

REVIEW OF RELATED LITERATURE

2.0 Introduction:

In this study work, the review of related literature is given in the following sections:

- Recommendations for Research on the Assessment of Professionalism
- A set of general guidelines for evaluating professionalism
- Classification of Professionalism themes and subthemes
- Assessment scales for evaluating professionalism in medical, dental, and nursing students, along with assessment tools for measuring professionalism.
- Assessment of professionalism, specifically in dental teaching, and deliberation on the implications of related literature reviews.

Importance of a Review of Related Literature:

Research projects typically include a critical analysis of existing literature, research studies, and other pertinent sources to pinpoint knowledge gaps, construct a theoretical framework, and offer context for the research issue. A thorough review of related literature can help researchers avoid duplicating previous studies, identify potential research questions, and better understand their study topic.

Determining the scope and limitations of research is an essential step toward conducting a successful study. Additionally, understanding various research methods and tools is crucial in this process. It is helpful to review previous research performed in the same area to gather insights and use this information as a basis for conducting recent research. Research also

provides access to different statistical measures. Lastly, knowing how to write a report to document and communicate research findings properly.

Objectives of the Review of Related Literature:

Reviewing previous related work is to gather data for the present research, understand what others have done, and gain insight into the investigator's job. It also helps to change any research problem into a specific and brief one, identify overlooked research possibilities, and understand the methods and measures used by other researchers. Additionally, reviewing previous work provides guidelines for problem delimitation and helps to avoid repetition. Finally, it can provide a valued understanding of the theories of research that are pertinent to the problem being studied. By studying the related literature, investigators can efficiently gather helpful information.

The review of related literature for this research delved into professionalism in the dental profession and the evaluation tools used to assess professionalism in dental students. The literature suggests that professionalism is a crucial aspect of dental education, and it is critical for dental students to cultivate a professional attitude toward their patients and colleagues.

Previous studies have utilized several assessment tools to evaluate professionalism in dental students, including self-assessment surveys, peer assessment, and faculty evaluation. However, these tools have limitations in terms of validity and reliability, and there is a pressing need for a specific and comprehensive assessment scale that is standardized for assessing professionalism in postgraduate dental students.

The literature review also emphasized the importance of identifying the aspects contributing to dental students' professionalism. Several factors, such as communication skills, ethical behavior, cultural sensitivity, and professionalism towards patients and colleagues, are essential in developing a professional attitude in dental students.

The literature also revealed specific challenges associated with assessing professionalism among postgraduate dental students. These challenges include diverse cultural backgrounds, educational experiences, and varying clinical exposure levels. Such challenges make it

necessary to develop a tool to assess professionalism comprehensively and account for these variables.

Overall, the literature review underscored the need for a standardized scale to assess professionalism among postgraduate dental students in India. The present study intends to report this gap in the literature by standardizing a new scale that could identify improvement areas and enhance dental students' professionalism. The study sought to make some additions to the existing literature on professionalism in dental education and provide a tool that could be used to improve dental education and teaching programs.

The literature suggests that professionalism is a vibrant element of dental education, and it is crucial for dental students to foster a professional attitude toward their patients and colleagues. The literature review highlights the need for a reliable and valid scale to assess professionalism among postgraduate dental students in India. The existing assessment tools, such as self-assessment surveys, peer assessment, and faculty evaluation, have limitations in terms of validity and reliability. Therefore, there is a pressing need for a specific and comprehensive assessment scale to assess professionalism in postgraduate dental students comprehensively and account for variables such as diverse cultural backgrounds, different educational experiences, and varying levels of clinical exposure.

The literature suggests several factors contribute to developing a professional attitude in dental students. These factors include communication skills, ethical behavior, cultural sensitivity, and professionalism toward patients and colleagues. The literature review also highlights the importance of identifying the elements of professionalism that are agreeable to learning and comparing definitions of professionalism with healthcare professions.

The present study proposes to address the gap in the literature by developing and validating a new scale that could be used to recognize areas for upgrading the professionalism of postgraduate dental students. The study intends to contribute to the existing literature on professionalism in dental education and provide a tool that could be used to improve dental education and teaching-learning programs. The study will also identify the factors contributing to professionalism in dental students and help understand the methods and measures utilized by other researchers. By reviewing the related literature, the study aims to efficiently gather helpful information and convert a tentative research problem into a specific and concise one.

2.1 Recommendations for Research on the Assessment of Professionalism (Hodges, 2019)

- Exploring professionalism within various linguistic and cultural settings
- Comparability of definitions of professionalism with healthcare professions
- Describe elements of professionalism that are agreeable to learning.
- Study links between assessments of professionalism and added forms of evaluation.
- Integrate or evaluate patient viewpoints in the assessment of professionalism.
- Discover professionalism in clinical settings.
- Describe how assessment information can change the philosophy of education.
- Reflect on what happens when prospects at an individual level struggle with those at an organization or system level.
- Discover advanced ways to gather data and assess competence.

