

Soft Skills Awareness Among General Dental Practitioners, Residents and Specialists

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ABSTRACT

Objective: To assess the awareness level and need perception of soft skills among general dental practitioners (GDPs), dental residents and specialists.

Study Design: Mixed method study

Place and Duration of Study: Armed Forces Institute of Dentistry (AFID), Rawalpindi and 28 Military Dental Centre (28 MDC), Lahore Pakistan, from Mar to Sep 2020.

Methodology: A mixed method study research design with descriptive and explorative strategies was used to formulate a survey questionnaire and in-depth interviews for participants aged 24-60, medically fit, with a minimum of one year of practical experience, and willing to participate.

Results: 136(74.37%) knew the basic concept of soft skills being non-technical skills, as they classified their awareness of soft skills as 'Partially Aware'. Only 9(4.91%) responded as being 'Expert' in this topic. 38(20.76%) were totally 'Unaware'. Regarding the need for teaching soft skills to dental students, 171(93.44%) participants wanted soft skills teaching to begin in the undergraduate years.

Conclusion: Participating dental professionals understood the basic concept of soft skills but needed a formal knowledge of what it entails. There is a dire need for the dental professional to have a satisfactory knowledge of soft skills to improve their overall job performance.

Keywords: Communication, Dentistry, Interpersonal, Normative Education, Soft Skills.

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INTRODUCTION

Dental curriculums worldwide are mainly concentrated on hard skills, including theoretical and clinical knowledge. The needs and wants of today's patients differ greatly from those of a decade ago.¹ Today, the world has realized the need for extra skills to have a competitive edge, which includes soft skills.² Soft skills are multifaceted and include communicational, personal, social, creative, leadership, interpersonal and different personality traits that enable people to navigate their surroundings and workplace, work well with others, perform well and achieve life goals.³ Briefly, Soft skills can be classified as intra-personal and interpersonal skills. Intra-personal skills refer to the ability of individuals to manage themselves to succeed in work. These skills include time management, stress management, creative thinking, etc. Interpersonal skills entail people's skills in managing their relationships with others to improve performance quality, such as the ability to provoke,

lead, and talk.^{4,5} Students in a professional undergraduate program such as dentistry are expected to be clinically competent upon graduation and exhibit good soft skills to serve society at large.⁶ Soft skills increase confidence, professionalism, coordination, friendliness and optimism.⁷

Different methodologies for teaching soft skills have been proposed, such as lectures, seminars, case-based studies, problem-based learning (PBL), project-oriented PBL (POPBL), and clinical simulation laboratory activities on specific skills.⁸ Each methodology has its strengths, and the methodology preference largely depends on institutions' and/or instructors' preferences.⁹ Many dental schools have adopted PBL in their curriculum in the South Asian region to develop content knowledge and skills and sharpen the soft skills that are equally needed to become a successful doctor.¹⁰

In Pakistan, studies have focused on a few aspects of soft skills, like communication and leadership skills, but there is not enough literature regarding the rest of the soft skills. Therefore, the objective of this study was to assess the awareness

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level and need perception of soft skills en masse among GDPs, dental residents, and specialists.

METHODOLOGY

The mixed method study was conducted at the Military Dental Centre (MDC), Lahore and Armed Forces Institute of Dentistry (AFID), Rawalpindi Pakistan, from March to September 2020 after seeking approval from the Ethical and Review Committees of respective institutes (Ref No. 107/Civ/Trg/08/2019). WHO calculator was used to calculate the sample size while keeping the estimated true proportion of 84.2%.¹¹

Inclusion Criteria: Dentists of either gender, aged 24-60 years, medically fit, with a minimum of 1 year of practical experience (including a house job) were included.

Exclusion Criteria: Individuals unwilling to participate were excluded.

