MARCELO SCHWELLER

O ENSINO DE EMPATIA NO CURSO DE GRADUAÇÃO EM MEDICINA

CAMPINAS

2014

UNIVERSIDADE ESTADUAL DE CAMPINAS
Faculdade de Ciências Médicas

MARCELO SCHWELLER

ENSINO DE EMPATIA NO CURSO DE GRADUAÇÃO EM MEDICINA

ORIENTAÇÃO: Prof. Dr. Marco Antonio de Carvalho Filho

Tese de Doutorado apresentada à Pós-Graduação da Faculdade de Ciências Médicas da Universidade Estadual de Campinas - UNICAMP para obtenção de título de Doutor em Clínica Médica na área de concentração Ensino em Saúde.

ESTE EXEMPLAR CORRESPONDE À VERSÃO
FINAL DA TESE DEFENDIDA POR
MARCELO SCHWELLER, E ORIENTADO PELO
PROF. DR. MARCO ANTONIO DE CARVALHO FILHO.

_____
Assinatura do Orientador

CAMPINAS
2014

Ficha catalográfica
Universidade Estadual de Campinas
Biblioteca da Faculdade de Ciências Médicas
Maristella Soares dos Santos - CRB 8/8402

Sch97e

Schweller, Marcelo, 1979-
O ensino de empatia no curso de graduação em medicina / Marcelo Schweller. – Campinas, SP : [s.n.], 2014.

Orientador: Marco Antonio de Carvalho Filho.
Tese (doutorado) – Universidade Estadual de Campinas, Faculdade de Ciências Médicas.

1. Empatia. 2. Simulação. 3. Educação médica. I. Carvalho Filho, Marco Antonio de,1974-. II. Universidade Estadual de Campinas. Faculdade de Ciências Médicas. III. Título.

Informações para Biblioteca Digital

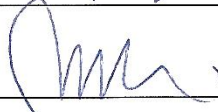
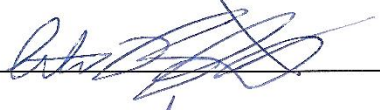
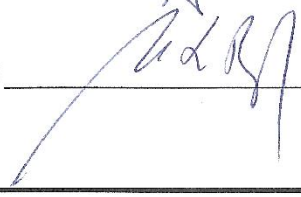
Título em outro idioma: Empathy teaching in the undergraduate medical course
Palavras-chave em inglês:
Empathy
Simulation
Medical education
Área de concentração: Ensino em Saúde
Titulação: Doutor em Clínica Médica
Banca examinadora:
Marco Antonio de Carvalho Filho [Orientador]
Milton de Arruda Martins
Antonio Pazin Filho
Mario Jose Abdalla Saad
Sigisfredo Luis Brenelli
Data de defesa: 30-07-2014
Programa de Pós-Graduação: Clínica Médica

BANCA EXAMINADORA DA DEFESA DE DOUTORADO

MARCELO SCHWELLER

ORIENTADOR: PROF. DR. MARCO ANTONIO DE CARVALHO FILHO

MEMBROS:

1. **PROF. DR. MARCO ANTONIO DE CARVALHO FILHO** 
2. **PROF. DR. MILTON DE ARRUDA MARTINS** 
3. **PROF. DR. ANTONIO PAZIN FILHO** 
4. **PROF. DR. MARIO JOSE ABDALLA SAAD** 
5. **PROF. DR. SIGISFREDO LUIS BRENELLI** 

Programa de Pós-Graduação em Clínica Médica da Faculdade de Ciências Médicas da Universidade Estadual de Campinas.

Data: 30 de julho de 2014

DEDICATÓRIA

À minha esposa, Mariana, e ao meu filho, Bruno, por me ensinarem a cada dia o verdadeiro significado da palavra empatia.

AGRADECIMENTOS

Ao longo do caminho, apoiei-me em pessoas que me ofereceram um pouco de sua sabedoria sobre o ser humano na forma de educação, medicina, e tantas outras. A soma dessas influências me aproxima de um estado em que a alegria com a vida de hoje coexiste com a necessidade de modificar o futuro. A todos, meu carinho e minha gratidão.

À minha avó, **Dora**, por ser meu exemplo de força e compaixão.