2.2 General guidelines developed for assessing professionalism

(Mook et al., 2009)

- The notion should be assessed as a multifaceted concept involving different levels of analysis, including individual, interpersonal, and societal aspects.
- To accurately assess professionalism, use multiple methods to capture its dimensions. Combine triangulation techniques, including measuring knowledge, values, attitudes, and performance. (Thistlethwaite & Spencer, 2008).
- The usage of assessment should be clarified, specifically whether it is formative or summative. Formative assessment responses can potentially alter behavior (Phelan et al., 1993; Papadakis et al., 2001; Goldie, 2012). According to Hunt (1992), using instruments that offer descriptive comments is the most effective approach.
- The choice of assessment method depends on its usefulness. For instance, peer assessment is effective as a formative assessment tool. Still, summative assessment may

not provide accurate results due to peer reluctance to give negative judgments (Arnold et al., 2005).

- Decide if assessors should be evaluated based on a norm or criteria. Since professionalism lacks a precise definition, use criteria-based standards. Nevertheless, standard maintenance is tough as lapses are rare. (Hafferty 2006)
- To increase the reliability of results, increasing the quantity of tests and related contexts is essential. This makes the assessment realistic, as stated by van der Vleuten in 1996. Furthermore, having more observers also increases reliability. Assessors must receive training on how to grade students' presentations quantitatively and evade 'attribution bias,' which is the predisposition to generalize observed behavior to all backgrounds, as explained by Stern in 2006.
- Include a conflict situation and explain the reasoning behind the proposed solution in the assessment.
- It should be a continuous process, evaluated throughout healthcare institutes and beyond, taking into account its longitudinal trajectory. (Hilton & Slotnik, 2005; Hafferty, 2006).
- According to Hodges et al. (2011), a proper assessment should be accompanied by sufficient guidance, recommendations for remedial actions, and determinations concerning the continuation of training. Studies have found a correlation between previous professional mistakes and disciplinary actions taken against doctors by licensing boards. Papadakis et al. (2004) and Ainsworth & Szauter (2006).
- It is essential to provide feedback and encourage reflection during and immediately after observations, according to van Mook (2009b). Bravilosky et al. (2011) and Goldie (2012) noted that reflection is essential for personal learning and developing a sense of identity. Furthermore, providing constructive feedback leads to enhanced professional behavior, as demonstrated by Phelan et al. (1993), Papadakis et al. (2001), and Goldie (2012).
- Re-validate tools for cultural relevance when used in new contexts. (Hodges et al., 2011).

2.3 Medical students' professionalism rating scale Ketis & Vrecko (2014)

Objectives: To create a tool for evaluating medical students' professionalism based on their attitudes towards and perceptions of professionalism in medicine and to validate it. **Methods:** The research included college-level medical students and utilized qualitative and quantitative methods. The first stage included two focus group sessions with 12 students, and the transcript analysis was done using the grounded theory method. Following that, a Delphi through 20 family medicine specialists and a psychometric scale evaluation with 449 students were both conducted. The Professionalism Assessment Scale was utilized in the evaluation, and a five-point Likert scale could answer the items. **Results:** After conducting focus groups, a Patient Advocacy Scale (PAS) was created with 56 items. However, the Delphi study suggested that only 30 items should be retained. For the quantitative analysis, 122 students were selected, with a response rate of 27.2%. Among these students, 95 were female (77.9%), and the average age was 22.1 ± 2.1 years. Eight items were removed after conducting a principal component analysis, and the final PAS was produced with 22 items. The Cronbach's alpha value of the scale came to 0.88, which indicates high internal consistency.

<p style="text-align: center;">Factor 1 Empathy and humanism</p>	<p style="text-align: center;">Factor 2 Professional relationship and growth</p>	<p style="text-align: center;">Factor 3 Responsibility</p>
<ul style="list-style-type: none"> ⌘ No biases ⌘ Personal mood should not interfere with patient management. ⌘ Respectful doctor-patient relation ⌘ Respectful physician and co-worker relations ⌘ Deliver the best for the patient. ⌘ Understand patient well ⌘ Be a good role model for students. ⌘ Manage each patient individually. ⌘ Maintain confidentiality. ⌘ Have an interest in the patients. 	<ul style="list-style-type: none"> ⌘ Indulge in continuous professional education. ⌘ Physicians should be able to say 'no.' when required. ⌘ Doctors should be able to demarcate private and Professional life. ⌘ Maintain professional relations in their Team. ⌘ Acquire more than clinical knowledge. ⌘ Maintain Physician-patient communication 	<ul style="list-style-type: none"> ⌘ Indulge in continuous professional education. ⌘ Physicians should be able to say 'no.' when required. ⌘ Doctors should be able to demarcate private and Professional life. ⌘ Maintain professional relations in their Team. ⌘ Acquire more than clinical knowledge. ⌘ Maintain Physician-patient communication ⌘ Accept the mistake.

2.4 Nursing Professional Value Scale (Weis, 2000) Objectives: To explain the Nursing Professional Values Scale's creation, validity, and reliability (NPVS).

