
Study aim: Physician empathy constitutes an outcome-relevant aim of medical education. Yet, the factors promoting and inhibiting physician empathy have not yet been extensively researched, especially in Germany. In this study, we explored German medical students’ views of the factors promoting and inhibiting their empathy and how their experiences were related to their curricula.

Methods: A qualitative short survey was conducted at three medical schools: Bochum University, the University of Cologne and Witten/Herdecke University. Students were invited to complete an anonymous written questionnaire comprised of open-ended questions inquiring about the educational content of and situations during their medical education that positively or negatively impacted their empathy. Data were analyzed through qualitative content analysis according to the methods of Green and Thorogood.

Results: A total of 115 students participated in the survey. Respondents reported that practice-based education involving patient contact and teaching with reference to clinical practice and the patient’s perspective improved their empathy, while a lack of these inhibited it. Students’ internal reactions to patients, such as liking or disliking a patient, prejudice and other attitudes, were also considered to influence their empathy. Although each of the three schools takes a different approach to teaching interpersonal skills, no relevant differences were found in their students’ responses concerning the possible determinants of empathy.

Conclusion: Providing more training in practice and more contact with patients may be effective ways of promoting student empathy. Students need support in establishing therapeutic relationships with patients and in dealing with their own feelings and attitudes. Such support could be provided in the form of reflective practice training in order to promote self-awareness. More research is needed to evaluate these hypothetical conclusions.


BACKGROUND AND RATIONALE:: Medical professionals’ attitude towards homosexuals affects health care offered to such patients with a different sexual orientation. There is absence of literature that explores the attitudes of Indian medical students or physicians towards homosexuality. AIM:: This study aimed to evaluate Indian medical students and interns’ knowledge about homosexuality and attitude towards homosexuals. MATERIALS AND METHODS:: After IEC approval and written informed consent, a cross-sectional study was conducted on a purposive sample of undergraduate medical students and interns studying in one Indian medical college. The response rate was 80.5%. Only completely and validly filled responses (N = 244) were analyzed. The participants filled the Sex Education and Knowledge about Homosexuality Questionnaire (SEKHQ) and the Attitudes towards Homosexuals Questionnaire (AHQ). SEKHQ consisted of 32 statements with response chosen from ‘true’, ‘false’, or ‘don’t know’. AHQ consisted of 20 statements scorable on a 5-point Likert scale. Multiple linear regression was used to find the predictors of knowledge and attitude. RESULTS:: Medical students and interns had inadequate knowledge about homosexuality, although they endorsed a neutral stance insofar as their attitude towards homosexuals is concerned. Females had more positive attitudes towards homosexuals. Knowledge emerged as the most significant predictor of attitude; those having higher knowledge had more positive attitudes. CONCLUSION:: Enhancing knowledge of medical students
by incorporation of homosexuality related health issues in the curriculum could help reduce prejudice towards the sexual minority and thus impact their future clinical practice.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4943442/


Abstract
The popularity of the term ?integrated curriculum? has grown immensely in medical education over the last two decades, but what does this term mean and how do we go about its design, implementation, and evaluation? Definitions and application of the term vary greatly in the literature, spanning from the integration of content within a single lecture to the integration of a medical school's comprehensive curriculum. Taking into account the integrated curriculum's historic and evolving base of knowledge and theory, its support from many national medical education organizations, and the ever-increasing body of published examples, we deem it necessary to present a guide to review and promote further development of the integrated curriculum movement in medical education with an international perspective. We introduce the history and theory behind integration and provide theoretical models alongside published examples of common variations of an integrated curriculum. In addition, we identify three areas of particular need when developing an ideal integrated curriculum, leading us to propose the use of a new, clarified definition of ?integrated curriculum?, and offer a review of strategies to evaluate the impact of an integrated curriculum on the learner. This Guide is presented to assist educators in the design, implementation, and evaluation of a thoroughly integrated medical school curriculum. http://www.tandfonline.com/doi/full/10.3109/0142159X.2014.970998