The mixed method explorative design was used to collect quantitative and qualitative data to understand the relationship among various variables. In the quantitative part of study, sample frame included clinicians of all genders from each professional status, i.e., GDPs, dental residents and specialists, and a nonprobability convenience sampling technique was used to enrol 201 respondents of the clinician mentioned above category. A customized questionnaire was developed after a literature search and review. This questionnaire was presented to soft skills academic experts of AFID for

questionnaire enclosed a brief explanation of the study's objective and a consent form to ensure voluntary participation. 183(91%) respondents out of 201 respondents responded with a 9 % dropout rate. The filled questionnaires were divided into three groups, i.e., responses from GDPs, dental residents, and specialists.

For the qualitative part of study, the researcher recorded in-depth interviews with open-ended questions, and nonprobability purposive sampling was used to enrol 2 participants from each category of clinicians.

Statistical Package for Social Sciences IBM (SPSS) Version 22 was used for statistical analysis. Quantitative variables were expressed as Mean±SD and qualitative variables were expressed as frequency and percentages. Chi-square test was applied to explore the inferential statistics. Content analysis of qualitative data was done after analyzing themes and trends from the interviews.

RESULTS

Of the 201 forms distributed, 183(91%) returned with valid responses. Of the valid respondents, 87(47.5%) were male and 96(52.5%) were females. Of the overall participants, 136(74.37%) knew the basic concept of soft skills being non-technical, as they classified their awareness of soft skills as 'Partially Aware'. Only 9(4.91%) responded as being 'Expert' in this topic. 38(20.76%) were totally 'Unaware' of this topic, as listed in Table-I.

Table-I: Professional Status Versus Awareness Scale (n=183)

		Awareness Scale			p-value
		0-2 Unaware	3-7 Partially Aware	8-10 Expert	
Professional Status	General Dental Practitioner (GDP)	24(13.11%)	79(43.16%)	1(0.54%)	0.152
	Dental Resident	11(6.01%)	48(26.23%)	1(0.54%)	
	Specialist	3(1.63%)	9(4.91%)	7(3.83%)	

omission, suggestions and rectification of items, if any. It was distributed to clinicians after journal club meeting sessions of their respective institutes, and efforts were made to include respondents from each category of dentists. They were asked to fill out and return this questionnaire in the next journal club session. The respondents were assured that the information in the questionnaire would be kept confidential and only used for research purposes. The questionnaire comprised initial demographic details, a visual analogue scale continuing to 12 questions which focused on assessing the operator's awareness and need perception of soft skills. The second page of the

123(67.21%) respondents could differentiate between soft and hard skills. A higher majority, 141(77.04%), believed these skills vary with professional status, and 109(59.56%) forms indicated that a specialist should have a more profound knowledge of soft skills than a GDP (Table-II). Not only dentists and dental students, but 179(97.81%) respondents also perceive a need for soft skill learning for the dental and paramedical staff. In question number 13 of questionnaire respondent were asked to mentioned the stage of medical professionals which require soft skills the most. Their responses were as shown in Figure.

Table-II: Answers to questions by Respondents (n=183)

Questions	Yes	No
Can you differentiate soft skills from hard skills?	145(79.24%)	38(20.76%)
Do SS have an influence on any clinical procedure?	139(75.96%)	44(24.04%)
Do SS vary with professional status?	143(78.14%)	40(21.86%)
Are SS different for a Specialist & for a GDP?	147(80.32%)	36(19.67%)
Do SS vary with each specialty?	149(81.42%)	34(18.58%)
Do SS influence interpersonal relations?	153(83.60%)	30(16.39%)
Do SS influence patient's confidence on operator?	173(94.54%)	10(5.46%)
Do SS have a morale boosting effect on clinician?	143(78.14%)	40(21.86%)
DO SS Important for dental staff?	171(93.44%)	12(6.56%)
Are SS teaching to dental students is beneficial?	171(93.44%)	12(6.56%)

For qualitative data analysis, six clinicians, two from each category who were conveniently available, were interviewed in-depth to assess the awareness level, perception of soft skills, need assessment, and SS inclusion in the curriculum by the researcher. During the interview, all participants were confident differentiating between soft and hard skills. At the same time, they believed that SS strongly influences their clinical practice and varies with professional status. According to participants, soft skills differs for specialists from GDP as general dentists rely on specialists to manage difficult cases. They also believe that SS varies even within various specialities. Most of them replied that they apply SS in their daily routine practice, which enhances their morale and confidence and improves interpersonal relations. Almost all of them believe that SS are important for dental staff and suggested including SS in the curriculum for dental

