	Total	134	100	134	100	134	100	134	100	134	100	134	100	134	100
	P value	0.32		0.84		0.31		0.83		0.62		0.65		0.307	

Table 1a. Comparison of 2 age groups for female orthodontist for different attires. N – Number of participants

There was no statistically significant difference seen in both the groups′ preference. (P>0.05%). In Table 1b for set 2 (with and without spectacles) Group I preferred female orthodontist with spectacle (26.9%) followed by without spectacle (26.1%) while Group II preferred without spectacle (24.7%) followed by with spectacle (15.7%). There was statistically significant difference between the groups for with spectacles photo (P<0.05%). For set 3 (open hair and half tied back hair) Group I preferred half tied back hair (41.8%) rather than open hair (19.4%) and Group II also preferred half tied back hair (29.1%) than the open hair (20.9%). No statistically significant difference was seen in both the groups′ preference for set 3 (P>0.05%). For set 4 (black hair and coloured hair) Group I preferred black hair (48.5%) than coloured hair (9.7%) and Group II also preferred black hair (35.8%) than coloured hair (9%), however there was significant difference seen in coloured hair trait (P<0.05). For set 5 (with and without smile) Group I preferred communicating with smile (76.9%) more attractive than without smile (0.7%) and Group II also chose with smile (67.9%) rather than without smile (3%). No statistically significant difference was seen (P>0.05%).

For Male orthodontist

As seen in Table 2a (set 6), Group I found that white coat with nametag plus vaccinated (71.6%) was extremely attractive, followed by PPE kit (63.4%), scrub (14.2%), formal (12.7%), casual (11.9%), ethnic clothing (6.7%) and finally white coat with nametag plus non-vaccinated (6%) while Group II preferred PPE kit (56.1%) to be extremely attractive followed by white coat with nametag plus vaccinated (54.6%), scrub (15.7%), formal (14.9%), casual (8.2%), ethnic clothing (6.7%) and white coat with nametag plus non-vaccinated (4.5%). However, statistically significant difference was seen between groups′ for photo in scrub (P<0.05%).

As seen in Table 2b for set 7 (with and without spectacle) Group I chose with spectacles (35.1%) then without spectacles (23.9%) while Group II preferred without spectacles (21.6%) followed by with spectacles (20.9%) as extremely attractive. There was statistically significant difference seen in both groups for with spectacles preferences (P<0.05%). For set 8 (with beard and clean shave) Group I preferred with beard and clean shave equally (30.6%) while Group II preferred with beard (41.9%) than the clean shave (13.4%). Statistically significant difference was seen in both the groups (P<0.05%) for clean shave preferences. For set 9 (black hair and coloured hair) Group I preferred black hair (62.7%) than coloured hair (4.5%) and Group II also preferred black hair (42.5%) than coloured hair (5.2%). There was significant difference seen in both the groups for black hair preferences (P<0.05). For set 10 (with and without smile) Group I preferred communicating with smile (70.3%) than without smile (0.7%) and Group II also chose with smile (56%) rather than without smile (5.2%). No statistically significant difference was seen in preferences of both the groups (P>0.05%).

In Table 3, the Group I preferred female orthodontist (59%) than male orthodontist (41%) and Native language (65.7%) over English (34.3%) for communication. They also chose treatment done without extraction (73.1%) rather than treatment done with extraction (26.9%). The Group I preferred orthodontist (95.5%) doing their treatment rather than their assistant (4.5%). Group II preferred female orthodontist (59.7%) than male orthodontist (40.3%) and Native language (68.7%) over English (31.3%). The treatment protocol was chosen without extraction (63.4%) rather than with extraction (36.6%) and the person doing the treatment should be the orthodontist (92.5%) rather than their assistant (7.5%). There was no statistically

significant difference for both the groups preferences (P>0.05).