BACKGROUND: There is a paucity of evidence on how to train medical students to provide equitable, high quality care to racial and ethnic minority patients. We test the hypothesis that medical schools’ ability to foster a learning orientation toward interracial interactions (i.e., that students can improve their ability to successfully interact with people of another race and learn from their mistakes), will contribute to white medical students’ readiness to care for racial minority patients. We then test the hypothesis that white medical students who perceive their medical school environment as supporting a learning orientation will benefit more from disparities training. METHODS: Prospective observational study involving web-based questionnaires administered during first (2010) and last (2014) semesters of medical school to 2394 white medical students from a stratified, random sample of 49 U.S. medical schools. Analysis used data from students’ last semester to build mixed effects hierarchical models in order to assess the effects of medical school interracial learning orientation, calculated at both the school and individual (student) level, on key dependent measures. RESULTS: School differences in learning orientation explained part of the school difference in readiness to care for minority patients. However, individual differences in learning orientation accounted for individual differences in readiness, even after controlling for school-level learning orientation. Individual differences in learning orientation significantly moderated the effect of disparities training on white students’ readiness to care for minority patients. Specifically, white medical students who perceived a high level of learning orientation in their medical schools regarding interracial interactions benefited more from training to address disparities. CONCLUSIONS: Coursework aimed at reducing healthcare disparities and improving the care of racial minority patients was only effective when white medical students perceived their school as having a learning orientation toward interracial interactions. Results suggest that medical school faculty should present interracial encounters as opportunities to practice skills shown to reduce bias, and faculty and students should be encouraged to learn from one another about mistakes in interracial interactions.
encounters. Future research should explore aspects of the medical school environment that contribute to an interracial learning orientation. ELECTRONIC SUPPLEMENTARY MATERIAL: The online version of this article (doi:10.1186/s12909-016-0769-z) contains supplementary material, which is available to authorized users. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5041316/


In 1995 Dundee medical school introduced an integrated, systems-based spiral curriculum with a number of innovative features. The medical school has now had eight years' experience of the curriculum. This paper describes the changes that have taken place in the curriculum over the eight years. Evidence from internal and external reviews and student examination data are used to identify the lessons learned from implementing the curriculum. The Dundee experience, the approaches to the curriculum described and the conclusions reached are relevant to all with an interest in medical education. 


The curriculum is a sophisticated blend of educational strategies, course content, learning outcomes, educational experiences, assessment, the educational environment and the individual students' learning style, personal timetable and programme of work. Curriculum mapping can help both staff and students by displaying these key elements of the curriculum, and the relationships between them. Students can identify what, when, where and how they can learn. Staff can be clear about their role in the big picture. The scope and sequence of student learning is made explicit, links with assessment are clarified and curriculum planning becomes more effective and efficient. In this way the curriculum is more transparent to all the stakeholders including the teachers, the students, the curriculum developer, the manager, the public and the researcher. The windows through which the curriculum map can be explored may include: (1) the expected learning outcomes; (2) curriculum content or areas of expertise covered; (3) student assessment; (4) learning opportunities; (5) learning location; (6) learning resources; (7) timetable; (8) staff; (9) curriculum management; (10) students. Nine steps are described in the development of a curriculum map and practical suggestions are made as to how curriculum maps can be introduced in practice to the benefit of all concerned. The key to a really effective integrated curriculum is to get teachers to exchange information about what is being taught and to coordinate this so that it reflects the overall goals of the school. This can be achieved through curriculum mapping, which has become an essential tool for the implementation and development of a curriculum. Faced with curricula which are becoming more centralized and less departmentally based, and with curricula including both core and optional elements, the teacher may find that the curriculum map is the glue which holds the curriculum together.


