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## The importance of compassionate care

A importância do cuidado humanizado na Odontologia

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### ABSTRACT

Recently, studies have highlighted the importance of compassionate care in healthcare. Not only does it improve patient outcomes and satisfaction, but it also improves the healthcare providers' overall well-being. Furthermore, it helps streamline the healthcare system by shortening hospital stays and rates of readmittance. Unfortunately, patients report that they feel there is a lack of compassionate care provided to them, thus shedding light on the compassion crisis. The compassion crisis seems to have its roots in healthcare professional education, as evidenced by the high levels of burnout experienced by students, particularly in dental students. Compassion training, however, not only equips healthcare professionals with strategies to more effectively treat their patients, but also with coping mechanisms to better handle the stressors of their profession. Dentistry is no exception and has some unique barriers to care as well such as communication, the physical barrier during treatment. This further highlights the importance of compassionate care while providing treatment. Implementing compassionate care to be taught in school will improve patient outcomes and provider well-being.

### KEYWORDS

Empathy; Delivery of healthcare; Dental education; Compassion; Compassionate care.

### RESUMO

Recentemente, estudos destacaram a importância da empatia na área da saúde. A empatia não só melhora resultados e satisfação do paciente, mas também melhora o bem-estar dos profissionais de saúde. Além disso, ajuda a diminuir o custo do sistema de saúde ao reduzir as internações hospitalares e as taxas de reinternação. Infelizmente, os pacientes relatam que sentem falta de empatia, levando a uma atual crise de falta de empatia nos serviços de saúde. A crise da falta de empatia parece ter suas raízes na formação dos profissionais de saúde, como evidenciado pelos altos níveis de burnout experimentados pelos alunos, principalmente em estudantes de Odontologia. Treinamento para empatia, no entanto, não apenas prepara os profissionais de saúde com estratégias para tratar de forma mais eficaz seus pacientes, mas também com mecanismos de enfrentamento para lidar melhor com os fatores de estresse da profissão. A Odontologia não é exceção e tem algumas barreiras específicas, como a comunicação, que fica comprometida durante o tratamento odontológico. Isso destaca ainda mais a importância da empatia durante o tratamento. Ensinar empatia nos cursos de Odontologia melhorará os resultados para os pacientes e o bem-estar dos profissionais.

### PALAVRAS-CHAVE

Empatia; Cuidados de saúde; Ensino odontológico; Compaixão; Empatia; Cuidado humanizado.

## INTRODUCTION

In recent years, there has been a strong initiative in the healthcare field for providers to adopt more patient-centered approaches toward care. Compassionate care is an imperative aspect of doctor-patient interactions as it helps build relationships in which the patients are more comfortable sharing their feelings, concerns, and symptoms [1,2]. In turn, this aids healthcare providers in, diagnosing and treating patients more effectively and efficiently [2]. Studies suggest that patients are more compliant with their treatment, thus experiencing better health outcomes and report higher satisfaction in their experience when they perceive their doctors as being compassionate [2,3]. Interestingly, patients who receive compassionate care experience quicker recoveries and are less likely to be readmitted to the hospital [4]. Thus, compassionate care not only improves patient outcomes, but it also improves the overarching healthcare system as it saves time and resources for other patients.

Physician burnout is a preeminent obstacle in the healthcare field. Indeed, greater than half of US physicians experience burnout, which negatively impacts the quality of care that they are able to provide their patients [5]. Fortunately, training providers in compassionate care benefits both the provider and the patient; it functions as a coping strategy for providers, thus allowing them to improve their patient care [6,7].

Unfortunately, compassion skills seem to be lacking among healthcare profession students. As healthcare students enter their clinical training years, there is a marked downturn in their compassion levels, which may be due to burnout [8,9]. Furthermore, this lack of compassion persists throughout students' education [8]. This begets a reduction in the quality of care that students provide to their patients [2]. In dentistry, specifically, patients describe feelings of dehumanization when being treated by their student doctors [10]. The authors hypothesized that this is due to the requirement-driven environment created by dental schools that does not easily allow for students to view their patients holistically [10]. Therefore, it seems to be important that healthcare professional students receive appropriate and intentional compassion training.