Design: The NPVS (Nurse et al.) was evaluated on a total of 599 individuals, including both bachelor's degree and master's students, as well as practicing nurses. The student participants were part of any of the 25 programs selected randomly. A group of practicing nurses was selected randomly from a list provided by the Nursing State Board. **Method:** A 44-item Likert-scale instrument was analyzed using principal axis extraction and Varimax rotation. **Findings:** Two major aspects, namely caregiving and activism, were significant, accounting for about 58% of the data's overall variance.

Conclusions: The NPVS was reliable and valid for measuring professional nursing values and improving professional socialization.

• Caregiving	• Trust
• Activism	• Freedom
• Accountability	• Safety
• Integrity	• Knowledge

2.5 The Dental Values Scale (Langille, 2010)

Objectives: This research aimed to create an accurate measuring tool to evaluate dental practitioners' and students' values. **Methods:** The author organized focus groups with 23 dental practitioners to create a standard dentistry scale. They came up with a list of 99 factors associated with dental work. 449 dentists were asked to rate the significance of each term using an online survey. The values were appraised using Schwartz's Values Scale. **Results:** Factor analyses identified 25 values, including altruism, personal satisfaction, conscientiousness, quality of life, and professional status. Dental students (N = 96) scored higher on carefulness, altruism, and individual satisfaction than dentists, but these values reduced over the period and became similar to dental surgeons.

Altruism	<ul style="list-style-type: none"> • Sensitivity toward others. • Understanding. • Kindness to others. • Acceptance of others despite their laws. • Compassion
Personal Satisfaction	<ul style="list-style-type: none"> • Satisfaction • Harmony in life. • Happiness. • Success • Quality time.
Conscientiousness	<ul style="list-style-type: none"> • Integrity in my profession. • Honest. • Conscientious. • Competent. • Ethical.
Quality of Life	<ul style="list-style-type: none"> • Good living. • Well paid. • Financial security. • Reasonable income. • Financial stability.
Professional Status	<ul style="list-style-type: none"> • Prestige. • Devotion to job. • Related to the medical field. • Respectful profession. • Ambition. • Pleasure. • Variety of patients.

2.6 Dental scale for professionalism (Zijlstra et al., 2005)

Objective: An assessment was carried out to know the effectiveness and level of acceptance of evaluating the conduct of dental undergraduates. **Materials and method:** an ordinal scale form is used to evaluate undergrads' professional behavior. The standard process is employed, with feedback given each term. Staff used student self-assessment to gauge performance. **Results:** The analysis showed results for each tenure. The reply rate was 80–85%. Initially, student and staff scores differed significantly. However, the study's end reduced the difference to a judicious agreement over two out of three measures. **Conclusions:** It showed that using specific forms and procedures minimized the gap in evaluating the professional conduct of dental students and staff. This validates the method's effectiveness as a teaching tool and confirms the acceptability of the assessment of dental students' professional behavior.

<input type="checkbox"/> Altruism	<input type="checkbox"/> Reflection
<input type="checkbox"/> Accountability	<input type="checkbox"/> Respect
<input type="checkbox"/> Autonomy	<input type="checkbox"/> Self-awareness
<input type="checkbox"/> Compassion	<input type="checkbox"/> Self-motivation,
<input type="checkbox"/> Excellence	<input type="checkbox"/> Social responsibility
<input type="checkbox"/> Honesty and integrity	<input type="checkbox"/> Trustworthiness
<input type="checkbox"/> Knowledge of ethical standards	<input type="checkbox"/> Working with others
<input type="checkbox"/> Moral reasoning	<input type="checkbox"/> Life long learning

2.7 Research carried out in India

K. M. & Gali (2016) stated that because the health profession requires a great deal of responsibility and accountability, healthcare workers are held in high regard in society. There is a stronger need to include all the necessary skills in our curricula so that students can deliver high-quality healthcare. One of the essential skills that pupils need to learn is professionalism. Health professionals could only teach such core competencies if they were part of our curriculum, and institutions could accept them subject to the obligatory regulations of regulatory agencies. The elements of professionalism were covered in the study, along with instructional and evaluation strategies for fostering professionalism in students.

Amritha et al. (2019) studied the Dental students' attitudes and beliefs regarding professionalism, as well as the impact of gender on the same. A descriptive study was done in Bengaluru's city dentistry institutions. A stratified random-taking method was utilized to choose 480 dental apprentices for the sample. To evaluate professionalism, the Professional Assessment Scale was employed. The questionnaire comprises 22 items and is categorized into three domains: professional responsibility, professional development and partnerships, and empathy and humanism. Using a 5-point Likert scale, which goes from strongly disagreeing to strongly agreeing, the students gave their answers. The data that were collected were analyzed using SPSS version 14.0. The ANOVA, chi-square test, independent Student's t-test, and Pearson's correlation were employed. The Professional Assessment Scale mean scores for UGs, interns, and PGs were 93.12 ± 10.35 , 97.41 ± 8.59 , and 94.42 ± 10.06 , respectively. These relationships were statistically significant ($P < 0.001$). There were no discernible gender disparities in the mean scores overall. It also found that all of the participants exhibited some level of professionalism; acknowledging these issues and incorporating them into professional education initiatives may lead to improved and more benevolent healthcare services for the general public.