Background: Effective team performance is essential in the delivery of high-quality health-care. Leadership skills therefore are an important part of physicians’ everyday clinical life. To date, the development of leadership skills are underrepresented in medical curricula. Appropriate training
methods for equipping doctors with these leadership skills are highly desirable. Objective: The review aims to summarize the findings in the current literature regarding training in leadership skills in medicine and tries to integrate the findings to guide future research and training development. Method: The PubMed, ERIC, and PsycArticles, PsycINFO, PsynDEX and Academic search complete of EBSCOhost were searched for training of leadership skills in medicine in German and English. Relevant articles were identified and findings were integrated and consolidated regarding the leadership principles, target group of training and number of participants, temporal resources of the training, training content and methods, the evaluation design and trainings effects. Results: Eight studies met all inclusion criteria and no exclusion criteria. The range of training programs is very broad and leadership skill components are diverse. Training designs implied theoretical reflections of leadership phenomena as well as discussions of case studies from practice. The duration of training ranged from several hours to years. Reactions of participants to trainings were positive, yet no behavioral changes through training were examined. Conclusions: More research is needed to understand the factors critical to success in the development of leadership skills in medical education and to adapt goal-oriented training methods. Requirements analysis might help to gain knowledge about the nature of leadership skills in medicine. The authors propose a stronger focus on behavioral training methods like simulation-based training for leadership skills in medical education. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3839077/


Medical schools and residencies are currently facing a shift in their teaching paradigm. The increasing amount of medical information and research makes it difficult for medical education to stay current in its curriculum. As patients become increasingly concerned that students and residents are “practicing” on them, clinical medicine is becoming focused more on patient safety and quality than on bedside teaching and education. Educators have faced these challenges by restructuring curricula, developing small-group sessions, and increasing self-directed learning and independent research. Nevertheless, a disconnect still exists between the classroom and the clinical environment. Many students feel that they are inadequately trained in history taking, physical examination, diagnosis, and management. Medical simulation has been proposed as a technique to bridge this educational gap. This article reviews the evidence for the utility of simulation in medical education. We conducted a MEDLINE search of original articles and review articles related to simulation in education with key words such as simulation, mannequin simulator, partial task simulator, graduate medical education, undergraduate medical education, and continuing medical education. Articles, related to undergraduate medical education, graduate medical education, and continuing medical education were used in the review. One hundred thirteen articles were included in this review. Simulation-based training was demonstrated to lead to clinical improvement in 2 areas of simulation research. Residents trained on laparoscopic surgery simulators showed improvement in procedural performance in the operating room. The other study showed that residents trained on simulators were more likely to adhere to the advanced cardiac life support protocol than those who received standard training for cardiac arrest patients. In other areas of medical training, simulation has been demonstrated to lead to improvements in medical knowledge, comfort in procedures, and improvements in performance during retesting in simulated scenarios. Simulation has also been shown to be a reliable tool for assessing learners and for teaching topics such as teamwork and communication. Only a few studies have shown direct improvements in clinical outcomes from the use of simulation for training. Multiple studies have demonstrated the effectiveness of simulation in the teaching of basic science and clinical knowledge, procedural skills, teamwork, and communication as well as assessment at the undergraduate and graduate medical education levels. As simulation becomes increasingly prevalent in medical school and resident education, more studies are


PURPOSE: Research is lacking on psychological distress and disorder among sexual minority medical students (students who identify as non-heterosexual). If left unaddressed, distress may result in academic and professional difficulties and undermine workforce diversity goals. The authors compared depression, anxiety, and self-rated health among sexual minority and heterosexual medical students. METHOD: This study included 4,673 first-year students with self-reported sexual orientation data in the fall 2010 baseline survey of the Medical Student Cognitive Habits and Growth Evaluation Study, a national longitudinal cohort study. The authors used items from published scales to measure depression, anxiety, self-rated health, and social stressors. They conducted bivariate and multivariate analyses to estimate the association between sexual identity and depression, anxiety, and self-rated health. RESULTS: Of the 4,673 students, 232 (5.0%) identified as a sexual minority. Compared with heterosexual students, after adjusting for relevant covariates, sexual minority students had greater risk of depressive symptoms (adjusted relative risk [ARR] =1.59 [95% CI, 1.24–2.04]) anxiety symptoms (ARR = 1.64 [1.08–2.49]), and low self-rated health (ARR = 1.77 [1.15–2.60]). Sexual minority students were more likely to report social stressors, including harassment (22.7% vs 12.7%, P < .001) and isolation (53.7% vs 42.8%, P = .001). Exposure to social stressors attenuated but did not eliminate the observed association between minority sexual identity and mental and self-reported health measures. CONCLUSIONS: First-year sexual minority students experience significantly greater risk of depression, anxiety, and low self-rated health than heterosexual students. Targeted interventions are needed to improve mental health and well-being.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4414698/