Table-III: Table of Contents for Qualitative Analysis of Study

Themes	Subthemes	Verbatim	Word Frequency
Soft skills	Interpersonal soft skills Intrapersonal soft skills	"I know various types of personal skills necessary for day to day working."	Soft Skills =139
Practicing Clinicians	General dental practioners Specialists Dental students	"I started practicing once I was student, then remain general dental practioner and now working as a specialists here."	Clinicians=109
Perception	Different soft skills for different category of clinicians Different soft skills for different category of dental specialties	"Yes I know that different types of clinicians require different SS and even different specialties demand different SS."	Knowledge of SS= 10 Daily clinical practice= 79
Awareness	Basic know how of soft skills	"Yes i have basic know how of SS being practiced in daily clinical settings."	Awareness= 76
Need Assessment	Requirements of soft skills in daily clinical routine practice	" while treating patients, SS play a pivotal role in treatment out come and help in good rapport build up dental fraternity."	Need of SS= 83 Effects of SS=93
Curriculum	Inclusion of SS in curriculum	" SS may need to be incorporated in existing curriculum of dentist and paramedical staff."	Training and curriculum=43

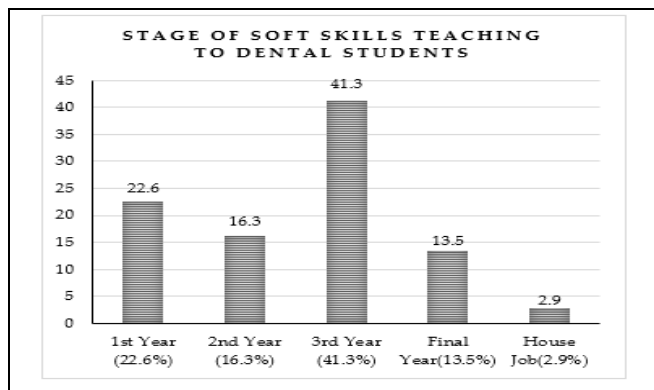


Figure: Stages of Soft Skills to Dental Students

students.

DISCUSSION

Acquiring and implementing soft skills in addition to technical skills has become a new topic of consideration. Keeping in mind the lack of attentiveness on this topic in our region, this cross-sectional survey study was carried out to make all categories of dental practitioners aware of the basic concept of soft skills and to assess its need to be included in the undergraduate dental curriculum so that our young dentists are ready to meet future challenges.

Findings suggest that soft skills are as essential as technical skills in delivering quality healthcare. This

supports Laari *et al.*, who argued that hard skills contribute to only 15% of one's success while soft skills make up the remaining 85%.¹² In our region, the 'Soft skills' term was new for many respondents even though they knew some of its components, mainly patient-dentist dealing. A literature search reveals a study where the author believes that we should not be referring to them as soft skills; the effective skills that we expect students to learn and carry into practice should be described as employability skills, and they are not, by any means, soft.¹³ Employability skills may be defined as a group of essential abilities that involve the development of a knowledge base, expertise level, and mindset that is increasingly necessary for success in the modern workplace.¹⁴

Stressing further the widespread importance of soft skills, Dalaya *et al.* maintained that combining technical expertise and soft skills is crucial for patient management. They concluded that professionals, students, employees and clinical practitioners require soft skills.⁸ Soft skills have become indispensable for every person in the present era. Gilbert *et al.* concluded that each soft skill is important and is sufficiently distinct from the others, where 'Inspiring moral trust' and 'Emotional intelligence' are the top two.¹⁵ Ayn *et al.* and Shigli *et al.* found interpersonal skills to be the most important employability skills for patients' development of trust.^{16,17} In another study, communication (verbal, nonverbal, and listening) and interpersonal and communicative patience were critical for success in dentistry. They also highlighted that stress management, self-esteem, and time management are the most important skills needed in the dental profession.¹⁸ Results of our study are in synchronization with the above observation as the shared responsibility would encourage positive interactions between team members and enhance interpersonal skills. Börner *et al.* proposed that, even with the rise of machine learning, people must communicate complex ideas, negotiate, and lead.¹⁹

