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The motivation and confidence in choosing dentistry as a career amongst dental students: A mixed-methods study

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Abstract

Objectives: An insight into students' motivation and confidence in the choice of entering and remaining in dental education is essential. The understanding of how choices are made can help universities in the planning of admission policies. This study aimed to evaluate the career choice influences, motivation and confidence in the choices made into dental education.

Methods: A mixed-method design was employed, using both quantitative and qualitative data. One hundred seventy-three questionnaires were distributed to all registered dental students, with a response rate of 85%. The questionnaire explored students' demographics and factors that influenced their career choice. Seven focus groups were facilitated with related data recorded and transcribed verbatim.

Results: The quantitative data revealed the desire to help others, and socioeconomic factors were influential, whilst for parents' influence, the mother's influence was statistically significant. Qualitatively, results converged and complemented quantitative data; there was a balance between helping others and socioeconomic and familial influences. There was an increase in confidence in the choice made as students advanced in their dental education. The results indicate that informed awareness of the dental programme structure is essential before embarking on a dental career.

Conclusions: The factors that impacted on choice were helping others, socioeconomic factors and the influence on choice from family. They were generally satisfied with their choice and were confident in the choice they made. This confidence, however, was not reflected until the more advanced clinical stages of their dental education.

KEYWORDS
career choice, dental education, dental students, focus groups, motivation

1 | INTRODUCTION

Diverse factors motivate dental students into a career in dentistry. These may be driven by socioeconomic backgrounds, gender, professional prestige and the desire to help others.[1,2] Previous studies found students attend dental schools because of the desire for independence (with a higher possibility of self-employment), serve others, as well as the attraction of the psychomotor skill of the profession, the acquired social status and/or financial security; being upwardly socially mobile and having a flexible work schedule.[3,4] Dental students reported monetary incentives, such as income and financial security as the main factors in students' decisions to study dentistry.[4]

In the last two decades, data from various countries show an unprecedented change in gender ratios in the workforce, with the rise in the number of female workers in several fields of the labour market; this is particularly evident in the field of dentistry.[5] Females were found to choose dentistry because they believe they will balance their personal and professional lives effectively as dentists.[5] They were also less concerned with the business component of a career and more concerned with the caring and people factors.[6-8]

In the Middle East, females in a Yemeni study indicated that they would choose dentistry because, in this sector, jobs were readily available, and the desire to improve the health of individuals and the community were also factors.[9] Jordanian female students had similar desires namely, "helping people," placing as the highest rated reason.[10] A study conducted in Iran revealed that "matrimonial considerations" amongst females had an influence on study motivation in addition to "social status," "income" and "work independence."[11]

The evaluation and understanding of the influences on students' choices and factors that affect these choices can be beneficial, since it may help in planning health care policies and design appropriate and effective recruitment, as well as setting entrance structures and requirements for dental schools.[12] Moreover, an insight into students' motivation could assist in designing and evaluating dental curricula, as well as enabling productive communication between students and educators.[1]

Dental education in Kuwait spans seven years, where four years are in predental years in conjuncture with medicine, enrolled in a BSC in Biomedical Sciences. The choice to do dentistry is made at the beginning of this BSc. After completing the BSc, students start their preclinical and clinical dental years. This education is provided free of charge by the government of the country. Insight into the motivators for this choice and confidence in the choice made as students' progress in their dental education can help in evaluating methods to ensure the productivity and satisfaction of the national dental work force as graduates of the programme are recruited to work there.

This study aimed to evaluate the influences and motivators of career choice into dental education by dental students and to explore and analyse factors involved in choice and motivation. It also aimed to evaluate students' confidence in the choices made to allow for insight, which could help in planning university admission policies, as well as providing an understanding into what students need to know about the career choice in dentistry before embarking on it.