Aos meus pais, **Mariza** e **Osmar**, pelo porto seguro, pela dedicação sem tamanho, e pelo amor. Minha vida é meu agradecimento a vocês.

Aos meus irmãos, **Mariana** e **Dani**, pela companhia, pelo orgulho, e por me mostrarem desde cedo que o mundo não é meu.

Ao meu amigo, padrinho e professor, **Marco Antonio de Carvalho Filho**, pela oportunidade, confiança e entrega. Por me ensinar a medicina que amo e o valor de formar pessoas. Por sua melodia, mas com a minha letra.

Ao meu amigo **Tiago Grangeia**, irmão mais velho que não tive, pela parceria no trabalho e na vida; por me aceitar, mesmo que exageradamente, como sou.

A **Thiago Martins**, amigo indispensável, por me ensinar a ser humilde.

Aos amigos **Daniel Franci** e **Diego Ribeiro**, fontes de grande admiração, primeiros alunos a se tornarem colegas na docência.

Aos amigos Eduardo, Heloísa, Luís Fernando, Douglas, Carolina, Tatiana, Fernando, José Carlos, Sílvia e Bruno pela companhia, parceria e apoio.

Aos atores Adilson, Leticia, Nádia, Carlos, Thaís e Marina, pela amizade e pela mágica de transformar ideias em realidade.

Aos alunos e ex-alunos do curso de medicina da Unicamp, por terem me mostrado o caminho.

A relação médico-paciente é o fundamento da prática da medicina. Entre os fatores que permitem o sucesso dessa parceria, a empatia se destaca como um dos mais importantes, e existem evidências que associam a atitude empática do médico com a satisfação do paciente, a adesão ao tratamento e melhores desfechos clínicos. Apesar de sua importância, a maioria dos estudos revela uma tendência de perda de empatia durante o curso de graduação em medicina, sendo o currículo oculto a causa mais comumente relacionada a este fenômeno. Várias estratégias têm sido propostas para preservar ou aumentar a empatia desses estudantes. O objetivo deste estudo é avaliar o impacto de metodologias ativas de ensino nos níveis de empatia de estudantes de medicina em diferentes estágios de formação. No primeiro estudo, duas turmas consecutivas de estudantes do primeiro ano (n=166) participaram de uma disciplina curricular concebida com o intuito de oferecer um contato inicial positivo com a prática médica, através de uma série de atividades com apelo realístico e espaço para debate e reflexão. Os níveis de empatia foram avaliados através da Escala Jefferson de Empatia Médica (JSPE) antes e após o curso. A média inicial foi de 117,9 e subiu para 121,3 após a intervenção ($p<0,001$), com um tamanho do efeito de 0,38. O aumento foi maior entre os estudantes com menores níveis iniciais de empatia. No segundo estudo, estudantes de duas turmas do quarto ano médico (n=124) e do sexto ano médico (n=123) participaram de consultas médicas simuladas com pacientes padronizados, seguidas de um *feedback* aprofundado com o objetivo de lidar com os sentimentos do paciente e dos estudantes. Após a atividade, houve um aumento significativo nos níveis de empatia para o quarto ano (de 115,8 a 121,1; $p<0,001$; tamanho do efeito=0,61) e para o sexto ano (de 117,1 a 123,5; $p<0,001$; tamanho do efeito=0,64). O terceiro estudo examinou a percepção dos estudantes sobre os desfechos de aprendizagem relacionados com a atividade de simulação descrita acima através de um questionário anônimo. Os estudantes sentiram-se

confortáveis durante a atividade, devido à “abertura ao diálogo”, à “proximidade com colegas e professores” e ao “ambiente livre de julgamento”. Mais da metade deles perceberam-se motivados a estudar, especialmente a “relação médico-paciente”, a “terapêutica”, as “doenças mais prevalentes” e "medicina em geral”. Cerca de 90% relatou que o aprendizado será útil em suas vidas pessoal e profissional, em função de uma maior “compreensão dos sentimentos”, “empatia”, “capacidade de ouvir” e de “lidar com conflitos”. Estes resultados sugerem que é possível manter ou mesmo aumentar os níveis de empatia de estudantes de medicina através de metodologias ativas de ensino em diferentes estágios da formação médica. Além disso, atividades com apelo realístico que apresentem a medicina de uma forma positiva podem se tornar um fórum para o debate de temas relacionados com o currículo oculto, o que estimula a reflexão sobre o tema. Esse tipo de atividade pode motivar o estudante no processo de ensino-aprendizagem, permitindo a recuperação do significado pessoal e social da prática da medicina.