Regarding the second part of our research, concerning the need assessment and inclusion of soft skills training into the undergraduate curriculum, Dentistry is known for frequent appointments where patient complaints are mostly regarding communication problems with their dentist, which can be dealt with through effective communication to hasten the diagnostic process, decision-making and enhance patient-dentist understanding. Therefore, the dental profession must include soft skills in the curriculum.²⁰

Literature search identifies the most prevalent teaching and learning methodology to be role modelling either by supervisor or peers, followed by workshop.¹¹

Coming towards when to start the training of soft skills, the appropriate starting place for soft skills training via a structured timeline is in dental schools, and it has been shown to have the benefits of early detection and correction of communication issues, improved retention, providing a greater understanding of the importance of communication skills in the patient-professional relationship.¹⁵

Results of our study revealed that soft skills training with a structured syllabus should begin in 3rd year of undergraduate. A possible explanation for this may be that in Pakistan, dental students start encountering live patients in 3rd year; therefore, most dentists believe that soft skill teaching should begin in the clinical years when students interact with patients. From observation in India, some universities teach first-year students behavioural skills. However, their knowledge needs to be refreshed when handling clinical patients from the third year onwards. Therefore, it is important to introduce these types of skills into the curriculum continuously in combination with clinical skills for the benefit of all students.

The study's implications are helpful and fruitful for institutions and regions across the country. Another avenue will be determining how and which soft skills can be taught to aspiring dental professionals. Moreover, multicenter research can be done over a large-scale population.

LIMITATION OF STUDY

The present study has a few limitations to consider when interpreting the findings. The sample contained an unequal distribution of males and females. Despite our efforts, the study was conducted in only one large city in Pakistan because of a lack of accessibility and resources. In general, studies employing a self-administered questionnaire, if too detailed, have other potential limitations, including non-response bias, recall bias, etc., because the total sample size decreases.

CONCLUSION

The findings of this research indicate that participating dental professionals understood the basic concept of soft skills but needed a formal knowledge of what it entails. No matter where the world progresses, hard skills can never surpass soft skills, especially in a field like medicine/dentistry, where patient satisfaction is regarded as the supreme consideration. Whether a student is planning for that all-important job interview or looking to make a

success of his / her working life, the student should be given soft skill training to address these needs.

Conflict of Interest: None.

Authors' Contribution

Following authors have made substantial contributions to the manuscript as under:

QA & HI: Data acquisition, data analysis, data interpretation, critical review, approval of the final version to be published.

KM & NA: Study design, data interpretation, drafting the manuscript, critical review, approval of the final version to be published.

NJB & FN: Conception, data acquisition, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