2 | METHODS

2.1 | Study setting

The present study was conducted at the Faculty of Dentistry (FOD), Health Science Center, XXX University. The Faculty of Dentistry was established in 1996 and follows a seven-year programme. The programme of study is publically funded and is the only dental programme in the country. The programme has students integrated with the medical students in the first four years of study. The total number of dental students registered from years 1–7 at the Faculty of Dentistry, Kuwait University at the time the study was 173.

2.2 | Participant recruitment

Participants were invited by email to participate in the study. They were recruited from all the dental education stages, which included all students enrolled in the dental programme from years 1–7 (n = 173). Participation was voluntary and anonymous. The purpose of the study was elucidated to all participants, who signed consent forms before participation.

2.3 | Data collection

A mixed-method design was employed in this study (method triangulation) to increase confidence in the findings and avoid potential bias arising from using a single methodology. Creswell (1999) describes mixed-method research as "research that incorporates both quantitative and qualitative methods of data collection and analysis. This type of research assists investigators to comprehend complex phenomena qualitatively as well as to explain the phenomena through numbers and basic statistical analyses."[13]

2.4 | Quantitative data

A 23-item questionnaire was developed to explore gender, demographics and the factors and influences on students' career choices. The questions were measured on a 4-point Likert scale (strongly agree, agree, disagree and strongly disagree). A pretest of ten questionnaires was conducted to identify any necessary modifications and eliminate unclear points for validity. These were used to conduct face validity by the researchers through a subjective judgement of experts to ensure correct and clear writing and transparency.[14] Furthermore, 15% of the sample, which represents 27 respondents were used to calculate the validity and reliability of the questionnaire. In this regard, the acceptable value of alpha is >0.6 and once the value of alpha Cronbach increases the reliability of the measure increases. In this study, the alpha Cronbach value was 0.696 and the validity was 0.834.

2.4.1 | Quantitative data analysis

The dependent variables were factors relating to decision to select dentistry (personal choice, influence of mother, father, dentist, teacher or friend), factors motivating a choice of dentistry (desire to help, reputation of the profession, independence, financial aspects, academic interests, job prestige, working hours and job security). The independent variables were the students' demographic data

including age, gender, marital status and mothers and fathers' academic qualifications.

The analysis was conducted using SPSS software (SPSS version 20.0; SPSS Inc., Chicago, Il, USA). Descriptive statistical analysis was made, and Pearson chi-square tests were conducted to evaluate significant factors influencing the decision to study dentistry.

2.4.2 | Qualitative data

The students from each year level were invited by email to volunteer into the focus groups. The plan was to have at least seven students to form seven focus groups, each representing a year of study level. These facilitated focus groups were conducted in a room in the Faculty of Dentistry; facilitated by a member of the research team, asking a series of open-ended questions. These were questions developed by the research team with all groups asked the same open-ended questions (Table 1). The focus groups were conducted in an open conversational style, and the conversations were digitally and professionally transcribed verbatim and notes were made after each focus group session.

Each participant in the focus group was assigned a number to protect their anonymity. The facilitator (HZ) was not involved in any activities relating to the participants' teaching and assessment.

TABLE 1 Focus groups questions

1. When you applied to Faculty of Dentistry, what made you feel confident that you knew which career choice would be best for you?
2. What were the factors that helped you in making your decision?
3. How did you weigh your options from a variety of options for your career choice?
4. Do you recall, any defining moment or anything, in particular that stands out that helped you make your decision, like an experience or critical event?
5. What was the experience or anything that stands out, that affected your choice?
6. How did factors such as social status or functional status, or helping others, influence your career choice?
7. What are the sort of things or influences that played a role in your decision about this career path?
8. The focus in your decision-making process, was it dominated by passion or logical decision?
9. How did any outside influences, from individuals, have on your decision? Like parents or family member.
10. What was your precollege experience in making an informed decision on which career you would like to pursue?
11. How do you feel regarding the choice you made, if correct or wrong career choice and why?
12. Are there things related to the process of career choice in dentistry that we haven't touched on that you would like to talk about?