Age group		With spectacles		Without spectacles		Open hair		Half tied back hair		Black hair		Coloured hair		With smile		Without smile	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
18-25 years	Extremely unattractive	3	2.2	1	.7	8	6.0	6	4.5	2	1.5	11	8.2	0	0	7	5.2
	Very unattractive	6	4.5	6	4.5	7	5.2	2	1.5	0	0	10	7.5	0	0	15	11.2
	Slightly unattractive	2	1.5	3	2.2	15	11.2	3	2.2	3	2.2	20	14.9	0	0	23	17.2
	Neutral	18	13.4	27	20.2	13	9.7	9	6.7	12	9.0	37	27.6	2	1.5	35	26.1
	Slightly attractive	37	27.6	23	17.2	28	20.9	25	18.7	13	9.7	19	14.2	3	2.2	30	22.4
	Very attractive	32	23.9	39	29.1	37	27.6	33	24.6	39	29.1	24	17.9	26	19.4	23	17.2
	Extremely attractive	36	26.9	35	26.1	26	19.4	56	41.8	65	48.5	13	9.7	103	76.9	1	.7
	Total	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0
26-35 years	Extremely unattractive	4	3.0	1	.7	4	3.0	2	1.5	0	0	8	6.0	0	0	12	9.0
	Very unattractive	2	1.5	1	.7	7	5.3	2	1.5	0	0	8	6.0	0	0	11	8.2
	Slightly unattractive	4	3.0	3	2.2	13	9.7	6	4.5	1	.7	13	9.7	1	.7	21	15.7
	Neutral	35	26.1	29	21.6	24	17.9	9	6.7	15	11.2	35	26.1	2	1.5	26	19.4
	Slightly attractive	40	29.8	34	25.4	29	21.6	24	17.9	17	12.7	43	32.1	8	6.0	44	32.8
	Very attractive	28	20.9	33	24.7	29	21.6	52	38.8	53	39.6	15	11.1	32	23.9	16	11.9
	Extremely attractive	21	15.7	33	24.7	28	20.9	39	29.1	48	35.8	12	9.0	91	67.9	4	3.0
	Total	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0
P value		0.049*		0.38		0.445		0.11		0.12		0.034*		0.32		0.17	

Table 1b. Comparison of 2 age groups for female orthodontist for with spectacles and without spectacles, open hair and half tied back hair, black hair and coloured hair, with smile and without smile. *P<0.05 is statistically significant difference. N – Number of participants.

Age Group		White coat with nametag plus vaccinated		White coat with nametag plus non-vaccinated		PPE Kit		Formals		Casuals		Scrub		Ethnic clothing	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
18-25 years	Extremely unattractive	0	0	2	1.5	0	0	2	1.5	3	2.2	4	3.0	27	20.1
	Very unattractive	0	0	1	0.7	2	1.5	6	4.5	8	6.0	10	7.5	28	20.9
	Slightly unattractive	0	0	6	4.5	2	1.5	8	6.0	23	17.2	15	11.1	28	20.9
	Neutral	2	1.5	19	14.2	8	6.0	29	21.5	44	32.8	28	20.9	21	15.7
	Slightly attractive	12	9.0	39	29.1	10	7.5	36	26.9	21	15.7	23	17.2	11	8.2
	Very attractive	24	17.9	59	44.0	27	20.1	36	26.9	19	14.2	35	26.1	10	7.5
	Extremely attractive	96	71.6	8	6.0	85	63.4	17	12.7	16	11.9	19	14.2	9	6.7
	Total	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0
26-35 years	Extremely unattractive	1	0.7	6	4.5	1	0.7	2	1.5	1	0.7	4	3	32	23.9
	Very unattractive	0	0	2	1.5	1	0.7	3	2.2	8	6.0	3	2.2	29	21.6
	Slightly unattractive	0	0	6	4.5	5	3.8	6	4.5	22	16.4	7	5.2	24	17.9
	Neutral	3	2.2	18	13.4	6	4.5	30	22.4	35	26.1	26	19.4	19	14.2
	Slightly attractive	18	13.4	47	35.1	15	11.1	36	26.9	36	26.9	45	33.6	14	10.5
	Very attractive	39	29.1	49	36.5	31	23.1	37	27.6	21	15.7	28	20.9	7	5.2
	Extremely attractive	73	54.6	6	4.5	75	56.1	20	14.9	11	8.2	21	15.7	9	6.7
	Total	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0
	P value	0.098		0.49		0.021		0.94		0.051		0.002*		0.94	