Compassionate care is an essential component of patient outcomes. Moreover, it benefits provider's mental health, and thus their ability to provide quality care, as well as the healthcare system itself. Notwithstanding, healthcare professional students are lacking compassion skills; and compassionate training should be provided to these students. This review highlights the importance of compassionate care for health professions, especially in dental education.

## WHY COMPASSIONATE CARE IS IMPORTANT

Compassionate or patient-centered care is an essential aspect to providing quality care to patients. It advocates for individualized medical treatment for each patient and promotes a pragmatic relationship between the physician and patient [1]. The doctor-patient relationship is intrinsic to successful treatment as it bolsters trust, a key component to patient compliance and satisfaction [11]. In fact, patients receiving compassionate care report higher levels of satisfaction with their treatment, as well as more improvements in their medical condition [1]. Hence, it is paramount for physicians to provide compassionate care to their patients.

Dentistry is a unique field of healthcare as it can feel invasive for the patient due to the nature of the profession. During many procedures, patients are unable to verbally express themselves, thus eliciting the importance of a robust, trusting relationship between the doctor and the patient [12]. A practical way to achieve such vigorous doctor-patient relationships is through compassionate care. By providing compassionate care, dentists are able to reduce dental anxiety and even improve treatment outcomes [9]. Accordingly, special care should be supplied to dental providers so they are able to best serve their patients.

## COMPASSION vs EMPATHY

Compassion and empathy are intertwined entities that are used as a means of providing patients with more therapeutic care. Empathy refers to awareness of other people's emotions whereas compassion is an emotional response to empathy that generates an eagerness to help [4,13]. Additionally, empathy and compassion stimulate

different pathways of the brain; empathy activates pain-related neural networks while compassion activates brain pathways for dopaminergic reward pathways [6]. This links empathy with negative states and distress whereas compassion is associated with positive feelings of warmth and concern for the patient [6]. Consequently, there is evidence of empathy precipitating burnout amongst physicians as it can exhaust the emotions of the physician if there are not appropriate coping mechanisms. In contrast, encouraging positive emotions, even when in adverse situations, is a key aspect of compassion that explains why compassion is not associated with physician burnout [7]. Although they are similar concepts, compassion and empathy affect the physician, and consequently the care they provide, differently.

## COMPASSION CRISIS AND ITS CAUSES

The compassion crisis describes the current view of the healthcare system and its providers. At present, the patients of the American healthcare system often report not being treated compassionately by their doctors, and consequently, are not satisfied with their care [4]. Many patients have noted feeling as though their doctors spend more time looking at the computer than they do caring for them [14]. Meanwhile, doctors report not having time to implement compassionate care as the current healthcare system is not conducive to it, thus they provide more problem-focused care rather than patient-centered care [15,16]. However, studies have shown that providing compassionate care can take less than a minute [17]. Alas, the compassion crisis is deeper seated than the amount of time the physician has to treat their patients.

There is a notable decline in compassion that starts during health care professional education and clinical years. Although many professionals enter the healthcare field as a means to help and care for people, there has been a radical decline in compassion in the last decades [10]. Unfortunately, some evidence suggests that as healthcare students progress through their education, there is a downtrend in their compassion levels [10]. Furthermore, this decline in compassion coincides with the timing of students entering their clinical training years [8,9]. In just a matter of months, student doctors' attitudes shift from eager

and compassionate to depressed and burnt out [8,18]. These feelings persist throughout the trainee's education and might be related to sleep deprivation and the lack of a healthy workplace [5,8]. This elicits the prevalence of burnout in the medical field.