2.8 Research carried out overseas

Cruess et. al (2006) constructed the Professionalism Mini-Evaluation Exercise (P-MEX), which was based on the mini-Clinical Examination Exercise (mini-CEX) format. From a comprehensive list of 142 observable professional behaviors identified during a workshop at McGill, 24 were selected and transformed into an evaluation tool inspired by the mini-CEX. This tool is intended for application across various clinical settings and was evaluated with clinical clerks in disciplines such as medicine, surgery, obstetrics and Gynecology, Psychiatry, and Pediatrics. A total of 211 evaluation forms were completed for 74 students by 47 different evaluators. The findings support both the content and construct validity of the instrument. An exploratory factor analysis revealed four key factors: skills related to the doctor-patient relationship, reflective abilities, time management, and interprofessional relationship skills. The findings suggest that the P-MEX was a feasible and effective method for assessing professionalism in clinical settings.

Masella (2006) stated that the primary goal of dental education is to help students become more professionally equipped. Technical proficiency and specialized knowledge could only make sense within the framework of professionalism. Professionalism was defined by its devotion to quality, altruism, integrity, and caring for the community. The foundation of it was the duty to serve others before self-service turned into a social contract. Instead of being a given as a byproduct of dental school, professionalism should be developed through focused interventions. A comparison was made between experience-based, mentor-mediated, socially motivated professionalism and top-down, rule-based professionalism. Professional progress and the professional lifestyle were inherently based on moral ideals. Dental schools give students conflicting messages about the value of professionalism through their formal and covert curriculum. Faculty, staff, and students should work together to establish an institutional consensus on professionalism through fervent support and an in-depth examination of dentistry's moral principles. The utilization of portfolios, large service-learning projects, and maximum student exposure to faculty role models were likely to improve professionalism, which ought to be assessed each semester for each student in conjunction with faculty and institutional evaluations. Studies found a strong correlation between clinical performance metrics and student moral reasoning levels, indicating that dental students' moral reasoning skills might be improved. There were accurate and valid surveys available to evaluate students'

moral thinking. The significance of professionalism in the development of students is acknowledged in ADEA policy declarations. Teachers and students in dental school should know without a doubt what is appropriate and inappropriate behavior in classroom and clinical settings from the very first day. Dental professionals and students were likely to raise their standards of professionalism with training and experience.

Lovas et al. (2008) advocated for the inclusion of mindfulness meditation in the dental curriculum. The traits developed by practicing mindfulness meditation were very similar to the professional attitudes that are prevalent throughout the world. The wide, overlapping notions of professionalism and mindfulness shared a prosocial goal of, self-serving rewards in favour of the long-term welfare of society. Another objective was ensuring the highest possible quality of life for both patients and practitioners. The authors proposed that mindfulness meditation should aid in enhancing dental professionals' attentiveness, self-awareness, acceptance, wisdom, and self-care, based on a selected study of the medical literature. They gave a brief overview of Dalhousie University's efforts to include mindfulness in its dental and dental hygiene courses, as well as the function of mindfulness in higher education.

Hisar et al. (2010) created a tool to evaluate nursing students' professional attitudes. The authors' scale, which had 28 items and eight subgroups containing statements on attitude, was used to gather the data. The scale used here was Likert-style, with a range of 5 to 1. Thirteen hundred and thirty-nine Turkish final-year undergraduate nursing students made up the sample for the study. Depending on the validity and reliability of the professionalism assessment tool for nursing students, eight criteria were established. Of the overall variation, these factors explained 65.5% of the variance. The scale's sub-factors had correlations ranging from 0.71 to 0.84. The sub-factors had a Cronbach alpha coefficient ranging from 0.71 to 0.84, while the overall Cronbach alpha value was 0.90. The instrument's validity and homogeneity were assessed using item test correlations, which extended from 0.30 to 0.63. The item was determined to be a valid and reliable evaluation tool that may be utilized to gauge nursing students' attitudes.

Deemer et al. (2011) documented the creation of a tool to measure postgraduate students' insights into faculty members' professional competence. The principal component analysis found 33 items that explained more than 72% of the variation in the information of 5 areas: (a) intercultural competence; (b) clinical supervision; (c) research; (d) professionalism and ethics; and (e) counseling and mentoring. The construct validity of the 5-factor model was confirmed by confirmatory factor analysis. Concurrent validity was demonstrated by the use of multilevel modeling. Findings indicated that many of the individual disparities in counselor and research self-efficacy could be explained by group-level Perceived Faculty Competence Inventory scores. There was discussion on the implications for professional psychological research and training.

Ketis and Vrecko (2014) created and validated a scale for the evaluation of professionalism in medical students. This study, which involved undergraduate medical students, used mixed approaches. Twelve students took part in two focus groups, and then there was a transcript analysis using open coding and the grounded theory approach. Next, a three-round Delphi with twenty specialists in family medicine was conducted. A group of 449 students underwent a psychometric evaluation of the scale. One could respond to the Professionalism Assessment Scale items using a five-point Likert scale. Following the focus groups, the initial PAS version had 56 items; following the Delphi research, there were only 30 things left. 122 students made up the final sample for the quantitative study (response rate: 27.2%). 95 pupils, or 77.9% of the total, were female. The sample's mean age was 22.1 ± 2.1 years. We created the final version of the PAS (22 elements) after removing 8 things using principal component analysis. The scale's Cronbach's alpha was 0.88. Development and responsibility, business relationships, empathy, and humanism were the three components that factor analysis identified. It was found that the new Professionalism Assessment Scale was valid and dependable. It might be applied to the evaluation of medical students' professionalism at the undergraduate level.