2.4.3 | Qualitative data analysis

The qualitative data analysis used the principles of the constant comparative method of grounded theory (GT).[15,16] The transcripts were checked by the research team to approve the accuracy of transcriptions and that adequate participant involvement had taken place. This was also to ensure limited input from the facilitator, allowing the capture of rich, authentic data.

The transcripts were entered into a qualitative software package (NVivo 12 plus; QSR International, Melbourne, Australia) and coded continuously whilst reading through the transcripts. The NVivo software permits qualitative data to be managed and organised into various categories and themes. A coding framework was then made around the topic, and key themes were identified as the data were analysed.

The analysis was conducted by authors independently reading through the transcripts several times, to familiarise themselves with the data/transcripts, without coding at this stage. Following that, independent coding (investigator triangulation) was made by two authors, trained in qualitative methodology (HZ and NH). For validation, codes were compared for commonalities and parallels, with revisions made during the process. Further refinements were made to codes and categories of the transcripts during grouping.[16] This was followed by evaluating the text under each code to check whether the codes were acceptable and justifiable. More understanding of the data and its credibility was assured at frequent meetings between the two coders and that the interpretations were acceptable and coherent with adequate connections and commonalities.

Thematic analysis was then completed iteratively and inductively, to identify, analyse and report patterns within the data, again independently by two researchers trained in qualitative methodology. Thematic analysis is a descriptive and interpretive process of selecting codes and constructing themes.[16] Braun and Clark (2006) described this as an independent six-stage qualitative descriptive approach to thematic analysis, which was used in this study. The Thematic Analysis, described by Braun and Clark 2006, has been used widely and has demonstrated effectiveness and rigour in healthcare education investigations.[17] The software of the NVivo version 12 plus (NVivo 12 plus; QSR International, Melbourne, Australia) facilitated coding of the data into meaningful units and grouped units into patterns and themes. This allowed the revisions, interpretation and addition of new codes when required.

Reliability was assured by triangulation, which is one of the strategies used to enhance the trustworthiness in qualitative research. Through inductive and deductive processes, involving several repeats and refinements a code book was developed. The final version that was believed to be efficient for the analysis was agreed upon by the researchers.[18,19] To demonstrated rigour, validity and inter-rater/coder reliability, we used the formula suggested by Miles and Huberman 1994,[18-20] and for the present study, the inter-rater/coder reliability was 80%.

2.5 | Ethics

A study protocol was submitted for ethical approval to the Joint Committee for the Protection of Human Subjects in Research of the Health Science Center, Kuwait University, and approval granted (VDR/EC/33). Information sheets about the study objectives were distributed to the participants; to ensure that they were well informed and that their participation was voluntary in nature.

3 | RESULTS

The total number of dental students registered from years 1–7 at the Faculty of Dentistry, XXXX University, at the time of the study was 173. A total of 147 completed the questionnaire, a response rate of 85%. The age range was 18–24 years old, with an average age of 21 years. Ninety-three per cent of respondents were females (Table 2).

We used the contingency coefficient analysis for the association between gender and the decision to choose dentistry, and no statistical significance was observed. The option "do not know" was excluded from the calculation and treated as missing, since it does not show any agreement and may inflate the average.

When asked about their perception of what influenced their decision to select dentistry as a career, personal decision predominated (96.5%). We dichotomised the response to agree and disagree and used the Fisher exact test. There were no statically significant differences (p-value 0.461) (Table 3). The contingency coefficient analysis for the association between personal decision and motivation also showed no statistical significance (*p*-value <0.001) (Table 4).

Parents' influence was split between mothers and fathers, and the contingency coefficient on the fathers and mothers' influences and gender effects; the mothers' influences were found to be statistically significant (p-value 0.02) in decision-making (Table 5).

The factors that impacted on the choice to pursue a career in dentistry where dichotomised into agree and disagree. The desire to help was the main factor, whilst job security was the least factor (Figure 1). When asked why medicine was not chosen as a career path, only 37% agreed that medicine would have been a longer, more challenging career path. Seventy-four per cent felt that a career in medicine would involve long working hours, and 71% felt that medicine would be stressful. Seven per cent of respondents felt that they wanted medicine but did not enrol in medicine because they did not have the grades for it, and 2% regretted their choice of dentistry.