Palavras-chave: Empatia, Simulação Clínica, Educação Médica.

A meaningful doctor-patient relationship is the foundation of the practice of medicine. Empathy stands out as one of the most important factors to ensure the success of this partnership, and there is evidence associating doctor's empathetic attitude with greater patient satisfaction, treatment adherence and better clinical outcomes. In spite of its importance in patient care, most studies reveal a tendency for empathy loss during medical school, with the work overload and the hidden curriculum being the most commonly cited causes of this phenomenon. Several strategies have been proposed to preserve or heighten empathy levels in medical students, with varying results. The purpose of this study is to examine the impact of active teaching methodologies on the empathy levels of medical students at different stages of their training. In the first study, two consecutive classes of first-year medical students (n=166) participated in a curricular course designed to be a positive initial outlook on the medical practice, through a series of different activities with real-world appeal and based on reflection. Students' empathy levels were assessed using the Jefferson Scale of Physician Empathy (JSPE) before and after the course. The mean pretest JSPE score was 117.9 and increased to 121.3 after the intervention (p<0.001), with an effect size of 0.38. The increase was greater among students with lower initial JSPE scores. In the second study, two classes of fourth-year (n=124) and two classes of sixth-year (n=123) medical students participated in simulated medical consultations with standardized patients, followed by an in-depth debriefing dealing with the feelings of the patient and the students. After the activity, there was a significant increase in the empathy levels of fourth-year students (from 115.8 to 121.1, p<0.001, effect size=0.61) and sixth-year students (from 117.1 to 123.5, p<0.001, effect size=0.64). The third study examined the students' perceptions on the learning outcomes related to the simulation activity described above through an anonymous questionnaire. Students felt comfortable during the activity, due to "openness to dialogue", "proximity with

colleagues and professors" and the "environment free of judgment". More than half of them were motivated to study, especially the "doctor-patient relationship", "treatment", "common diseases" and "medicine in general". Approximately 90% reported that what they learned would be useful in their professional and personal lives, providing a greater "understanding of emotions", "empathy", "ability to listen" and "ability to deal with conflicts". These results suggest that it is possible to maintain or even to increase medical students' empathy levels through active teaching methodologies at different stages of medical training. Activities with real-world appeal that present medicine in a positive way may also become a forum for debating topics related to the hidden curriculum, allowing students to reflect and cope. This practice may even motivate learning in medicine, allowing for the recovery of the personal and social meaning of its practice.

Keywords: Empathy, Clinical Simulation, Medical Education.

SUMÁRIO

1. INTRODUÇÃO

A medicina é uma profissão humana, e sua prática está fundamentada no vínculo entre o médico e seu paciente. Para o sucesso dessa relação, o médico deve estar apto a criar canais de comunicação que permitam um fluxo bilateral de informações, vital para a elaboração do plano terapêutico. Dessa forma, conquista a confiança do paciente, e os processos de investigação e tratamento passam a ser encarados como uma parceria.

Entre as competências necessárias para o médico no desenvolvimento dessa parceria, a empatia se destaca como uma das mais importantes (1), e por isso deve ser avaliada e estimulada no contexto da educação médica (2).

1.1. Histórico do termo *Empatia*

Na era moderna, a história do termo *empatia* inicia-se no final do século XIX com o filósofo alemão Robert Vischer. A partir do termo clássico *empatheia*, ele elaborou em 1873 a palavra *einfühlung*, que pode ser traduzida para a língua portuguesa como “sentir em”, ou “sentir-se dentro”. Curiosamente, seu objetivo original era descrever os sentimentos desencadeados pela observação de uma obra de arte (3), especialmente quando o observador sentia-se de certa forma integrado a ela. Depois, o mesmo termo passou a ser usado para representar sentimentos de conexão com a natureza (4).

Duas décadas depois, o psicólogo alemão Theodore Lipps extrapolou o significado de *einfühlung* para a psicologia, referindo-se ao reconhecimento de um ser humano por outro. Entretanto, apenas no início do século XX o termo foi usado para descrever relações humanas (3), na mesma época em que Sigmund Freud usou-o com o sentido de "colocar-se na posição de outra pessoa" (4).