Lin et al. (2015) determined the factor construction of the Nurse Practitioners' Roles and Competencies Scale. They examined data from 563 valid questionnaires that were accomplished in three different trials. Additionally, they used varimax orthogonal rotation for principal component analysis extraction to carry out an exploratory factor analysis. The Cronbach's alpha coefficient was used to assess the internal consistency and reliability of the

overall scale as well as its subscales. The six components of the measure were leadership and reform, clinical research, practical advice, direct treatment, professionalism, and medical support. The overall variance in the role competencies of nurse practitioners was explained by these characteristics in 67.5% of cases. The total scale's Cronbach's alpha coefficient was 0.98, whereas the subscales' values varied from 0.83 to 0.97. The Nurse Practitioners' Roles and Competencies Scale had strong construct validity, internal consistency, and reliability. Item response theory should be used to reduce item redundancy, as indicated by the high internal consistency and reliability. This will improve the questionnaire's suitability for use in upcoming academic and clinical studies.

Salloch (2016), stated that medical professionalism serves as a shield for doctors' ethos against outside influences that could jeopardize the integrity of medical practice. However, a defining separation between the professional and ethical parts of a physician's conduct is lacking in contemporary professional discussions. The argument made in this paper was that there was more to this distinction between professionalism and ethics than just academic curiosity. Rather, it was about highly relevant practical matters concerning ethically controversial medical issues. A brief examination of the debates in the social sciences and history demonstrated that professionalism was more than just a slogan in contemporary medical disputes; it had a nuanced theoretical foundation that was still up for debate. Professionalism may have involved negative elements like elitism, monopolies, or the preservation of power and privileges, even while it was associated with the noble goals of serving the individual and society. The professional philosophy of medical doctors must be distinguished from the ethical viewpoint on morally debatable issues, as the latter may adopt a universal stance and be able to evaluate moral standards that are context-specific in a critical manner.

Watts (2016), stated that dental professionalism represented a system of principles, conduct, and interpersonal interactions that supported the public's confidence in dental practitioners. Professionals would differ in the specifics of these values and behaviors, but the evidence-based ideas included adhering to fundamental ethical principles, having effective communication skills, empathy, being honest and punctual, being well-groomed, being driven, being careful and skilled, working in a team, and exercising leadership.

Alcota et al. (2016), stated that several authors, experts, and educational institutions have promoted the subject of professionalism in the dental industry. He emphasized that while professionalism was essential to dentist education, there was no evidence of it in dentistry school curricula across the globe. As a result, the graduates' professionalism in dentistry was lacking. To sensitize the significance of these elements in the education of dental students, he examined the ideas of cross-disciplinary skills, professional values, and the development of professionalism in many domains throughout the dental career in his review paper.

Li et al. (2017) gathered research published between 1990 and 2015 by doing a thorough search, following eligibility screening of complete texts, abstracts, and titles, the publications included in this analysis were categorized based on the instrument used in each case. A two-phase evaluation was carried out: first, the methodological quality was evaluated by referring to the COSMIN checklist, which is a consensus-based standard for the choice of health grade measurement devices; second, Terwee's criteria were utilized to assess the quality of measurement properties. To find instruments that are recommended, the findings were combined using best-evidence synthesis. 74 instruments from 80 previous investigations were included after 2,959 records were screened. These studies' overall methodological quality was subpar for a variety of reasons, such as unclear hypotheses, insufficient sample sizes, and missing data that is unknown. Content validity, cross-cultural validity, and criterion validity were either evaluated poorly or not at all in most studies. Three tools were finally suggested based on best-evidence synthesis.

Alshahrani et al. (2017) tried to know how patients felt about the professionalism that students showed during their clinical rotations. At the King Khalid University College of Dentistry campuses, 215 new patients undergoing comprehensive care and intern clinics were given a self-administered questionnaire. Answers to specific questions about the conduct and communication of the students during the therapy process were requested from them. The majority of students behaved and looked professional, according to the results. However, they needed to put more emphasis on addressing patients' concerns and inquiries about their treatments. It was the responsibility of students and support personnel to ensure that patients signed the informed consent form only after carefully reading it. The results also demonstrated

that only dental students who received training from the start of their curriculum displayed professionalism.