TABLE 2 Students socioeconomic characteristics

		Count	Per cent
Gender	Male	12	8.2%
	Female	133	90.5%
	Missing	2	1.4%
What year are you in your Faculty	1	18	12.3%
	2	25	17.1%
	3	20	13.7%
	4	26	17.8%
	5	19	13.0%
	6	15	10.3%
	7	23	15.8%
Where is your place of birth?	Kuwait	135	91.8%
	Netherlands	1	0.7%
	USA	5	3.4%
	Canada	1	0.7%
	Japan	1	0.7%
	Missing	4	2.7%
What is your type of residence?	With family	147	100.0%
	Boarding house	0	0.0%
What is your marital status?	Single	141	95.9%
	Married	6	4.1%
	Divorced	0	0.0%
Do you have any children?	Yes	2	1.4%
	No	141	95.9%
	Missing	4	2.7%
What are your spoken languages?	Arabic	146	99.3%
	English	0	0.0%
	French	0	0.0%
	Other	0	0.0%
	Missing	1	0.7%

TABLE 3 Fisher exact test of the association between gender and personal decision-making

	Personal decision			*P*-Value
	Agree	Disagree	Total	
Male	11 (91.7%)	1 (8.3%)	12 (100.0%)	0.461
Female	127 (95.4%)	6 (4.6%)	133 (100.0%)	
Missing	2 (100.0%)	0 (0.0%)	2 (100.0%)	
Total	140 (95.3%)	7 (4.7%)	147 (100.0%)	

3.1 | Qualitative analysis

Three main themes emerged from the qualitative data, which seemed to interrelate (Table 6). The customary practice in qualitative research is to present direct quotations from the participants to illustrate themes. Given the extensive number quotations, we include a summarised version of the thematic analysis. More details of the thematic analysis are available in Appendix 1.

3.2 | Theme 1: Factors and influences on choice

The combination of helping others and financial factors were voiced in this investigation.

TABLE 4 The association between personal decision and motivation

	Gender				
	Gender	Gender	Gender	Gender	
	Gender	Gender	Gender	Gender	Gender
Desire to help, treat or serve people	136 (92.5%)	6 (4.1%)	5 (3.4%)	0 (0.0%)	<0.001
Reputation of the profession	125 (85.0%)	14 (9.5%)	5 (3.4%)	3 (2.0%)	<0.001
Interest in dentistry as profession	129(87.8%)	9 (6.1%)	7 (4.8%)	2 (1.4%)	<0.001
Working independently	113 (76.9%)	20 (13.6%)	11 (7.5%)	3 (2.0%)	<0.001
Financial opportunities of the profession	124 (84.4%)	16 (10.9%)	5 (3.4%)	2 (1.4%)	<0.001
Academic interest	123 (83.7%)	15 (10.2%)	7 (4.8%)	2 (1.4%)	<0.001
Interest in dentistry as a branch of medicine	123 (83.7%)	11 (7.5%)	9 (6.1%)	4 (2.7%)	<0.001
Degree leads to a prestigious job within the society	121 (82.3%)	14 (9.5%)	8 (5.4%)	4 (2.7%)	<0.001
Reasonable working hours	115 (78.2%)	15 (10.2%)	13 (8.8%)	4 (2.7%)	<0.001
More job opportunities	107 (72.8%)	17 (11.6%)	19 (12.9%)	4 (2.7%)	<0.001
Job security	99 (67.3%)	16 (10.9%)	27 (18.4%)	5 (3.4%)	<0.001

> "I always knew I wanted to help people, so that was a big aspect and you know also if I get to help people and make money at the same time that's awesome".

