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MEDICAL EDUCATION: PEER-REVIEWED ARTICLE

Using Music to Teach Health Professions Students to Listen Closely and Promote Peace

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Abstract

Promoting peace with patients requires clinicians to be skilled in helping patients feel safe, respected, and heard. Close listening is a teachable skill set that enables clinicians to focus sensory attention on a patient and to cultivate space for reflection before speaking. While communication skills are taught in health professions education, close listening is rarely formally emphasized as an equally important skill. This article draws on musical arts education methods to suggest strategies for teaching close listening that can be applied to peace promotion in patient care.

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Not every patient can be saved, but his illness may be eased by the way the doctor responds to him.
Anatole Broyard[1]

Clinical Close Listening

To provide patient-centered care, enhance patient dignity, and relieve patient suffering, physicians must promote peaceful health care environments where patients feel heard and understood by those caring for them.[2] Fostering such peaceful environments starts foremost with physicians listening to their patients. Nevertheless, while 87% of physicians self-identify as "good listeners,"[3] studies demonstrate that physicians ask for their patients' agendas only 36% of the time, and, when they do inquire, they interrupt their patients after a median of 11 seconds or an average of 36 seconds.[4,5] It is thus no surprise that consumer websites, such as Healthgrades and WebMD, abound with criticisms of physicians' deficiencies in communication skills, with patients often perceiving their physician as "too busy to listen and too distant to care."[6] While many systemic reasons—from insurance pressures to hospital schedules—can affect patients' perceptions of physician listening, we need to ask whether physicians are actually taught to be good listeners in the first place.

According to patients, physician listening is a defining feature of a "good" doctor that is perceived not only (1) to increase data gathering and diagnostic accuracy but also (2) to

create and maintain good patient-physician relationships and (3) act as a healing and therapeutic agent in itself.[7] Physician listening skills—such as the use of reflective listening, wherein physicians restate a patient's comment in order to demonstrate empathy and ensure shared understanding—have been shown to be correlated with patient feelings of physician-supported autonomy,[8] as well as medication adherence in diabetic patients.[9] Moreover, a curricular review of physician empathy training found that the physician skills and behaviors that elicited an increase in patient-perceived compassion included "(1) sitting (versus standing) during the interview; (2) detecting patients' non-verbal cues of emotion; (3) recognizing and responding to opportunities for compassion; (4) non-verbal communication of caring (e.g. eye contact); and (5) verbal statements of acknowledgement, validation, and support."[10] Interestingly, the review's authors also highlighted that all the empathy trainings included in their review had considered the role of listening in developing the aforementioned skills and behaviors, with the authors explicitly noting the need for future curricula to focus on educating physicians on the particular importance of listening.[10] Given the key role that listening plays in patient-perceived compassion and the significant correlation between patient-perceived empathy and greater patient satisfaction, strengthened patient enablement, decreased thoughts of litigation, lower patient anxiety and distress levels, and better clinical outcomes for diabetes,[11,12,13] improving physician "close listening" skills seems a promising approach to amplifying peaceful patient experiences.

Close Listening Skills in Medical Education

According to the Association of American Medical Colleges (AAMC), oral communication skills, including listening skills, are considered requisite professional competencies for admission to medical school.[14] Once admitted, however, listening skills are not explicitly tested or routinely taught to medical students. While sincere efforts have been made to instruct and assess listening skills in medical education, a 2020 review found that historical teaching methods employed to improve the listening competence of medical students, such as standardized patient encounters or objective structured clinical examinations, placed little emphasis on specific listening skills, were insufficiently standardized, and would benefit from medical educators' increased collaboration with specialists from other fields, such as the arts and humanities.[15,16]

At the same time, as acknowledged by the 2020 AAMC report, "The Fundamental Role of the Arts and Humanities in Medical Education" (FRAHME), the arts and humanities have been explicitly called upon to develop medical student skills and attitudes.[17] The most common arts and humanities approaches have dealt with "close reading" pedagogies, such as narrative medicine, and "close looking" pedagogies, such as Artful Thinking or Visual Thinking Strategies. In fact, 71% of the arts and humanities modalities used in medical education to date have been from visual art, literature, or writing-related categories, while the musical arts have composed just 3% of modalities used.[18] Nevertheless, while arts and humanities medical education curricula related to close looking and close reading skills have been widely developed and implemented, no such standardized curriculum yet exists in medical education for the teaching of close listening skills.[19]