BACKGROUND: The patient-centered medical home (PCMH) is an accepted framework for delivering high-quality primary care, prompting many residencies to transform their practices into PCMHs. Few studies have assessed the impact of these changes on residents' and faculty members' PCMH attitudes, knowledge, and skills. The family medicine program at Brown University achieved Level 3 PCMH accreditation in 2010, with training relying primarily on situated learning through immersion in PCMH practice, supplemented by didactics and a few focused clinical activities. OBJECTIVE: To assess PCMH knowledge and attitudes after Level 3 PCMH accreditation and to identify additional educational needs. METHODS: We used a qualitative approach, with semistructured, individual interviews with 12 of the program’s 13 postgraduate year 3 residents and 17 of 19 core faculty. Questions assessed PCMH knowledge, attitudes, and preparedness for practicing, teaching, and leading within a PCMH. Interviews were analyzed using the immersion/crystallization method. RESULTS: Residents and faculty generally had positive attitudes toward PCMH. However, many expressed concerns that they lacked specific PCMH knowledge, and felt inadequately prepared to implement PCMH principles into their future practice or teaching. Some exceptions were faculty and resident leaders who were actively involved in the PCMH transformation. Barriers included lack of time and central roles in PCMH activities. CONCLUSIONS: Practicing in a certified PCMH training program, with passive PCMH roles and supplemental didactics, appears inadequate in preparing residents and
faculty for practice or teaching in a PCMH. Purposeful curricular design and evaluation, with faculty development, may be needed to prepare the future leaders of primary care.

Hardeman, R. R., et al. (2015). "Medical student socio-demographic characteristics and attitudes toward patient centered care: Do race, socioeconomic status and gender matter? A report from the Medical Student CHANGES study." Patient education and counseling 98(3): 350-355. OBJECTIVE: To determine whether attitudes toward patient-centered care differed by socio-demographic characteristics (race, gender, socioeconomic status) among a cohort of 3191 first year Black and White medical students attending a stratified random sample of US medical schools. METHODS: This study used baseline data from Medical Student CHANGES, a large national longitudinal cohort study of medical students. Multiple logistic regression was used to assess the association of race, gender and SES with attitudes toward patient-centered care. RESULTS: Female gender and low SES were significant predictors of positive attitudes toward patient-centered care. Age was also a significant predictor of positive attitudes toward patient-centered care such that students older than the average age of US medical students had more positive attitudes. Black versus white race was not associated with attitudes toward patient-centered care. CONCLUSIONS: New medical students' attitudes toward patient-centered care may shape their response to curricula and the quality and style of care that they provide as physicians. Some students may be predisposed to attitudes that lead to both greater receptivity to curricula and the provision of higher-quality, more patient-centered care. PRACTICE IMPLICATIONS: Medical school curricula with targeted messages about the benefits and value of patient-centered care, framed in ways that are consistent with the beliefs and world-view of medical students and the recruitment of a socioeconomically diverse sample of students into medical schools are vital for improved care.