Whilst there were students who made their own personal choice however, the immediate family expectations influence on career choice were prominent. There was also the perception that some students were keeping their parents happy by making the choice of dentistry. Parents' personal experiences through the generations also had some influence on choice.

> "My parents wanted me to be a dentist, so I went for it."

> "My dad was very supportive of the choice because he always wanted to be a dentist".

Influences from siblings, cousins or distant family were also voiced. Given the close culturally netted extended family ties in this region, distant family involvement was expected, particularly amongst those who had a parent or relatives within the profession.

> "I think they were many factors from parents, from a family that worked as dentists."

Family expectations can be formed by cultural and acceptable norms, particularly for females, who formed the overwhelming number of students. Marriage and starting a family at a certain age are also very important culturally, particularly for females.

> "I want to start a family; the work hours are a lot easier than being a physician, so that made up my mind."

Choices were also dominated by logically thought processes. The potential of flexible, shorter working hours and guaranteed employment also made dentistry an attractive choice.

> "I think 90% of my decision-making process is the logical aspect, merely for guaranteed employment and good financial status especially"

The students' experience with a dentist and how that influenced shaping the choice was also voiced by several participants.

> "I would go to my orthodontist every two months so I told them I was considering dentistry and he was very enthusiastic about it, and he just kept telling me." And every time I would go to the clinic after that he was like, "Hey my future colleague." So, yeah, that was really nice."

A mixture of influences and factors was also visible in some of the comments' students made.

> "So, definitely family, economic aspect of course, is important and can't be denied for sure and I guess personally as well because I also wanted to help people somehow".

TABLE 5 The association between parent's influence and choice

Gender	Father's influence						Mother's influence					
	Strongly agree	Agree	Disagree	Strongly Disagree	Total	*p*-Value	Strongly agree	Agree	Disagree	Strongly Disagree	Total	*p*-Value
Male	1 (9.1%)	3 (27.3%)	6 (54.5%)	1 (9.1%)	11 (100%)	0.198	1 (8.3%)	5 (41.7%)	6 (50%)	0 (0%)	12 (100%)	0.02*
Female	8 (6.7%)	33 (27.5%)	34 (28.3%)	45 (37.5%)	120 (100%)		9 (7.4%)	39 (32%)	34 (27.9%)	40 (32.8%)	122 (100%)	
Total	9 (6.9%)	36 (27.5%)	40 (30.5%)	46 (35.1%)	131 (100%)		10 (7.5%)	44 (32.8%)	40 (29.9%)	40 (29.9%)	134 (100%)	

*p-value <0.05 statistically significant.

3.3 | Theme 2: Confidence in the choice made

There was some doubt in confidence in the choice made, particularly, those still at the basic sciences and preclinical years.

> "I still don't know, I'm still in the academic year, so I don't know if I made a good choice."

Conceivably not starting the dental curriculum earlier may have increased the lack of confidence in dentistry as a choice. After studying medicine for four years, some felt maybe they should have continued with medicine and completed medicine instead.

> "Even now after four years I think it will be hard for us to let go of all this information, all this knowledge that we have acquired, it will all be somewhat useless."

The confidence in choice made increased as students moved past the preclinical years.

> "Yeah I love it. I like drilling apparently, and even more today because we're also shadowing 7th year."

This might be a testament for support of early dental related patient contact, even if it is at the level of shadowing more senior students. Nevertheless, there were students who were happy with having to learn their preclinical years similar to medicine and felt that this strengthened their learning.

Several students experienced some difficulty in negotiating the thought process, regarding their confidence in the choice they made.

> "I think dental students have biased judgments because you know that you're already accepted into dentistry."

The sixth year, in particular, had a significant number amongst them who were not confident about their choice. For this particular cohort, at entry, the regulations changed; as a result, many students who wanted to do medicine ended up in dentistry. The dental school entry traditionally required the highest GPA, particularly compared to medicine; this was reversed for this cohort. Whilst they enjoyed the preclinical years, they felt resentful being in this position. The expression of resentment and regret was to the extent that they will not choose dentistry if given the choice again and would shift to medicine if permitted.