Nguyen et al. (2017) examined the evidence supporting clinical education practice approaches to dentistry professionalism development. Full-text, peer-reviewed studies about dentist practitioners printed in English between 2000 and June 2016 were found by searching pertinent electronic databases. Every research design was covered. Two independent reviewers rated the strength of the evidence after an initial and thorough screening process, and the included publications underwent an independent quality appraisal. After 195 unique papers were obtained by removing duplicates, 34 full-text articles were screened and their eligibility was determined, leading to the evaluation of 15 papers for this study. There were found to be eight distinct clinical education strategies. Based on Kirkpatrick's hierarchy, the majority of research revealed low levels of educational results that were of low quality. The analysis revealed that there was insufficient high-quality evidence to back up any one strategy for raising dental professionalism. In educational studies, low-level outcomes were noted. What was even more frustrating was the lack of a concept for dental professionalism and the inadequate justification of the technique. The study's conclusions were in line with data from other international health professions. An inter-professional strategy could be used to address the problem of creating and then evaluating professionalism.

Uma et al. (2017) evaluated undergraduate dentistry students' professionalism using a hybrid instrument. Purposive sampling was combined with a cross-sectional design. In this study, all final-year undergraduate dental students took part. The assessment of knowledge regarding professionalism was conducted via a written exam. An evaluation of each final-year student's professional conduct in a clinical context was conducted using a multisource feedback (MSF) pre-validated questionnaire. For every student, the MSF and written test scores were computed. To examine knowledge and MSF scores according to the assessor category, the data were evaluated. It was determined whether knowledge scores and MSF were correlated. Student opinions were included while evaluating professionalism. Descriptive statistics were utilized in the statistical analysis. The average knowledge scores and MSF scores were correlated using Pearson's coefficient. Female students had considerably higher knowledge ratings ($P < 0.05$, *t*-test). Physicians gave the students the highest ratings. Pearson's correlation, $P < 0.01$, indicated

a statistically significant association between knowledge and MSF scores. According to input from students, a professional assessment ought to be conducted right away throughout the clinical years. The assessment found a correlation between professional knowledge and professional behavior, suggesting a relationship between knowledge and the justifications for certain actions.

Farah et al. (2017) used the P-MEX and the Emotional Quotient Inventory (EQ-i) 2.0 to evaluate the relationship between EI and professionalism. Their research found a positive association between emotional intelligence and professionalism, highlighting the significance of emotional intelligence in shaping professional behavior. This suggests that enhancing emotional intelligence could potentially improve professionalism among medical students. Additionally, the study discovered that emotional intelligence was crucial in developing effective communication skills and empathy, both of which are essential in providing quality patient care. Therefore, incorporating emotional intelligence training into the medical education curriculum may be beneficial in cultivating well-rounded and competent healthcare professionals. The additional goal of the research was to investigate the associations between the EQ-i 2.0 subscales and the P-MEX. In 2015-16, correlational cohort research was carried out in which dental students completed the EQ-i 2.0 after their second year, just before they started their clinical practice. 49 (74%) of the 66 students in the class were selected at random to take part in the clinic, with a group of roughly 12 students per team. Eight months later, the P-MEX assessments were gathered in three different locations: clinical care seminars, community outreach clinics, and comprehensive care clinics. There was no significant link between the students' P-MEX mean scores and EQ-i 2.0 mean scores. Nonetheless, there was a substantial correlation found between the P-MEX mean scores and the self-actualization and happiness EQ-i 2.0 subscales. Since these results indicated a connection between these students' EI and professionalism, they supported the evaluation and growth of professionalism through multiple triangulations.

Zijlstra et al. (2017) created and verified a method to evaluate the professionalism of dental students based on a previously created conceptual framework. An evaluation program was created with the framework in mind, encouraging students to consider, justify, and provide appropriate feedback for the behaviors they saw in others. After undergoing panel testing, the

curriculum was given to a group of senior dental students. Program usefulness was assessed qualitatively, but internal reliability criteria validity and construct validity were assessed quantitatively. The agreed-upon grades, staff, and student means were equivalent, and there were no floor or ceiling effects. With a Cronbach's alpha of 0.95 and all item-total correlations greater than 0.6, the internal reliability was deemed adequate. Good criterion validity was indicated by the substantial correlations that all items had with global evaluations. Grades had no relationship to age or gender, and all predicted relationships were significant. Three topics emerged from the qualitative data: recommendations for improvement, instructional value, and the assessment procedure. The assessment program indicates that building an evaluation system around a clear theoretical model is a useful teaching tool and has strong internal reliability and validity.

Taibah (2018) surveyed patients to find out what they thought about professionalism. He gave out surveys to dental patients in hospitals and clinics, both private and public. 504 of the forms were included in the analysis. Using a factor analysis, themes and sub-themes were produced. ANOVA tests were used for comparison of means in more than two separate groups, and independent sample t-tests were used to compare two independent groups. Four factors were identified using factor analysis: competence in practice; humanism, commitment, and service-mindedness; managerial abilities and excellence in communication; and the responsibilities and duties of dentists. Patients ranked the following five factors as the most important aspects of dental professionalism: following protocols for sterilization and infection control; maintaining personal cleanliness and dressing in clean professional apparel; having good communication abilities; using the clinical and diagnostic decisions to provide the most effective dental treatment; and making moral decisions and providing moral help. Several demographic variables revealed notable variations in perception. The author concluded that there are certain differences in how dentists and patients view professionalism in dentistry and professional conduct. To guarantee the quality of dental care, these discrepancies need to be taken into consideration. Dental practitioners also need to understand the individual elements that influence how patients view professionalism.