This imbalance is perhaps unsurprising, given that both close reading and close looking pedagogies have been shown to be teachable concepts, with reviews demonstrating that close looking education can facilitate the development of clinical observational skills, while close reading education can result in the modification of skills, attitudes, and knowledge.[20,21] Notably, claims have been made regarding the transferability of

close reading skills to close listening skills via improved quality of perceptive attention.[22] However, these claims have been problematized for conflating orality with literacy, as literary close reading skills are distinct from the dynamic, oral close listening skills required during real-time, interactive physician-patient encounters.[23]

Given the documented need for greater physician listening skill training, the lack of a standardized close listening curriculum for medical education, the novel AAMC curricular recommendations contained in the FRAHME report, the musical arts' gross underrepresentation in medical education, and the musical arts' refined, professional approach to close listening, we propose a new approach to teaching listening in medical education. The musical arts can be uniquely leveraged to train medical students as close-listening peacemakers in health care by fostering the skillful formation of medical student motivations, behaviors, speech acts, and responses to high-stakes tension and conflict. In turn, these attitudes and skills can promote the consequential peace of mind and body that patients and doctors alike feel when they are being heard.

Teaching Close Listening

The historical connection between music and medicine has been long established: Apollo was the god of healing and music; and it was to Apollo that Hippocrates dedicated his exalted oath, asserting "there is art to medicine as well as science."[24] This connection between art and medicine resonates today, as it is estimated that at least 70% of medical students have received some musical training,[25] which might be reflected in the prevalence of choirs, a cappella groups, small instrumental ensembles, and musical theater programs in medical schools.[19]

In fact, limited evidence suggests that students with a music education who enter medical school might outperform their peers in certain areas. For example, learning the skills of listening to lung sounds is frequently difficult for medical students, with many experiencing awkwardness, uncertainty, pressure, and intimidation; however, those students "who had studied music reported finding it easier to be attentive to the frequency and rhythm of body sounds and find ways to describe them."[26] Beyond exhibiting this listening skill, medical students with a music background have been shown to have higher levels of empathy than those without a music background, and physician trainees who took a "music and medicine" course regarded the course as an academically valid approach to humanism training.[27,28]

In sum, despite the limited empirical evidence of the value of music in medical education, there still exists a significant repository of academic claims regarding the usefulness of music in developing physician attitudes and skills.[29] For example, medical students engaging in music-based educational interventions have reported that these pedagogies support professional identity formation, enhance reflective capacity, increase interest in human dimensionality, develop critical thinking and openness to new perspectives, and improve ability to appreciate nonverbal interactions.[30,31,32,33] Additionally, academic medicine scholars have posited that the musical arts might contribute to medical education through musical-medical lessons on shared concepts like improvisation, performance, and ensemble.[34,35] These claims encompass a broad range of benefits—from improved communication, auditory, improvisational, and interviewing skills to increased coping abilities, greater self-awareness, increased metacognitive capacity, and greater tolerance of and appreciation for ambiguity.[34,35,36,37,38,39]

Nevertheless, given the gap between what is claimed about the affordances of music and what has been explicitly demonstrated in medical education research, further investigation into the ability of music to develop clinical close listening skills is indicated.[29] As such, we propose that an ideal musical close listening skills framework for medical education must address both the attitudinal elements of close listening and the behavioral skills required of close listeners. While we do not have space to offer a formal framework here, we suggest elements of music education pedagogies that can be offered in medical training in close listening skills.