> "No, I don't think that it's the correct decision; I feel if I were in medicine, I would have been doing better than now."

> "I would go to medicine if I was allowed to shift after the 4th year."

When weighing potential career options considering culture, family circumstances and career aspiration, an interesting picture emerged.

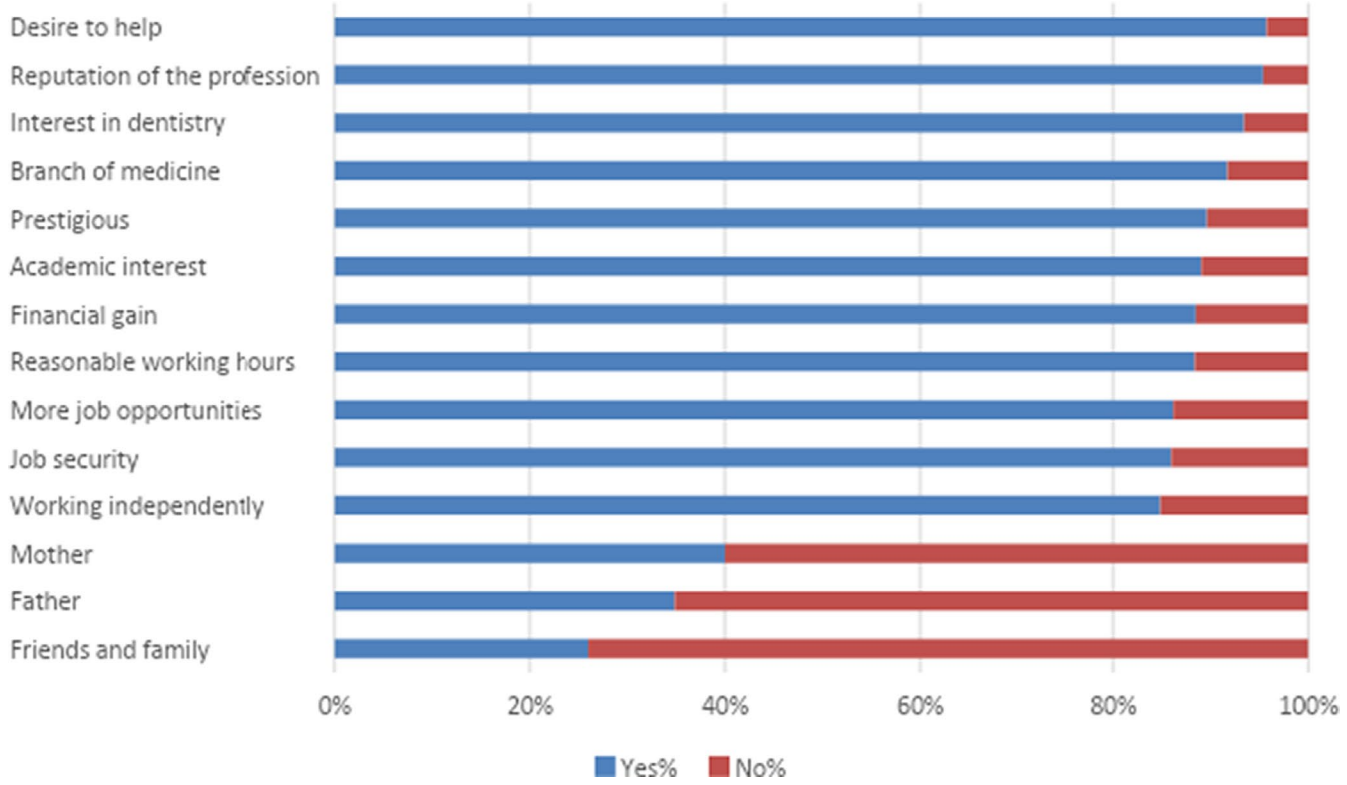

FIGURE 1 The factors impacting on career choice in dentistry

TABLE 6 The frequency distribution of codes deduced from the text within each theme

Codes	# of References	Themes
Reflections on choice	46	Factors and influences on choice
Influences on choice	129	
Weighing choices before entry	68	
Past dental experience	34	Confidence in the choice made
Social and Financial	65	
Logic in choice	37	
Preschool experience	60	Awareness of the programme of study and choice
Views on choice made	143	

Students feel that compared to career choices globally, the choices for them were limited.