Friedlander et al. (2019) published a study on the 2015 review of the BDS Clinical Practice course and the 2016 introduction of the updated curriculum. The authors offered a learner-

focused BDS curriculum for a clinical practice course that prioritized competency, professional practice, and comprehensive patient-centred care. Along with teacher training, learning opportunities, and assessment procedures, these modifications gave students a framework to help their professional and clinical growth while taking into account their various learning styles. The results matched the competency standards set by the New Zealand dentistry regulatory organization for general practitioner licensing. Feedback from staff and students has been good since the curriculum's launch three years ago, indicating that it was successful in accomplishing its goals. The author claims that the curriculum provided students with a strong foundation for their autonomous clinical practice in the public and helped them transition to the professional growth of clinical instructors. It may also be applied in other areas of health education to ensure the delivery of thorough, high-quality patient care. Additionally, the curriculum's emphasis on professional development could potentially benefit other healthcare disciplines seeking to enhance their clinical teaching skills. By expanding its use beyond dentistry, this curriculum has the potential to completely influence a wider range of healthcare professionals and ultimately increase patient outcomes across various healthcare settings.

Htay et al. (2019) constructed a adapted Medical Students' Professionalism Assessment Scale (MSPAS) for assessing professionalism during history-recording and physical examinations at OSCE stations. This includes dual questionnaires: the MSPAS for History Taking (MSPAS-H) and the MSPAS for Physical Examination (MSPAS-PE). An exploratory factor analysis confirmed the scales' internal consistency, with Cronbach's alpha scores of 0.87 for MSPAS-H and 0.92 for MSPAS-PE. Content validity was established through expert ratings, with all 12 items achieving indices greater than 0.85. Each scale contains six statements for history taking along with six for physical checkup, with factor loadings of 0.5 or above. The scales were designed to be brief and straightforward, facilitating quick completion when simulated patients were properly instructed.

Tanriverdi et al. (2023) constructed the Professionalism Assessment Scale to appraise the attitudes toward professionalism among medical students in Turkish. They also analyzed its validity and reliability. The translation and back-translation of the scale were conducted and piloted on 30 students. Following this, the finalized scale was administered to medical students to establish its validity. Criterion validity was assessed through external validation using the

Professionalism Questionnaire from the Penn State University College of Medicine. Confirmatory factor analysis was conducted to evaluate structural validity. The reliability of the scale was assessed using test-retest methods, item correlations, split-half analysis, and Cronbach's alpha coefficient. The initial version of the scale consisted of 22 items organized into three factors, and this format was maintained throughout the validation process. The scale is practical for evaluating medical students' professionalism attitudes, as it contains a limited number of items and can be completed quickly.

Ho et al. (2023) developed and validated a self-assessment tool for appraising the professionalism of medical students. This questionnaire was based on the ten principles of professionalism outlined in the Professional bodies. To assess construct validity, Principal Component Analysis was accomplished, and Cronbach's alpha was utilized to evaluate internal reliability. In total, 541 individuals participated in the study, but after eliminating incomplete responses, 504 replies were included in the analysis. The PCA resulted in a 17-item survey that comprises a five-component solution called "Medical Professionalism: A Self-assessment Tool" (MPAST). The five components identified in the survey were: (1) dedication to the best interests of the patient, (2) honesty and integrity, (3) professional competence, (4) patient safety and care, and (5) teaching obligations. The overall Cronbach's alpha value for the survey was 0.777, with component values ranging from 0.540 to 0.714. MPAST is recognized as the first valid, reliable, and practical self-assessment measure for evaluating professional traits and behaviors among medical students.

Xin et al. (2024) developed a self-administered scale to assess the professional conduct of medical students. The initial version of the scale was created through Delphi interviews and an extensive literature appraisal on medical professionalism, conducted in both English and Chinese. To confirm the reliability and validity of the scale, analyses were performed using Cronbach's α calculations, Confirmatory Factor Analysis (CFA), and a survey of Chinese medical students. Wilcoxon rank-sum tests were utilized to explore the relationships between professional behaviors and factors such as gender, medical programs, and the duration of clerkships. Initially, a pool of 48 components was created by reviewing 57 medical professionalism assessment instruments from 121 studies. This item pool was subsequently narrowed down to 24 items after 18 experts contributed in two rounds of Delphi interviews to

refine the selection. A total of 492 individuals finished the questionnaire. The final, reliable scale consists of 23 items grouped into six domains: excellence, duty, integrity, communication and collaboration, altruism, and respect.