In consideration of the key attitudinal orientations required of both musical and clinical close listening skills, a first lesson might pertain to affective listening, embodied cognition, holistic attention, or internal and external self-awareness of how one's self or instrument is engaging in the encounter.[40] For example, students might generate a collective word cloud of affective terms to describe what they each heard after listening to a particular musical work, with subsequent conversation demonstrating the diversity of responses and inducing reflection on how one's individual identities and circumstances might have shaped one's unique hearing experience in the setting of a common stimulus. In addition to affective listening, another important listening attitude concerns the concept of ego surrender and learning to "play second fiddle" as a way of centering patient voice and bolstering patient autonomy. As an example, in an interactive listening exercise with a live music group, musicians can demonstrate the unique and integral roles of each ensemble member, underscoring the critical and often understated role that harmonists (or physicians) play in supporting and accompanying a soloist's (or patient's) melody, especially during times of musical (or medical) dissonance and uncertainty. A final listening attitude concerns curiosity; musical and medical practitioners need to remain curious, to vigilantly examine the unique voices in their ensemble and their contribution to the ensemble's collaborative sound. A lesson in this concept might entail asking students to pay special attention to the collective, contextual interactions of the different "voices" in the room as they are sequentially added to a piece of music, one instrument at a time. Examining how novel "instruments" or pieces of clinical information can dynamically alter a musical theme or illness narrative can help students develop a heightened respect and appreciation for their unique role in contributing to a patient's diagnosis, treatment, and understanding of illness. Moreover, embracing curiosity in this manner might combat selective attention bias and foster tolerance for ambiguity—important physician characteristics that can affect physicians' ethical behavior and patient care—thereby encouraging physicians not only to listen for heuristic keywords that can enable them to draw down a list of possible diagnoses, but also to listen more broadly, to listen for the unexpected, to listen past the illness and to the patient.[35,41]

Teaching key behavioral components of close listening skills might include not only attitudinal lessons but also training of particular actions, such as "playing" the rests—durations of silence indicated in musical notation—and leveraging dedicated silence to foster space for ambiguity processing and narrative co-construction. These behaviors might be taught through a live small ensemble performance wherein musicians explain their use of measured silence or "rests"—by highlighting their use of intentional pauses and breaths to ensure simultaneity of attention, space for reflection, and opportunity for thematic co-construction—before tasking students with envisioning how similarly dedicated silences and deliberate pauses might be applicable to clinical situations of uncertainty. Additionally, musicians might offer specific behavioral lessons in nonverbal communication by demonstrating how they leverage cues, shared breathing, or

alterations in their eye contact, head movements, facial expressions, or body positions to facilitate optimal dialogue in real time. Students might practice this lesson through a storytelling exercise wherein a pair of students alternate between dedicated storyteller and listener roles, with the listener paying special attention to how their nonverbal communication behaviors might modify psychological distance and convey understanding, validation, or support to the storyteller. Finally, it is vital to master the technical listening behaviors required to "build ensemble" and "play together," which may translate to using established clinical communication tools that optimize peaceful physician-patient interactions. For example, musicians could demonstrate how established musical devices like imitation, repetition, motion, counterpoint, or call and response aid the harmonious co-construction of a work's musical theme. They could then offer parallels for how established clinical communication tools, such as the elicitation of patient agendas and the use of teach-back strategies, reflective statements, empathic statements, and summary statements, might play critical, technical roles in harmonizing the physician-patient "performance."

Ultimately, applying the musical arts-inspired, close-listening attitudes and behaviors detailed above to medical education can promote physicians' close listening and improve physician-patient interactions. By ensuring that clinician attention is centered on the patient and that space for ambiguity processing and narrative formation is cooperatively built and maintained with intention, patients will have the room to speak, be heard, and feel at peace. Given that music education has recognized methods of instilling these attitudes in and teaching these skills to students, medical education should draw upon these lessons to develop an interprofessional curricular framework that addresses both the attitudinal and behavioral components required of skillful close listeners.

Promoting Patient Peace

The musical arts—and specifically musical education—have been underutilized in medical education, yet they offer a rich repository of pedagogical strategies to teach valuable close listening skills. Patient-perceived physician listening skills and actions are measurably connected to a myriad of downstream benefits for clinicians—from increased patient satisfaction to decreased litigation. Most importantly, physicians' close listening skills serve patients well; they are correlated with lower patient anxiety levels and better outcomes. Patients' hope for peace provides an opportunity for health care professionals to help patients feel safe, respected, heard, and confident that their concerns are being attended to. To promote this peace for patients, we need to draw on music education to teach close listening attitudes and behaviors in medical education.