Table 2a. Comparison of 2 age groups for male orthodontist for different attires
*P<0.05 is statistically significant difference.
N – Number of participants.

e group	With spectacles N	%	Without spectacles N	%	With beard N	%	Clean shave N	%	Black hair N	%	Coloured hair N	%	With smile N	%
Extremely unattractive	3	2.2	1	0.7	7	5.2	4	3.0	2	1.5	17	12.7	0	0
Very unattractive	4	3.0	5	3.7	3	2.2	7	5.2	0	0	13	9.7	0	0
Slightly unattractive	2	1.5	4	3.0	4	3.0	14	10.4	0	0	18	13.4	3	2.2
Neutral	15	11.2	28	20.9	17	12.7	27	20.1	6	4.5	30	22.4	1	0.7
Slightly attractive	21	15.7	33	24.6	32	23.9	18	13.4	9	6.7	33	24.6	7	5.2
Very attractive	42	31.3	31	23.2	30	22.4	23	17.3	33	24.6	17	12.7	29	21.
Extremely attractive	47	35.1	32	23.9	41	30.6	41	30.6	84	62.7	6	4.5	94	70.
Total	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100
Extremely unattractive	0	0	1	0.7	2	1.5	11	8.2	0	0	9	6.7	0	0
Very unattractive	4	3.0	3	2.2	1	0.7	1	0.7	0	0	9	6.7	0	0
Slightly unattractive	0	0	3	2.2	5	3.7	13	9.7	1	0.7	17	12.7	1	0.7
Neutral	18	13.4	26	19.4	19	14.2	28	20.9	10	7.5	30	22.4	5	3.7
Slightly attractive	41	30.6	37	27.6	18	13.4	32	23.9	24	17.9	38	28.4	13	9.7
Very attractive	43	32.1	35	26.3	33	24.6	31	23.2	42	31.4	24	17.9	40	29.
Extremely attractive	28	20.9	29	21.6	56	41.9	18	13.4	57	42.5	7	5.2	75	56
Total	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100.0	134	100
value	0.011*		0.97		0.10		0.001*		0.004*		0.56		0.054	

Table 2b. Comparison of 2 age groups for male orthodontist for with spectacles and without spectacles, with beard and clean shave, black hair and coloured hair, with smile and without smile.
*P<0.05 is statistically significant difference.
N – Number of participants.

Preference of orthodontist	N	%	Preference of language	N	%	Preference of treatment protocol	N	%	Preference of treatment done by whom
Male orthodontist	55	41.0	Native Language	88	65.7	Treatment with extraction	36	26.9	Done by orthodontist
Female Orthodontist	79	59.0	English	46	34.3	without extraction	98	73.1	Done by assistant
Total	134	100.0	Total	134	100.0	Total	134	100.0	Total
Male orthodontist	54	40.3	Native Language	92	68.7	Treatment with extraction	49	36.6	Done by orthodontist
Female Orthodontist	80	59.7	English	42	31.3	without extraction	85	63.4	Done by assistant
Total	134	100.0	Total	134	100.0	Total	134	100.0	Total
0.90			0.60			0.08			0

Table 3. Comparison of 2 age groups for preference of orthodontist, language preferred, treatment procedure used and who does the treatment.
N – Number of participants