> "I don't think we have that many options to begin with of what we are going to do"

3.4 | Theme 3: Awareness of the program of study and choice

The students reflected on two issues; the dental curriculum and duration of study; not starting till the end of the 4th year, after completing the Bachelor in Medical Science with medical students, and having the same curriculum in Anatomy, Physiology, Biochemistry, etc." Some felt that they should have been allowed to choose at the stage when they completed the fourth years with medicine rather than earlier or at entry to the school.

> "I think that it would be better if students were able to choose dentistry or medicine after year four."

There were also some expressions of unfairness that they have to study seven years to become dentists, whilst their counterparts who study abroad would complete it in less time with the potential of having more time and hands-on preclinical and clinical dental training.

> "I think seven years are too long for dentistry. Like we see our colleagues graduate from other universities before us, and they get more experience in dentistry because we have four years of medicine. So, we only get three years of dentistry while other students get approximately five years. So, they gain more experience than us, and this upsets me."

The role of precollege orientation or career advice seems to be lacking in the students' experiences, and they did not feel that they were given enough career advice. Many students relied on social media for their search to help choose their career choice.

> "I just searched on the internet and asked a few of my friends, and so they helped me choose this faculty."

Some of the schools' career advice approach seems to orient their students with a view of specifically going abroad to study and in particular medicine rather than studying locally and with an opening for several choices.

> "Yeah, they were like, Study abroad, and if you are going to be a doctor even if you are going into a medical field, be a doctor and not a dentist."

The length of curriculum was a deciding factor in choice; if they were aware of what was involved in studying dentistry in comparison with other universities; their choice might have been different.

> "If I knew that I was going to study in such great detail in medicine, such as renal or reproduction, I maybe wouldn't have entered dentistry."

4 | DISCUSSION

The study aimed to explore the factors and influences that affect a career in dentistry, and the confidence in choice, to provide insight and a deeper understanding. This may ensure that students who enrol in dental programmes will eventually be content with their choice and play a significant role in a satisfied, productive workforce. This information may also help in the strategic planning of educational programmes, which would ultimately impact the national workforce.

Dental education is a costly burden on the individuals and their communities, particularly in countries where the educational expenses are government-supported or subsidised, as in this cohort. The loss of any dental student after a long and expensive training is a considerable loss of resources and also a potentially lost opportunity for another candidate who may become a more productive member of the dental workforce.

In the present study, the majority of students enrolled in the dental programme were females. This may be attributed to local, cultural influences that place preference for females to study in their home countries instead of choosing to study dentistry abroad since this option is available. However, this may not be regarded as the only reason for the gender distribution reported since research and official government data show a rise in the number of female workers in several fields of the labour market in the last two decades. This seems to be related to the expansion of schooling and female access to universities.[21] The trend is also visibly reflected in dentistry.[22]

A commonly reported factor from the questionnaires and the focus groups is the financial and prestigious expectations associated with dentistry career choice. This element is not a contemporary one. Since the early 1960 s, More and Kohn found that the prestige of the profession and financial earnings were commonly reported occupational motivations for studying dentistry.[23]

Continued research on the topic of motivations behind a career in dentistry found that factors such as financial stability remained dominant themes amongst both males and females.[24] In Malaysia, the emerging dental workforce also seem to indicate the desire for financial stability.[24] An Australia study also reported on students' motivation to study dentistry, where males were found to indicate that income and status of the profession as motivators.[25] It seems that, similar to medical students, career choice intentions are complex with multiple modifiable and non-modifiable factors, where financial reward and prestige rank high.[26] Finances and prestige seem to resonate worldwide in association with the dental profession. This information is important as it highlights the fact that younger candidates, as in this cohort, should be given insight into average incomes associated with various disciplines of related choices.