References

1. Broyard A. *Intoxicated by My Illness and Other Writings on Life and Death*. Fawcett Columbine; 1992.
2. Gramling R, Stanek S, Ladwig S, et al; AAHPM Research Committee Writing Group. Feeling heard and understood: a patient-reported quality measure for the inpatient palliative care setting. *J Pain Symptom Manage*. 2016;51(2):150-154.
3. Frellick M. Physicians, nurses rate their listening skills high in poll. *Medscape*. December 4, 2018. Accessed December 30, 2023. https://www.medscape.com/viewarticle/905954?form=fpf
4. Singh Ospina N, Phillips KA, Rodriguez-Gutierrez R, et al. Eliciting the patient's agenda—secondary analysis of recorded clinical encounters. *J Gen Intern Med*. 2019;34(1):36-40.

5. Plug I, van Dulmen S, Stommel W, Olde Hartman TC, Das E. Physicians' and patients' interruptions in clinical practice: a quantitative analysis. *Ann Fam Med*. 2022;20(5):423-429.
6. Levinson W, Pizzo PA. Patient-physician communication: it's about time. *JAMA*. 2011;305(17):1802-1803.
7. Jagosh J, Donald Boudreau J, Steinert Y, Macdonald ME, Ingram L. The importance of physician listening from the patients' perspective: enhancing diagnosis, healing, and the doctor-patient relationship. *Patient Educ Couns*. 2011;85(3):369-374.
8. Pollak KI, Alexander SC, Tulsky JA, et al. Physician empathy and listening: associations with patient satisfaction and autonomy. *J Am Board Fam Med*. 2011;24(6):665-672.
9. Shafran-Tikva S, Kluger AN. Physician's listening and adherence to medical recommendations among persons with diabetes. *Int J List*. 2018;32(3):140-149.
10. Patel S, Pelletier-Bui A, Smith S, et al. Curricula for empathy and compassion training in medical education: a systematic review. *PLoS One*. 2019;14(8):e0221412.
11. Derksen F, Bensing J, Lagro-Janssen A. Effectiveness of empathy in general practice: a systematic review. *Br J Gen Pract*. 2013;63(606):e76-e84.
12. Smith DD, Kellar J, Walters EL, Reibling ET, Phan T, Green SM. Does emergency physician empathy reduce thoughts of litigation? A randomised trial. *Emerg Med J*. 2016;33(8):548-552.
13. Hojat M, Louis DZ, Markham FW, Wender R, Rabinowitz C, Gonnella JS. Physicians' empathy and clinical outcomes for diabetic patients. *Acad Med*. 2011;86(3):359-364.
14. The premed competencies for entering medical students. Association of American Medical Colleges. Accessed December 30, 2023. https://students-residents.aamc.org/real-stories-demonstrating-premed-competencies/premed-competencies-entering-medical-students
15. Boudreau JD, Cassell E, Fuks A. Preparing medical students to become attentive listeners. *Med Teach*. 2009;31(1):22-29.
16. Meldrum H, Apple R. Listening education in the medical curriculum. In: Worthington D, Bodie G, eds. *The Handbook of Listening*. John Wiley & Sons; 2020:315-326.
17. Howley L, Gaufberg E, King B. The fundamental role of the arts and humanities in medical education. Association of American Medical Colleges; 2020. Accessed December 30, 2023. https://store.aamc.org/downloadable/download/sample/sample_id/382/
18. Moniz T, Golafshani M, Gaspar CM, et al. How are the arts and humanities used in medical education? Results of a scoping review. *Acad Med*. 2021;96(8):1213-1222.
19. Nemoy L. Beyond the art of listening: music research in medical education. In: Andrews BW, ed. *Issues and Directions*. Brill; 2020:192-208. Andrews BW. *Perspectives on Arts Education Research in Canada*; vol 2.
20. Mukunda N, Moghbeli N, Rizzo A, Niepold S, Bassett B, DeLisser HM. Visual art instruction in medical education: a narrative review. *Med Educ Online*. 2019;24(1):1558657.
21. Milota MM, van Thiel GJMW, van Delden JJM. Narrative medicine as a medical education tool: a systematic review. *Med Teach*. 2019;41(7):802-810.