Communication skills also factor into the compassion crisis. Various studies have reported that there is a lack of standardization in terms of training healthcare professionals on how to communicate with their patients [4]. Consequently, doctors miss nuances regarding the health status of the patient as they are concentrating on problem-focused care rather than patient-centered care [4,15]. Further, physicians often interrupt patients, effectively shutting down the conversation and limiting the amount of information that can be derived from the patient [4]. In doing so, diagnoses may be overlooked, highlighting the gravity of effective communication skills.

The compassion crisis presents a unique challenge in dentistry. Dental anxiety is a fairly prevalent condition that affects roughly 36% of the US population and can have detrimental effects on a person's oral health [19]. Therefore, it is necessary for dentists to provide patients with compassion as a means of building trust in such a way that levels of anxiety may be lessened [20-22]. However, there is a noteworthy devolution in compassion in dental students as they reach their clinical training years [9]. This decline is particularly damaging to patients as they report feelings of dehumanization [10]. Thus, the compassion crisis urgently needs to be addressed in dental education.

## HOW COMPASSION CAN IMPROVE PATIENT OUTCOMES, COMPLIANCE, AND SATISFACTION

Compassionate care has many benefits at the patient level. Patients who are provided with compassionate care build better rapport with their healthcare providers, and consequently, are more willing to trust and work with them throughout treatment [2]. As a result, patients experience better outcomes such as less severity of illness, shorter recovery times, and increased satisfaction with their care [23]. Providing patients with compassionate care is an effective method of improving the health of patients.

Compassionate care positively influences patient outcomes. The emotional status of patients influences their existing disease, as well as their recovery time [24]. Patients who experience compassionate care report more extensively about their symptoms and concerns, thus allowing physicians to more accurately diagnose and treat patients [2,25]. Accordingly, patients receiving compassionate care experienced less severe and shorter duration of their illness [23]. Indeed, patients provided with compassionate care had more of their needs met and thus averaged hospital stays two days shorter than patients who did not experience compassionate care [24]. Thus, compassionate care is remarkably important for improving patient experiences.

Patients suffering from anxiety are associated with slower recovery time and greater postoperative pain. Using patient-centered care strategies that allow the patients to express their concerns, and doctors to tailor information to the patients' needs, has been shown to be the most effective way to reduce anxiety in patients [26]. In such cases, there is a distinguished decrease in medical interventions such as sedative prescriptions and medical complications [26]. This elicits the function of compassionate care as a means for doctors and patients to more effectively communicate.

Compassionate care motivates patients to be more involved in their health. Patient centered care encourages patients to share more about their current health status, allowing doctors to more effectively diagnose and treat the patient [2,25]. When doctors foster a relationship with their patients, patients participate more heavily, with increased compliance, in their treatment [2]. In pediatric dentistry patients, fewer disruptive behaviors were exhibited when the dentist employed compassionate care [9]. Interestingly, these methods improved patient compliance and home care in orthodontic treatment [9]. Patients are encouraged to participate more in their healthcare when treated with compassionate care.

Compassionate care strategies promote a safe, productive environment for patients to share their feelings and concerns. Appropriately, patients receive individualized care that prompts patient compliance to treatment, and thus, better health outcomes [3]. As a result, there is a substantial increase in patient satisfaction [3]. Not only do patients recover and heal faster, but

they also feel as though their doctor listened to them. By helping patients feel more relaxed and comfortable with their dental treatment, there is a notable improvement in patient satisfaction [3]. By taking the time to address patient fears, significant changes in patient compliance to treatment plans are observed, which results in more positive treatment outcomes [3]. Implementing compassionate care in dentistry can reduce dental anxiety, while also improving satisfaction.

## **HOW COMPASSION CAN IMPROVE PROVIDER WELLBEING**

Burnout is a common problem amongst healthcare professionals. More than half of physicians in the United States experience burnout, which impacts the quality of care that they are able to provide to their patients [5]. Burnout often stems from the considerable weight of negative emotions shared by patients [6,7]. Without proper coping mechanisms, this can severely affect how physicians provide care to their patients.