Com o objetivo de traduzir o termo alemão *einfühlung*, a palavra *empathy* surgiu na língua inglesa em 1909 com o psicólogo Edward Titchener, inspirada no termo grego *empatheia*. Nesse momento, o significado de empatia já era bastante próximo do atual, ou seja, o ato de entender o outro (5). Alguns anos depois, a empatia começou a ser entendida como um fator facilitador de desfechos positivos na relação com pacientes (6).

Devido à universalização da palavra empatia e de seu significado, o termo *einfühlung* que lhe deu origem foi substituído na própria língua alemã pelo cognato *empathie*.

1.2. Definição do conceito de empatia

Não existe consenso em relação à definição de empatia na prática da medicina (1), tendo sido descrita até hoje como um traço profissional (7), um aspecto da personalidade (8), uma habilidade (9), um elemento terapêutico (10), um atributo cognitivo (11), ou até uma emoção (12). Essa falta de clareza gerou

diferentes usos, o que limitou o desenvolvimento de pesquisas ou, ao menos, dificultou sua interpretação (13). Por isso, alguns autores sugeriram até a substituição do termo empatia por outro menos ambíguo (14).

No entanto, apesar da dificuldade de definir empatia e mensurá-la, a percepção prática de sua existência e sua função na relação com pacientes sempre estiveram em evidência, o que motivou a continuidade da pesquisa sobre o assunto. O termo *empatia*, já consagrado, permaneceu em uso, bem como o debate sobre seu significado.

Historicamente, o entendimento do conceito de empatia gira em torno de dois componentes principais, o cognitivo e o afetivo (15). O primeiro evoluiu a partir de Rosalind Dymond que, em 1949, definiu empatia como “a transposição imaginativa de si para o pensar, o sentir e o agir do outro, para então estruturar o mundo como ele o faz” (16). Desde então, diversos autores abordaram a empatia como uma habilidade predominantemente cognitiva, que tem como objetivo perceber intelectualmente as preocupações do outro (11,17).

Em paralelo, o caráter afetivo do conceito de empatia foi ressaltado a partir de Stotland (18), que a definiu como “uma resposta emocional vicariante às experiências emocionais percebidas no outro”. Esse tipo de resposta teria origem mais primitiva, ou inata (15), e seu papel no conceito de empatia foi reforçada por outros autores (19,20).

No contexto da dicotomia de significado, foi postulado que empatia seria uma habilidade eminentemente cognitiva, baseada na busca intelectual do entendimento do outro; e que haveria outro termo, *simpatia*, para representar a percepção emocional das experiências do outro (21). Assim, ter empatia seria entender o tipo de experiência vivida pelo outro, algo sempre benéfico na relação médico-paciente, e ter simpatia seria sentir a intensidade dessa experiência, o que em excesso poderia prejudicar a objetividade do médico no processo de tomada de decisão (22).

Dessa forma, para manter a neutralidade clínica e evitar o próprio desgaste pessoal, o médico deveria manter um distanciamento afetivo (23) em relação ao paciente, tendo por ele empatia, mas não simpatia. A maioria dos estudos de empatia em educação médica tem feito essa distinção com a justificativa de uniformizar a definição para fins de pesquisa. Outros autores acreditam que existe grande dificuldade em definir o limite entre os dois termos, e que não é de valia prática excluir do conceito de empatia o componente emocional. Nesse sentido, a empatia surgiria da interação entre o clínico e o paciente, na forma de um sentimento espontâneo de identidade, que traz conforto para ambos (12).

Segundo Rogers (24), empatia é "a capacidade de captar o mundo particular do paciente como se fosse o seu próprio, sem nunca perder de vista o *como se*". De forma complementar, Mead (25) definiu empatia como "a capacidade de assumir o papel do outro e adotar perspectivas alternativas". Assim, o clínico poderia evitar a perda do potencial de decidir e ajudar sem

distanciar-se emocionalmente do paciente, devendo para isso manter a consciência de si e o foco no objetivo da consulta e do ato empático.