22. Charon R, Hermann N, Devlin MJ. Close reading and creative writing in clinical education: teaching attention, representation, and affiliation. *Acad Med*. 2016;91(3):345-350.
23. Delbene R. Listening like a reader? Problematizing transferable skills from reading to listening in narrative medicine. Presented at: Communication, Medicine, and Ethics Conference; July 1-3, 2020; Aalborg, Denmark.
24. Lasagna L. Hippocratic Oath: modern version. *NOVA*. 1964. Accessed June 7, 2024. https://www.pbs.org/wgbh/nova/doctors/oath_modern.html
25. Westphal C. Boston's prominence in medicine, music isn't an accident. *Boston Globe.* August 8, 2014. Accessed December 30, 2023. https://www.bostonglobe.com/opinion/editorials/2014/08/08/boston-prominence-both-medicine-and-music-isn-accident/nDKTCVo3gdbNQyBoGILBvl/story.html
26. Harris A, Flynn E. Medical education of attention: a qualitative study of learning to listen to sound. *Med Teach*. 2017;39(1):79-84.
27. Pirgon Y. The effect of music education on the empathy of medical students. *Int J New Trends Educ Implic*. 2015;6(3):77-86.
28. Newell GC, Hanes DJ. Listening to music: the case for its use in teaching medical humanism. *Acad Med*. 2003;78(7):714-719.
29. Orchard AR, Sitoh J, Wyatt A, Moore M. Music in medical education: a critical interpretive synthesis. *Med Educ*. 2024;58(5):507-522.
30. Levin SR, Cai F, Noronha N, Wald HS, Hedy S, Daniel MM. Diseases, doctors, and divas: cultivating reflective capacity in preclinical medical students through a critical examination of opera. *J Learn Arts*. 2017;13(1):D913128321.
31. Blasco PG, Moreto G, Levites MR. Teaching humanities through opera: leading medical students to reflective attitudes. *Fam Med*. 2005;37(1):18-20.
32. Ledger A, Joynes V. "A huge part of my life": exploring links between music, medical education, and students' developing identities as doctors. *MedEdPublish (2016)*. 2018;7:183.
33. Hall LM, Buechler C, Marusca G, Brennan S, Levine DL. Utilizing chamber music to teach non-verbal communication to medical students: a pilot initiative. *Cureus*. 2021;13(4):e14587.
34. Haidet P. Jazz and the "art" of medicine: improvisation in the medical encounter. *Ann Fam Med*. 2007;5(2):164-169.
35. van Roessel P, Shafer A. Music, medicine, and the art of listening. *J Learn Arts*. 2006;2(1):14.
36. Ortega RA, Andreoli MT, Chima RS. Is there a place for music in medical school? *Med Teach*. 2011;33(1):76-77.
37. van Ark AE, Wijnen-Meijer M. "Doctor Jazz": lessons that medical professionals can learn from jazz musicians. *Med Teach*. 2019;41(2):201-206.
38. Dornan T, Kelly M. Music and medicine: being in the moment. *MedEdPublish (2016)*. 2018;7:197.
39. Bradner M, Harper DV, Ryan MH, Vanderbilt AA. "Don't play the butter notes": jazz in medical education. *Med Educ Online*. 2016;21(1):30582.
40. Thomas C. Active listening: teaching with music. Yale University Center for Teaching and Learning. November 30, 2015. Accessed April 28, 2024. https://campuspress.yale.edu/yctl/tag/active-listening/
41. Geller G, Grbic D, Andolsek KM, Caulfield M, Roskovensky L. Tolerance for ambiguity among medical students: patterns of change during medical school and their implications for professional development. *Acad Med*. 2021;96(7):1036-1042.

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