Rdesinski, R. E., et al. (2015). "Development and use of an instrument adapted to assess the clinical skills learning environment in the pre-clinical years." Medical science educator 25(3): 285-291. BACKGROUND: The Communication, Curriculum, and Culture (C3) instrument is a well-established survey for measuring the professional learning climate or hidden curriculum in the clinical years of medical school. However, few instruments exist for assessing professionalism in the pre-clinical years. We adapted the C3 instrument and assessed its utility during the pre-clinical years at two U.S. medical schools. METHODS: The ten-item Pre-Clinical C3 survey was adapted from the C3 instrument. Surveys were administered at the conclusion of the first and second years of medical school using a repeated cross-sectional design. Factor analysis was performed and Cronbach’s alphas were calculated for emerging dimensions. RESULTS: The authors collected 458 and 564 surveys at two medical schools during AY06-07 and AY07-09 years, respectively. Factor analysis of the survey data revealed nine items in three dimensions: “Patients as Objects”, “Talking Respectfully of Colleagues”, and “Patient-Centered Behaviors”. Reliability measures (Cronbach’s alpha) for the Pre-Clinical C3 survey data were similar to those of the C3 survey for comparable dimensions for each school. Gender analysis revealed significant differences in all three dimensions. CONCLUSIONS: The Pre-Clinical C3 instrument’s performance was similar to the C3 instrument in measuring dimensions of professionalism. As medical education moves toward earlier and more frequent clinical and inter-professional educational experiences, the Pre-Clinical C3 instrument may be especially useful in evaluating the impact of curricular revisions.


BACKGROUND: Patient-centred care is an important aspect of quality health care. The learning environment may impact medical students’ adoption of patient-centred behaviours. METHODS: All medical students at a single institution received an anonymous, modified version of the Communication, Curriculum, and Culture instrument that measures patient-centredness in the training environment along three domains: role modelling, students’ experience, and support for patient-centred behaviours. We compared domain scores and individual items by class year and gender, and qualitatively analyzed responses to two additional items that asked students to describe experiences that demonstrated varying degrees of patient-centredness. RESULTS: Year 1 and 2 students reported greater patient-centredness than year 3 and 4 students in each domain: role modelling (p = 0.03), students’ experience (p = <0.001), and support for patient-centred behaviours (p < 0.001). Female students reported less support for patient-centred behaviours compared with male students (p = 0.03). Qualitative analysis revealed that explicit patient-centred curricula and positive role modelling fostered patient-centredness. Themes relating to low degrees of patient-centredness included negative role modelling and students being discouraged from being patient-centred. CONCLUSIONS: Students’ perceptions of the patient-centredness of the learning environment decreased as students progressed through medical school, despite increasing exposure to patients. Qualitative analysis found that explicit patient-centred curricula cultivated patient-centred attitudes. Role modelling impacted student perceptions of patient-centredness within the learning environment. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5285277/


Interpersonal and communication skills are a core area of competency for medical students, residents, and practicing physicians. As reflection and self-assessment are essential components of skill-building, we examined the content of medical students’ assessments of their own developing communication skills. Between 2000 and 2003, a total of 674 first-year medical students completed self-assessments of their communication skills after viewing videotapes of their interaction with simulated patients. Self-assessment forms were open-ended, providing ample space for students to write about the strengths and weaknesses they observed. Completed forms were coded by two members of the research team trained in content analysis. Students identified an average of 5.0 things that went well (range 1–15, S.D.=2.2) and 2.8 areas for improvement (range 1–9, S.D.=1.3). The most frequently observed strengths were: elicited information/covered important topics (54%); made a personal connection/established rapport (51%); was supportive/encouraging/helpful (40%); attended to conversational flow and transitions (34%); ensured patient comfort (32%). The most frequently noted weaknesses involved problems with: eliciting information/covering important topics (35%); paralanguage, particularly in terms of tone, rate, volume, and disfluencies such as “uh”, “um” (32%); discussing health risks (26%); attending to conversational flow and transitions (23%); students’ own comfort/organization/preparation (20%). We observed that a video-based, open-ended approach to self-assessment is feasible, practical, and informative. While the self-assessments covered a broad scope, students clearly attended to tasks and skills relevant to effective communication and relationship building. Videotaped clinical encounters allow learners to review their own behavior and make specific
comments supported by tangible examples. An open-ended approach to self-assessment of communication skills can serve as one important component of a systematic education and evaluation program. [http://www.sciencedirect.com/science/article/pii/S0738399107002236](http://www.sciencedirect.com/science/article/pii/S0738399107002236)