Compassionate care training is a means of coaching healthcare providers to develop interpersonal relationships with their patients. Objectively, the primary intention of this training is to better meet the needs of patients, but compassion training is also beneficial for healthcare providers as it functions as a coping strategy to cultivate emotional health and resilience [7]. The Cleveland Clinic, a major hospital system, developed "Code Lavender" as a means of providing care to stressed healthcare staff in need of emotional support [27]. This support system positively connects healthcare providers to the hospital and, in turn, makes them more likely to employ compassionate care strategies [27]. Studies show that compassionately supported healthcare providers felt they were more effectively and accurately able to detect and respond to patients' suffering [2,27]. Thus, providing healthcare professionals with the tools necessary to cope with the stresses of their job benefits both the provider and the patient.

## **HOW COMPASSION CAN IMPROVE THE HEALTHCARE SYSTEM**

Compassionate care improves both patient and provider well-being, but it also affects the

healthcare system as a whole. While it is often argued that the healthcare system has neither the time nor the resources to take on the emotional status of patients, it may be just the opposite as patients who are provided with compassionate care recover faster, experience shorter hospital stays, and are less likely to be readmitted to the hospital [4,24]. This, in turn, saves the hospital time and resources.

## COMPASSIONATE CARE IN DENTAL EDUCATION

It has been shown that students who enter dental school show a higher level of empathy towards their patients than medical students [9]. However, this has been shown to drop as the student enters the clinical phases of their education, which is then in line with the lack of empathy shown in the medical students. Of concern, is why would students do not show empathy to their patients. One suggestion is that dental school is “requirement” based, so students set off to fill “requirements.” (i.e. Did I work on a crown? A filling? A root canal?) Having to focus on a check mark next to a requirement to graduate, would have them chasing “cases” rather than serving patient needs.

There has been very little research in the areas of patient empathy in dental schools (and hence dentistry in general). It is more usual for people to avoid going to the dentist than going to a doctor. It is very difficult to convince adults to come in for preventative care, let alone maintenance or remedial work. Physically, the invasion of the personal space (oral cavity) of the patient is a very intimate “face to face” encounter. It is imperative that the patient is able to trust this stranger who is nose to nose with them [10]. Knowing this, it would seem imperative that the dentist go out of his/her way to make sure the patient is welcomed, feels they are valued as an individual, and that their concerns are addressed with empathy and compassion. Any time options are available for treatment, the dentist should outline all possibilities, and working together with the patient, let the patient know they have control over the situation, and that the dentist is for them, not against them.

Some strategies that can be implemented to teach compassionate care during the dental education coursework would be adding

role modeling training to faculty members, standardized patient actors, poverty/disability simulation clinics, and implementation of evidence-based strategies in which the patient-centered component is emphasized. However, these initiatives should be vertically and horizontally integrated in the curriculum and have a systematic approach to intentionally teach compassionate care across the multiple departments/disciplines. This would result in better communication skills and help to reduce dental student burnout. Burnout is higher in dental students than in medical students. It has been suggested this is because medical school standards recommend the teaching of compassionate and empathetic care. Contrariwise, dental schools usually do not have an intentional approach to teach these topics, leaving it to (sporadic) role modeling. The measurements used in medical schools could be modeled in dental school [9]. The American Dental Education Association recommends empathic care for all patients as its second clinical competency.

One study found that faculty members had higher levels of empathy than their students [28]. Perhaps maturity factors into empathy toward others. Student burnout, and anxiety makes students self-focused rather than patient-focused. Thus making faculty members aware of this and having it worked into discussions (and modeled through empathic, compassionate communications between faculty members and students) throughout the coursework, could go a long way to having this issue worked out before clinical work begins.