REFERENCES

- Meyers G. The things they don't teach you at dental school. *BDJ Stu* 2019; 26(3): 21. <https://doi.org/10.1038/s41406-019-0045-x>.
- Theruru K, Bathala LR, Thota MM, Songa MV, Jyotsna M. Awareness of Dental Personnel of Two Dental Colleges in AP, on the Role of Soft Skills in Dentistry-A Survey. *J Clin Diag Res* 2017; 5: 139. <https://doi.org/10.4172/2376-0311.1000139>.
- Nicolaides M, Cardillo L, Theodoulou I, Hanrahan J, Tsoulfas G, Athanasiou T, et al. Developing a novel framework for non-technical skills learning strategies for undergraduates: A systematic review. *Ann Med Surg* 2018; 36: 29-40. <https://doi.org/10.1016/j.amsu.2018.10.005>.
- Khajeghyasi RV, Liaghatdar MJ, Nili MR, Shirazi M. Ranking the soft skills of the dental profession based on the importance in job performance: A mixed method study in Isfahan and Mazandaran Universities of Medical Sciences. *Dent Res J* 2021; 18: 24.
- Bissett J. Soft skills: raising the bar. *Dent Nurs* 2019; 15(9): 424-425. <https://doi.org/10.12968/denn.2019.15.9.424>.
- Gonzalez MA, Abu Kasim NH, Naimie Z. Soft skills and dental education. *Eur J Dent Edu* 2013; 17(2): 73-82. <https://doi.org/10.1111/eje.12017>.
- Mirghani I, Mushtaq F, Balkhoyor A, Al-Saud L, Osnes C, Keeling A, et al. The factors that count in selecting future dentists: sensorimotor and soft skills. *Br Dent J* 2019; 226(6): 417-421. <https://doi.org/10.1038/s41415-019-0030-3>.
- Dalaya M, Ishaquddin S, Ghadage M, Hatte G. An interesting review on soft skills and dental practice. *J Clin Diagn Res* 2015; 9(3): ZE19-ZE21. <https://doi.org/10.7860%2FICDR%2F2015%2F12725.5719>.
- Haseeb M, Azfar MW, Ahmed M, Tariq A, Nawaz MS, Sadiq A, et al. Development and validation of scale for self evaluation of soft skills in postgraduate dental students. *J Pak Med Assoc* 2021; 71 (Suppl 1): S9-S13.
- Rimal J, Shrestha A, Badyal DK. Impact of problem-based learning in dentistry curriculum in Nepal: A self-reflection. *Chrimed J Health Res* 2018; 5: 302-304. <https://doi.org/10.4103/cjhr.cjhr.122.18>.
- Verma M, Mohanty V, Talwar S. D-CAST: enhancing communication skills among dental students. *Med Edu* 2018; 52(5): 557. <https://doi.org/10.1111/medu.13551>.
- Laari L, Dube BM. Nursing students' perceptions of soft skills training in Ghana. *Curationis* 2017; 40(1): e1-e5. <https://doi.org/10.4102/curationis.v40i1.1677>.
- Lluch AM, Lluch C, Arregui M, Jiménez E, Giner-Tarrida L. Peer Mentoring as a Tool for Developing Soft Skills in Clinical Practice: A 3-Year Study. *Dent J* 2021; 9(5): 57. <https://doi.org/10.3390/dj9050057>.
- Murthy V, Rajaram S, Choudhury S, Sethuraman KR. Are we Training Enough of Communication Skills and Patient Psychology Required in Dental Practice. *J Clin Diagn Res* 2017; 11(4): ZE01-ZE04. <https://doi.org/10.7860/ICDR/2017/24664.9619>.
- Gibert A, Tozer WC, Westoby M. Teamwork, Soft Skills, and Research Training. *Trends Ecol Evol* 2017; 32(2): 81-84. <https://doi.org/10.1016/j.tree.2016.11.004>.
- Ayn C, Robinson L, Nason A, Lovas J. Determining Recommendations for Improvement of Communication Skills Training in Dental Education: A Scoping Review. *J Dent Educ* 2017; 81(4): 479-488. <https://doi.org/10.21815/JDE.016.003>.
- Shigli K, Awinashe V. Patient-dentist communication: an adjunct to successful complete denture treatment. *J Prosthodont* 2010 ;19(6): 491-493. <https://doi.org/10.1111/j.1532-849x.2010.00597.x>.
- Khajeghyasi RV, Liaghatdar MJ, Nili MR, Shirazi M. Ranking the soft skills of the dental profession based on the importance in job performance: A mixed method study in Isfahan and Mazandaran Universities of Medical Sciences. *Dent Res J* 2021; 18: 24.
- Börner K, Scrivner O, Gallant M, Ma S, Liu X, Chewning K, et al. Skill discrepancies between research, education, and jobs reveal the critical need to supply soft skills for the data economy. *Proc Natl Acad Sci* 2018; 115(50): 12630-12637. <https://doi.org/10.1073/pnas.1804247115>.
- Karemore V. Communication skills as a competency in Dental schools: a Review. *J Edu Tech Health Sci* 2018; 5(3): 119-121. <https://doi.org/10.18231/2393-8005.2018.0024>.