Em 1983, Davis (26) propôs uma abordagem multidimensional da empatia, o que permite uma visão ampla e inclusiva de seu significado, considerando possíveis diferenças entre indivíduos. Dessa forma, o conceito de empatia contém um componente afetivo, a capacidade de se sensibilizar com as experiências do outro, e um componente cognitivo, a capacidade de entender o outro e comunicar esse entendimento, associada à intenção de ajudar (27).

As intervenções de ensino descritas nessa tese de doutorado abordaram a empatia como um conceito multidimensional, considerando seus componentes afetivo e cognitivo.

1.3. Instrumentos para medir empatia

Em função do importante papel da empatia nos relacionamentos interpessoais, alguns instrumentos (16,28) foram elaborados a partir da segunda metade do século XX com o objetivo de mensurá-la. De acordo com Hemmerdinger (8) esses questionários podem avaliar empatia através de três diferentes perspectivas: na primeira pessoa, quando o próprio clínico preenche um questionário; na segunda pessoa, quando o paciente preenche um questionário referente à empatia do clínico; e na terceira pessoa, quando um observador

externo avalia a empatia do clínico a respeito de uma consulta real ou simulada. A maioria dos instrumentos disponíveis enquadra-se no primeiro grupo.

O primeiro instrumento usado em maior escala surgiu em 1969, quando Hogan (29) elaborou sua Escala de Empatia, com 64 itens a serem respondidos como verdadeiros ou falsos. Encontrou-se correlação entre seu resultado e medidas de sociabilidade, inclusive entre estudantes de medicina.

No mesmo período, Mehrabian e Epstein (30) desenvolveram a Escala de Empatia Emocional. Sua versão mais recente (31), conhecida como BEES (*Balanced Emotional Empathy Scale*), conta com 30 itens pontuados através de uma escala Likert de nove pontos, desde "concordo muito fortemente" (+4 pontos) até "discordo muito fortemente" (-4 pontos). Alguns itens que representam essa escala são: *"Filmes com final triste perseguem-me por horas"* e *"Não consigo sentir-me muito triste por pessoas que são responsáveis por seu próprio sofrimento"*.

Feletti e colaboradores (32) descreveram seu Teste de Empatia como parte de um processo de seleção para estudantes de medicina na Austrália, em uma avaliação multidimensional alternativa ao uso exclusivo do desempenho escolar prévio. Além da avaliação cognitiva, usaram testes de solução de problemas, criatividade, empatia e dilemas morais. A avaliação foi considerada confiável e válida, apesar de não ser possível determinar a validade de cada teste, individualmente, com os dados obtidos.

Um dos instrumentos mais utilizadas no contexto da educação médica é o Índice de Reatividade Interpessoal (IRI), desenvolvido por Davis (26). Em consonância com sua ideia de que a empatia é um construto multidimensional, o IRI é composto por 28 itens divididos igualmente em quatro subescalas: *Perspective Taking* (PT), *Fantasy* (FS), *Empathic Concern* (EC) e *Personal Distress* (PD). Cada item recebe uma pontuação de zero (não me descreve bem) a quatro (descreve-me muito bem).

Um item típico da subescala PT é “Imagino como as pessoas se sentem quando eu as critico”; a subescala FS pode ser representada pelo item “Sinto emoções de um personagem de filme como se fossem minhas próprias emoções”; o item “Fico comovido com os problemas dos outros” exemplifica a subescala EC; e “Tendo a perder o controle durante emergências” representa a subescala PD.

O IRI foi adaptado e validado para a língua Portuguesa na realidade do Brasil. O primeiro estudo, realizado em 2001 por Koller e colaboradores (33), não utilizou os itens da escala *fantasia*, baseada em aspectos culturais regionais, resultando em um questionário com apenas 21 itens. Um estudo mais recente (34), de 2011, realizou nova análise e excluiu apenas dois dos 28 itens originais do IRI, resultando em uma escala com 26 itens que contempla, inclusive, a subescala *fantasia*.

Todas as escalas descritas acima foram elaboradas para avaliar empatia na população geral, e seu uso foi extrapolado para o contexto da prática da medicina e da educação médica. A partir disso, um grupo de pesquisadores da Escola de

Medicina da Universidade Thomas Jefferson nos Estados Unidos, liderado pelo professor Hojat, dedicou-se ao desenvolvimento de um instrumento específico para o contexto do cuidado de pacientes. A Escala Jefferson de Empatia Médica (JSPE) teve como foco inicial a avaliação de estudantes de medicina (35), sendo posteriormente adaptada para médicos formados e outros profissionais da área da saúde (27).