## COMMUNICATION - MAKE SURE IT'S INTEGRATED: WHAT YOU COMMUNICATE IS WHAT YOUR PATIENT PERCEIVES

Communication skills are seen as the weakest aspect of contemporary dentistry. The unique nature of dentistry that requires the patient to be silent so the dentist can work, sets up a physical barrier to good communication between patient and dentist. With verbal communication difficult, non-verbal communication is imperative, and it goes both ways. A lack of good dentist-patient communication has been historically marked as a source of anxiety for the patient, and it results in occupational stress for the dentist. These adverse issues of communication and trust must

be addressed in the dental profession [12]. As far as both preventative and remedial dentistry goes, it has been indicated that good communication between dentist and patient increases patient compliance, while poor communication decreases compliance. These unique factors require that dental professionals learn to strengthen their communication skills, both non-verbal and verbal.

The result of deficits in verbal and non-verbal communication between dentist and patient can lead to a lack of empathy, either real or perceived, because of communication misunderstandings. Empathic communication is therefore crucial in dentistry and crucial for dental students. Beattie et al. [29] found that “female students have been shown to be inherently more emotionally expressive and sensitive, which has been correlated with better communication skills.” It would be assumed that clinicians who are able to communicate empathy and compassion towards their patients would see improved patient health outcomes. This could be tracked when dentists see outcomes of better patient diagnostic accuracy, increased patient satisfaction and cooperation.

Negative empathic communication results in patients who are more dissatisfied with their interactions with their practitioners, and more likely to be fault finding. It has been shown in medical studies, that those who exhibit negative communication with their patients are much more likely to be sued than those who have positive patient interactions [30]. If the patient feels they are “invisible” or just a “number” or a “paycheck” they will not believe that their provider cares about them. The opposite happens when somebody looks them in the eyes and asks them questions about themselves, or if the dentist arrives late, he/she apologizes and acknowledges that the patient’s time is important. These types of things could be discussed and practiced between dental students in a controlled setting with standardized patient actors. Striving to match more outgoing students with more reserved students may also be a good start to producing dentists who have better empathic communication skills in clinic work.

## FINAL CONSIDERATIONS

Compassionate care is imperative for achieving excellence in health care, as it improves patient outcomes, provider well-being and optimizes health care system resources, offering

better health results to society. Dentistry is no exception, and dental education needs to focus on finding the appropriate strategies to intentionally teach compassionate care skills to the future workforce. Incorporating compassionate care into dental education is crucial to ensuring dental professionals are able to deliver proper empathic care. Starting this dialogue and training in dental education will drastically improve patient outcomes and provider-well being earlier which may reduce burnout further down the road. Compassionate care is imperative to dental education and the success of rising dental professionals, not only for better patient outcome, but also for better provider well-being. Compassionate care is a necessity for obtaining excellence in healthcare.

## Author’s Contributions

RL, MG, LM: Data collection, analysis, drafting the manuscript, revising and approving final version.

## Conflict of Interest

The authors have no proprietary, financial, or other personal interest of any nature or kind in any product, service, and/or company that is presented in this article.

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## REFERENCES

1. Beach MC, Keruly J, Moore RD. Is the quality of the patient-provider relationship associated with better adherence and health outcomes for patients with HIV? *J Gen Intern Med.* 2006;21(6):661-5. <http://dx.doi.org/10.1111/j.1525-1497.2006.00399.x>. PMID:16808754.
2. Neumann M, Edelhauser F, Tauschel D, Fischer MR, Wirtz M, Woopen C, et al. Empathy decline and its reasons: a systematic review of studies with medical students and residents. *Acad Med.* 2011;86(8):996-1009. <http://dx.doi.org/10.1097/ACM.0b013e318221e615>. PMID:21670661.
3. Dambha-Miller H, Feldman AL, Kinmonth AL, Griffin SJ. Association between primary care practitioner empathy and risk of cardiovascular events and all-cause mortality among patients with type 2 Diabetes: a population-based prospective