DISCUSSION

The objective of this study was to check the perception of the patients according to the orthodontists' attire and personality. Dentists must be mindful of their patients' needs throughout therapy and their opinion. Similar studies were done before but, in this study, we've included a PPE kit because it's the most important safety precaution to take during this period of covid and certain characteristics like facial expression, hairstyle, hair colour, spectacle and beard were included, which has not been used before in any study. The standard photographs with similar background and in similar pose were used. In our investigation, for female orthodontist, Group I (young participants) chose the preferred attire as white coat with nametag plus vaccinated and PPE kit but Group II (middle-aged participants) preferred PPE kit. For male orthodontist, Group I chose white coat with nametag plus vaccinated and Group II chose PPE kit as preferred attire as it implies professionalism and safety. A similar study was done by Andréa et al[1] and Guy et al[9] who also showed the preference for white coat because it is associated with cleanliness and hygiene. Another study by Aitken et al[2] showed the importance of doctor's appearance and attire. The findings in this study, however, differ from Lill and Wilkinson's[3] results, which revealed that patients prefer doctors to dress in a semiformal manner and also from a study done by Edwards et al[10] who stated that there was no preference of attire while selecting the doctor as selection criteria should be according to the experience of the doctor.

No research has been done regarding the perception of wearing PPE kit, impact of hair colour and spectacles on the preference of dentist. Group I preferred female (26.9%) and male (35.1%) orthodontists in spectacle and black hair colour for female (48.5%) and male orthodontists (62.7%)

while Group II chose both female (24.7%) and male (21.6%) orthodontists without spectacle and black hair for female (35.8%) and male orthodontists (42.5%) as it was more attractive in appearance.

Group I and II, preferred hair tied back for female orthodontist (41.8%, 29.1%) respectively as it was more hygienic. Group I chose beard and clean shave equally (30.6%) for male orthodontist and Group II preferred with beard (41.9%) as it look more mature and experienced. A study by Kelly et al[6] showed similar results because of the orthodontist's physical closeness to the patient in the dental chair while the study done by Lee et al[11] stated that facial appearance does not have any effect on patient and doctor relationship as they felt that various types of communication, such as verbal and nonverbal behaviours, had a greater impact on the patient–doctor connection.

Group I chose communicating with smile for both female (76.9%) and male orthodontist (70.1%) and Group II for female orthodontist (67.9%) and male orthodontist (56%) as it makes easier for patients to communicate. Similar result was seen in a study done by Lee et al.[11]

In this study, Group I (59%) and Group II (59.7%) chose female orthodontist over male orthodontist (41%, 40.3%) respectively as the female orthodontists have more patience. This result was similar with Swami et al,[12] Melanie et al[8] and Kelly et al[6] as female dentists showed empathy-related characteristics, better communication and soothing abilities. A study done by Budny et al[13] concluded that the sex of the doctor does not affect the patient's preference for their treatment however there was significant difference for men. The differences in result can be because of the measuring tool used in this study.

In this investigation Group I (65.7%) and Group II (68.7%) both preferred the use of Native language over English for the communication. Hector et al[14] also reported that it was easier to communicate with patients in their own language.

Both the Groups (I&II) in this study chose the orthodontic treatment to be done without extraction (73.1%, 63.4%) instead of extraction. No study has been done before regarding patient's perception of the treatment procedure but, a study done by Guilherme et al[15] showed that over the years orthodontists chose treatment without extraction. The person doing the treatment should be the orthodontist (95.5%, 92.5%) instead of the dental assistant respectively. Simon et al[16] reported that there was more preference for general practitioner than personal assistant as they trusted their doctor more but Joyce et al[17] showed no preference between doctor and personal assistants.

CONCLUSION

The orthodontists' attire, looks, vaccination status and way of communication contributed to the preferred choices for patients.

1) The young participants preferred the female orthodontists in white coat and PPE kit equally, whereas the middle-aged participants appraised in white coat and both the groups preferred their doctor to be vaccinated.