O processo de construção da JSPE foi descrito por Hojat (1). Após revisão bibliográfica e estabelecimento de uma base conceitual para empatia, criou-se uma escala com 90 itens relacionados ao tema. Após a análise de 100 médicos a escala foi reduzida a 45 itens e administrada a 223 estudantes de medicina da Universidade Thomas Jefferson. Por fim, verificou-se a correlação entre os itens, reduzindo-os a 20, que compõem o modelo atual da versão para estudantes de medicina da escala (*Anexo 1*), com três fatores principais.

O primeiro componente, de nome *Perspective Taking* (PT), é composto por dez itens, por exemplo, "*Os pacientes sentem-se melhor quando os médicos compreendem os seus sentimentos*"; o segundo fator, *Compassionate Care* (CC), tem oito itens, sendo um deles "*Eu acredito que as emoções não têm qualquer participação no tratamento das doenças*"; e dois itens compõem o terceiro fator, *Standing in the Patient's Shoes* (SPS), por exemplo, "*Os médicos deveriam tentar colocar-se no lugar dos seus pacientes quando estão cuidando deles*".

Por ser uma escala do tipo Likert, a cada uma das 20 afirmações da JSPE é atribuído um valor de 1 (discordo fortemente) a 7 (concordo fortemente), o que

resulta em um mínimo de 20 e um máximo de 140 pontos. A metade dos itens é considerada positiva, tendo pontuação direta, e a outra metade negativa, com pontuação reversa. Essa organização diminui a tendência de que o estudante concorde ou discorde constantemente dos itens.

Por ter sido desenhado especificamente para a avaliação de empatia na relação médico-paciente, a JSPE é a escala em primeira pessoa mais utilizada no mundo em pesquisas com educação médica, tendo sido traduzida e validada em 42 línguas. Paro et al. (36) realizaram a tradução e validação para a língua Portuguesa do Brasil e encontraram, na análise fatorial, o componente *Compassionate Care* como fator principal da escala na realidade cultural Brasileira.

Uma característica inerente ao uso de instrumentos autoaplicados é a possibilidade de respostas ajustadas ao que se considera desejável ou socialmente mais aceito. Esse fator pode interferir nos resultados, mas seu peso depende do objetivo do teste no ponto de vista de quem o responde. Quando é utilizado de forma confidencial, em caráter de pesquisa aprovada por um comitê de ética, sem a finalidade de seleção para vagas ou punição, a interferência é menor (1).

No entanto, o principal viés relacionado ao uso de escalas em primeira pessoa para avaliação de empatia é a possível discrepância entre a empatia autoavaliada pelo sujeito e seu comportamento nos cenários reais de prática (37-39). Sem dúvida, a percepção do sujeito sobre sua própria empatia é uma medida

indireta do que é realmente percebido pelo paciente, mas existe evidência de associação entre a intenção e o comportamento (1,40).

Diante disso, questionários foram desenvolvidos com o intuito de avaliar empatia através de perspectivas que não a do médico ou do estudante de medicina. A escala *Consultation and Relational Empathty* - CARE (41) é composta por dez itens que permitem ao paciente avaliar diversos aspectos do desempenho do médico que o consultou através de um sistema Likert de cinco pontos. Tem sido usada em diversos contextos, sendo que médicos e pacientes relataram enxergar sua relevância na prática clínica (42).

A *Jefferson Scale of Patient´s Perceptions of Physician Empathy* – JSPPPE (43) tem o mesmo intuito e conta com cinco itens através dos quais o paciente pode avaliar a empatia do médico. Houve correlação entre seus resultados em consultas de médicos residentes e outras medidas de profissionalismo e comportamento humanístico.

Apesar de representarem uma medida mais direta do comportamento empático do médico durante a consulta, os instrumentos em segunda pessoa têm como viés de uso o alto índice de pontuação máxima atribuída à consulta pelos pacientes. Existem relatos de mais de 75% de pontuação máxima, o que limita a correlação dessas escalas com outras medidas, como a empatia autoavaliada pelo médico (1).