The reasons for choosing dentistry as an occupation differ from one country to another. In 2009, it was reported that the most frequent reason amongst Swedish dental students was "helping other people,"[27] which comes into agreement with the present findings; whilst the most frequent one for the Japanese dental students was "family expectations,"[27] which also seem to be evident influence in the qualitative data.

There was a convergence between the questionnaire and qualitative data in that factors and influences on career choice are helping others, family expectations and the socioeconomic aspects of a career in dentistry. The interaction between socioeconomic aspects, cultural and lifestyle issues, studies conducted worldwide have reported that lifestyle issues have also been highlighted as prominent in medical students' choice of a career.[25,26,28] Of course, cultural issues vary and exert their influences in different ways, perhaps a subject of future research, to investigate the cultural influences on career choice in different parts of the world. Dental school admissions within this region should perhaps consider and provide such related information to applicants and their parents that could help make a more informed decision.

Emerging from the focus groups' narrative, one crucial issue that needs to be addressed relates to the structure of the programme of study. Dental programmes worldwide vary in length from five to eight years. Within this cohort, the programme's content and integration with the medical curricula were associated with some degree of frustration. Many students reported not to have realised the breakdown of the didactic programme, along with the timeline of the introduction to dental subjects, may have influenced how they feel about the choice they made; in fact, it made some of them unhappy with their choice.

The element of confidence in the choice made is essential, acting as a motivator, which sees students through difficult times during their study years and enables them to accept their chosen career with greater satisfaction. The implication is reduced number of losses of dental graduates who may not join the workforce after graduation due to uninformed choices. The financial impact of this loss in addition to the lost opportunities to others who did not get

the opportunity is significant. The focus groups revealed that students in the preclinical years had more doubt in their choice. This doubt reduced once students entered their clinical years. This highlights the impact of early patient contact, which first can help ensure students' choices are met and second identify those who are unhappy, and if realistically, they will be able to continue in this field. This is quite relevant as our study reports that some females – who are increasing in percentage, felt as though their overall choices of study are limited compared to their counterparts globally. Within these limited options, they need to be given a chance to understand the nature of the career that they have accepted and make an informed decision early on whether they choose to continue with it.

This study has limitations; it is cross-sectional, evaluating the opinions of students locally. Generalisability cannot be claimed, since it does not consider the students who study dentistry abroad, and who make a large part of the local workforce. However, it would apply to a similar setting or cohort.

Furthermore, reproducibility in qualitative and mixed-method analysis is through the concept of triangulation, in combining different data sources, methods (quantitative and qualitative), researchers or perspectives (students') in the study of the same complex phenomenon (career choice), that then ensures validity, which was the case in this study. Therefore, analysis of such qualitative transcripts would not be compatible with statistical probabilities. Additionally, the results of the qualitative part should not be valid for population groups in general, but should be descriptions or theories relevant to a specified setting.[29]

We combined quantitative and qualitative methods to evaluate Kuwait University dental students' choice in the dentistry and the factors and influences on their choices. There was convergence in the data between the qualitative and quantitative, and both data were also complementary to each other. This we believe have increased validity since it promoted a more comprehensive understanding of the factors and the influences on choice.[30]

5 | CONCLUSIONS

The study found that the factors and influences on career choices amongst dental students are broad and included the desire to help, socioeconomic factors, as well as job prestige and security. Parent's influences have an effect with mothers' being more significant. Overall, students were confident in their career choice; however, this confidence was not clear until the more advanced clinical stages of their dental education.

CONFLICT OF INTEREST

The authors declare no interest that may pose conflict with any party.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in preprint server Research Square Pre-print Platform. The link to it is as follows https://www.researchsquare.com/article/rs-22532/v1

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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