2) For both the orthodontists, the patients preferred to see them in black-colored hair with their hair tied up for female orthodontists, and for male orthodontists, the young participants preferred them witheither a clean shave or a beard, but the middle-aged preferred them with a beard.

The patients want to get their treatment done without extraction, with more preference for female orthodontists than male orthodontists, and communicate in their native language

REFERNCES

1. Souza-Constantino AM, Cláudia de Castro Ferreira Conti A, Capelloza Filho L, Marta SN, Rodrigues de Almeida-Pedrin R. Patients' preferences regarding age, sex, and attire of orthodontists. Am J Orthod Dentofacial Orthop. 2018; 154:829-834.

2. Aitken SA, Tinning CG, Gupta S, Medlock G, Wood AM, Aitken MA. The importance of the orthopaedic doctors' appearance: a cross-regional questionnaire-based study. Surgeon 2014; 12:40-6.

3. Lill MM, Wilkinson TJ. Judging a book by its cover: descriptive survey of patients' preferences for doctors' appearance and mode of address. BMJ. 2005; 331:1524-7.

4. Chung H, Lee H, Chang DS, Kim HS, Lee H, Park HJ, Chae Y. Doctor's attire influences perceived empathy in the patient-doctor relationship. Patient Educ Couns. 2012; 89:387-91.

5. Fischer RL, Hansen CE, Hunter RL, Veloski JJ. Does physician attire influence patient satisfaction in an outpatient obstetrics and gynecology setting? Am J Obstet Gynecol. 2007; 196: 186.e1- 5.

6. Kelly GR, Shroff B, Best AM, Tufekci E, Lindauer SJ. Parents' preferences regarding appearance and attire of orthodontists. Angle Orthod. 2014; 84:404-9.

7. Saghafi N, Heaton LJ, Bayirli B, Turpin DL, Khosravi R, Bollen AM. Influence of clinicians' experience and gender on extraction decision in orthodontics. Angle Orthod. 2017; 87:641-650.

8. Smith MK, Dundes L. The implications of gender stereotypes for the dentist-patient relationship. J Dent Educ. 2008; 72:562-70.

9. Gherardi G, Cameron J, West A, Crossley M. Are we dressed to impress? A descriptive survey assessing patients' preference of doctors' attire in the hospital setting. Clin Med (Lond). 2009; 9:519-24

10. Edwards RD, Saladyga AT, Schriver JP, Davis KG. Patient attitudesto surgeons' attire in an outpatient clinic setting: substance overstyle. Am J Surg. 2012; 204:663- 5.

11. Lee SH, Chang DH, Kang OS, Kim HH, Kim H, Lee H, et al. Do notjudge according to appearance: patients' preference of a doctor's face does not influence their assessment of the patient-doctor relationship. Acupunct Med. 2012; 30:261-5.

12. Swami V, McClelland A, Bedi R, Furnham A. The influence ofpractitioner nationality, experience, and sex in shaping patientpreferences for dentists. Int Dent J. 2011; 61:193-8.

13. Budny AM, Rogers LC, Mandracchia VJ, Lascher S. The physician'sattire and its influence on patient confidence. J Am Pediatr MedAssoc. 2006; 96:132-8.

14. González HM, Vega WA, Tarraf W. Health care quality perceptions among foreign-born Latinos and the importance of speaking the same language. J Am Board Fam Med. 2010; 23:745-52

15. Janson G, Maria FR, Bombonatti R. Frequency evaluation of different extraction protocols in orthodontic treatment during 35 years. Prog Orthod. 2014; 15:51.

16. Simon de Lusignan, Andrew P. McGovern, Mohammad Aumran Tahir, Simon Hassan, Simon Jones, Mary Halter, Louise Joly, Vari M. DrennanPLoS One. 2016; 11: e0160902

17. Pauline. Patient Satisfaction with Care as Managed by the Physician Associate or the Doctor as Part of a Pilot Project in Ireland. Health, Journal & Joyce. 2019; 2:218-223.