- cohort study. *Ann Fam Med*. 2019;17(4):311-8. <http://dx.doi.org/10.1370/afm.2421>. PMID:31285208.
4. Lown BA, Rosen J, Marttila J. An agenda for improving compassionate care: a survey shows about half of patients say such care is missing. *Health Aff (Millwood)*. 2011;30(9):1772-8. <http://dx.doi.org/10.1377/hlthaff.2011.0539>. PMID:21900669.
  5. Shanafelt TD, West C, Zhao X, Novotny P, Kolars J, Habermann T, et al. Relationship between increased personal well-being and enhanced empathy among internal medicine residents. *J Gen Intern Med*. 2005;20(7):559-64. <http://dx.doi.org/10.1007/s11606-005-0102-8>. PMID:16050855.
  6. Klimecki OM, Leiberg S, Ricard M, Singer T. Differential pattern of functional brain plasticity after compassion and empathy training. *Soc Cogn Affect Neurosci*. 2014;9(6):873-9. <http://dx.doi.org/10.1093/scan/nst060>. PMID:23576808.
  7. Klimecki OM, Leiberg S, Lamm C, Singer T. Functional neural plasticity and associated changes in positive affect after compassion training. *Cereb Cortex*. 2013;23(7):1552-61. <http://dx.doi.org/10.1093/cercor/bhs142>.
  8. Bellini LM, Baime M, Shea JA. Variation of mood and empathy during internship. *JAMA*. 2002;287(23):3143-6. <http://dx.doi.org/10.1001/jama.287.23.3143>. PMID:12069680.
  9. Sherman JJ, Cramer A. Measurement of changes in empathy during dental school. *J Dent Educ*. 2005;69(3):338-45. <http://dx.doi.org/10.1002/j.0022-0337.2005.69.3.tb03920.x>. PMID:15749944.
  10. Hoskin E, Woodmansey K, Beck L, Rodriguez T. Dental Students' perceptions of dentist-patient interactions: an exploration of empathy in dental students. *Strides Dev Med Educ*. 2017;15(1):1-6. <http://dx.doi.org/10.5812/sdme.65124>.
  11. Kerse N, Buetow S, Mainous AG 3rd, Young G, Coster G, Arroll B. Physician-patient relationship and medication compliance: a primary care investigation. *Ann Fam Med*. 2004;2(5):455-61. <http://dx.doi.org/10.1370/afm.139>. PMID:15506581.
  12. Jones LM, Huggins TJ. Empathy in the dentist-patient relationship: review and application. *N Z Dent J*. 2014;110(3):98-104. PMID:25265748.
  13. Hojat M, Gonnella JS. Eleven years of data on the Jefferson Scale of Empathy-Medical Student Version (JSE-S): proxy norm data and tentative cutoff scores. *Med Princ Pract*. 2015;24:344-50. <https://doi.org/10.1159/000381954>.
  14. Tai-Seale M, Olson CW, Li J, Chan AS, Morikawa C, Durbin M, et al. Electronic health record logs indicate that physicians split time evenly between seeing patients and desktop medicine. *Health Aff (Millwood)*. 2017;36(4):655-62. <http://dx.doi.org/10.1377/hlthaff.2016.0811>. PMID:28373331.
  15. Levinson W, Gorawara-Bhat R, Lamb J. A study of patient clues and physician responses in primary care and surgical settings. *JAMA*. 2000;284(8):1021-7. <http://dx.doi.org/10.1001/jama.284.8.1021>. PMID:10944650.
  16. Sinsky C, Colligan L, Li L, Prgomet M, Reynolds S, Goeders L, et al. Allocation of physician time in ambulatory practice: a time and motion study in 4 specialties. *Ann Intern Med*. 2016;165(11):753-60. <http://dx.doi.org/10.7326/M16-0961>. PMID:27595430.
  17. Fogarty LA, Curbow BA, Wingard JR, McDonnell K, Somerfield MR. Can 40 seconds of compassion reduce patient anxiety? *J Clin Oncol*. 1999;17(1):371-9. <http://dx.doi.org/10.1200/JCO.1999.17.1.371>. PMID:10458256.