2.9 Research gap:

In India, there exists a pressing and critical need for a standardized scale specifically designed to evaluate the professionalism of postgraduate dental students. Recognizing this significant gap in the current educational framework, the researcher has undertaken the task of developing a self-administered rating scale. This innovative tool aims to establish baseline values for professionalism among dental doctoral students across the country, acting as an essential foundation for instituting meaningful reforms in teaching methodologies and learning practices within the sphere of dental education. A comprehensive review of the existing literature on this topic reveals a perplexing trend: despite substantial initiatives in other countries to assess professionalism within dental curricula, India significantly lags. Notably, only one major study has been conducted on this subject by Vanishree et al. (2019), which examined the professionalism of Indian dental students through the lens of a professional scale devised by Ketis and Vrecko (2014) for medical students. This solitary effort underscores the need for a more exhaustive exploration of this vital area. Through meticulous analysis, the researcher evaluated a diverse array of methods, measures, subjects, and approaches utilized by several scholars, such as Van Luijk et al. (2010), Cannick et al. (2007), Christie et al. (2007), Garetto and Senour (2006), Chamberlain et al. (2005), Kalwitzki (2005), Hottel and Hardigan (2005), Christie et al. (2003), Röding (2001), Ryding and Murphy (1999), Gleber (1995), Bebeau and Thoma (1994), Bebeau (1985), and Bebeau et al. (1985). These studies collectively highlight the existence of foreign scales that probe into the complex dimensions of professionalism. However, the literature review reveals a glaring deficiency in research that specifically focuses on Indian dental students, underscoring the urgent need to develop localized evaluation frameworks. It is imperative to conduct a thorough assessment of dental professionalism among postgraduate students in India, addressing the critical demand for tailored evaluation methods that reflect the unique cultural, social, and professional landscape of the nation. Consequently, the development of an indigenous professional assessment scale is not just beneficial but essential. This scale must incorporate insights from a diverse array of stakeholders, including patients, dental experts, faculty members, and students themselves, tapping into the rich

tapestry of experiences and perspectives they offer. To date, no research has specifically targeted postgraduate dentistry students in a manner that integrates all four crucial domains of professionalism: societal, personal, professional, and ethical. Therefore, the researcher is dedicated to the creation of a holistic scale that encompasses these vital dimensions. By doing so, the aim is to gather preliminary data that accurately reflects the current state of professionalism among postgraduate dental students in India, thereby paving the way for enhanced educational practices and improved outcomes in the field.

2.10 The Implications of a Review of Related Literature

The investigator conducted a wide-ranging literature review, which provided valuable insights from previous work. Hodges' 2019 Recommendations for Research on the Assessment of Professionalism offered a substantial understanding of assessing professionalism. The information provided by Mook et al. in 2009 was also helpful, and the scale was developed by keeping all those points in mind. The 2019 classification by Wilkinson et al. offers a detailed understanding of the different themes and subthemes associated with professionalism. Their interpretation of professionalism from definitions helps them gain in-depth knowledge of the subject matter. The study conducted by Ketis and Vrecko in 2014 on the professionalism assessment scale for the medical field, as well as the dental scale for professionalism by Zijlstra et al. in 2005, the dental values scale by Langille in 2010, and the nursing professional value scale by Weis in 2000, were all useful for the present research work. The research gained insight into various themes and subthemes about professionalism in healthcare systems in the literature.

Htay et al. (2019), Tanriverdi et al. (2023), Ho et al. (2023), and Xin et al. (2024) have recently emphasized the importance of limiting survey questions to a range of 17 to 23. They advocate for keeping these questions simple and straightforward to ensure that respondents can complete them quickly.

The researcher gained detailed knowledge about the tool preparation and standardization processes. Reliability and validity are essential factors when it comes to measuring the effectiveness of any given scale. However, in many studies, these factors must be mentioned or briefly addressed in a limited capacity. This is why researchers must deeply explore previous literature research to ensure that proper methodology and standardization are followed to guarantee the dependability and validity of the upcoming scale.

The researcher gained insight into gaps in the literature, scale preparation and standardization, sample selection, and research methodology from reviews of related literature studies. The chapter also explores the various assessment methods used to evaluate professionalism in dental education, such as self-assessment surveys, peer assessment, and faculty evaluation. However, these tools have limitations in terms of validity and reliability, and it is essential to develop more reliable methods for assessing professionalism in dentistry.

In any research, a crucial element is presenting an all-inclusive review of related literature. The review is divided into various sections, including recommendations for research on assessing professionalism, guidelines for evaluating professionalism, a classification of domains and constructs that arise from definitions of professionalism, and assessment tools for measuring professionalism. It is crucial to emphasize the significance of examining and evaluating the current literature, research studies, and other pertinent sources to detect deficiencies in knowledge, establish a theoretical structure, and provide background information for the research issue. The literature review concludes that there is an urgent need for a reliable and valid scale to measure professionalism among postgraduate dental students in India. This study aims to bridge this gap in the literature by standardizing a new scale that could identify improvement areas and enhance dental students' professionalism. This will add to the existing literature on professionalism in dental education and provide a tool that could be used to improve dental education and training programs. Overall, this review of related literature provides valuable insights into professionalism in dental education, the challenges associated with assessing it, and the need for a comprehensive and reliable assessment tool.

In conclusion, the chapter broadly explains professionalism and its importance in dental education. It emphasizes the need to develop reliable methods for assessing professionalism and the critical role of professionalism in upholding public trust and confidence in the dental field. The section offers a foundation for the subsequent chapters, focusing on developing and implementing a scale for assessing professionalism among dental students.