  18. Prinz P, Hertrich K, Hirschfelder U, de Zwaan M. Burnout, depression and depersonalisation—psychological factors and coping strategies in dental and medical students. *GMS Z Med Ausbild*. 2012;29(1):Doc10. <http://dx.doi.org/10.3205/zma000780>. PMID:22403595.
  19. Hill KB, Chadwick B, Freeman R, O'Sullivan I, Murray JJ. Adult Dental Health Survey 2009: relationships between dental attendance patterns, oral health behaviour and the current barriers to dental care. *Br Dent J*. 2013;214(1):25-32. <http://dx.doi.org/10.1038/sj.bdj.2012.1176>. PMID:23306496.
  20. Beaton L, Freeman R, Humphris G. Why are people afraid of the dentist? Observations and explanations. Medical principles and practice : international journal of the Kuwait University. Health Science Centre. 2014;23(4):295-301.
  21. Marchini L, Ettinger RL. COVID-19 and Geriatric Dentistry: what will be the new-normal? *Braz Dent Sci*. 2020;23(2 Suppl 2):1-7. <https://dx.doi.org/10.14295/bds.2020.v23i2.2226>.
  22. Franco JB, Ribas PF, Valente LAS Jr, Matias DT, Varotto BLR, Hamza CR, et al. Hospital Dentistry and dental care for patients with special needs: dental approach during COVID-19 pandemic. *Braz Dent Sci*. 2020;23(2 Suppl 2):1-9. <https://dx.doi.org/10.14295/bds.2020.v23i2.2243>.
  23. Rakel DP, Hoelt TJ, Barrett BP, Chewing BA, Craig BM, Niu M. Practitioner empathy and the duration of the common cold. *Fam Med*. 2009;41(7):494-501. PMID:19582635.
  24. Mumford E, Schlesinger HJ, Glass GV. The effect of psychological intervention on recovery from surgery and heart attacks: an analysis of the literature. *Am J Public Health*. 1982;72(2):141-51. <http://dx.doi.org/10.2105/AJPH.72.2.141>. PMID:7055315.
  25. Singh Ospina N, Phillips KA, Rodriguez-Gutierrez R, Castaneda-Guarderas A, Gionfriddo MR, Branda ME, et al. Eliciting the Patient's Agenda- Secondary analysis of recorded clinical encounters. *J Gen Intern Med*. 2019;34(1):36-40. <http://dx.doi.org/10.1007/s11606-018-4540-5>. PMID:29968051.
  26. Pereira L, Figueiredo-Braga M, Carvalho IP. Preoperative anxiety in ambulatory surgery: the impact of an empathic patient-centered approach on psychological and clinical outcomes. *Patient Educ Couns*. 2016;99(5):733-8. <http://dx.doi.org/10.1016/j.pec.2015.11.016>. PMID:26654958.
  27. McClelland LE, Vogus TJ. Compassion practices and HCAHPS: does rewarding and supporting workplace compassion influence patient perceptions? *Health Serv Res*. 2014;49(5):1670-83. <http://dx.doi.org/10.1111/1475-6773.12186>. PMID:24837713.
  28. Carvajal M, Lopez S, Sarabia-Alvarez P, Fontealba J, Padilla M, Sumi J, et al. Empathy levels of dental faculty and students: a survey study at an Academic Dental Institution in Chile. *J Dent Educ*. 2019;83(10):1134-41. <http://dx.doi.org/10.21815/JDE.019.124>. PMID:31235504.
  29. Beattie A, Durham J, Harvey J, Steele J, McHanwell S. Does empathy change in first-year dental students? *Eur J Dent Educ*. 2012;16(1):e111-6. <http://dx.doi.org/10.1111/j.1600-0579.2011.00683.x>. PMID:22251333.
  30. Moore PJ, Adler NE, Robertson PA. Medical malpractice: the effect of doctor-patient relations on medical patient perceptions and malpractice intentions. *West J Med*. 2000;173(4):244-50. <http://dx.doi.org/10.1136/ewj.173.4.244>. PMID:11017984.

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