O *Four Habits Coding Scheme* (FHCS) é um instrumento que mede habilidades de comunicação na perspectiva de terceira pessoa, ou seja, um observador externo à consulta real ou simulada. Um de seus componentes é voltado à empatia do clínico, mas seu uso em pesquisas com educação médica ainda é restrito (44).

1.4. Associações entre empatia e características individuais

A partir da possibilidade de medir os níveis de empatia, tornou-se factível estudar sua relação com características pessoais de médicos e estudantes de medicina e com desfechos relacionados à relação médico-paciente, à consulta médica e ao prognóstico de certas doenças.

Desde o surgimento dos primeiros instrumentos de medida de empatia, a maioria dos estudos encontra níveis mais elevados em mulheres (26,29), o que tem sido explicado através de diferenças culturais, de formação pessoal e da forma com que lidamos com as emoções. Os resultados mais recentes estão em consonância com essa tendência (27,35,45). Entretanto, esse achado é mais evidente quando a medida é em primeira pessoa, e não foi reproduzido em avaliações do comportamento empático direto, observado (46).

Existe associação dos níveis de empatia com a idade dos indivíduos avaliados, com resultados favoráveis aos mais jovens (47,48). Esse dado pode ser questionado devido ao fato de se referir a profissionais da área da saúde, sendo

difícil definir se a perda de empatia está relacionada à idade ou às experiências profissionais.

No mesmo sentido, há evidência de correlação entre os níveis de empatia de médicos e estudantes de medicina e medidas de qualidade de vida, *Burnout* e sintomas de depressão (45,49,50). Apesar de ser consagrada a ideia de que os ambientes acadêmico e profissional influenciam a empatia desses indivíduos, certamente existem outros fatores, já que até traços de personalidade já foram associados aos níveis de empatia (51).

A intenção de seguir determinadas especialidades médicas também está associada aos níveis de empatia de estudantes de medicina. De modo geral, aqueles que pretendem especialidades com contato direto com os pacientes, como medicina de família, clínica médica, psiquiatria e pediatria, apresentam níveis de empatia maiores que os estudantes que buscam especialidades orientadas por tecnologia ou procedimentos, como anestesiologia, radiologia e patologia (52,53). Estudos com médicos formados obtiveram resultados semelhantes (27,54).

Por fim, as tentativas de relacionar os níveis de empatia com os desempenhos acadêmico e clínico não tiveram sucesso (1). No entanto, há evidência de associação entre a empatia avaliada por pacientes simulados e a qualidade da história clínica e do exame físico realizado por estudantes de medicina (55), e da empatia autoavaliada através da JSPE com as notas

subjetivas de competência clínica atribuídas por professores de medicina aos seus estudantes (56).

1.5. Associações entre empatia e desfechos da consulta médica

A relação médico-paciente é o primeiro instrumento do médico, e deve ser viabilizado antes de qualquer outro. Considerando a empatia um fator fundamental para o desenvolvimento e manutenção dessa relação (57), torna-se provável que ela tenha influência positiva em desfechos associados à consulta médica (1). Essa ideia foi reforçada por estudos que encontraram associação entre a empatia do médico e maior acurácia no diagnóstico (58) e prognóstico (59).

Existe também evidência da associação entre a empatia médica percebida pelo paciente e a satisfação do paciente com a consulta e o cuidado que recebeu (60), bem como entre a empatia do médico e sua própria satisfação profissional (61). No mesmo sentido, o treinamento do médico em habilidades de comunicação tem associação com uma maior aderência do paciente ao tratamento proposto (62) e com menor risco de processos judiciais por má prática médica (63).

Estudos recentes têm demonstrado que o fato de ser consultado por um médico com maiores níveis de empatia pode trazer melhores desfechos clínicos. Hojat et al. (64) relataram que pacientes diabéticos tratados por médicos com maiores níveis de empatia têm mais chance de atingir um bom controle metabólico, avaliado através das medidas de hemoglobina glicada e LDL

colesterol. Del Canale et al. (65) encontraram menor incidência de complicações do diabetes mellitus (cetoacidose e estado hiperosmolar) em pacientes tratados por médicos com maiores níveis de empatia.

1.6. Empatia durante o curso de graduação em medicina

Em função de sua importância no contexto da relação médico-paciente, o comportamento dos níveis de empatia do estudante de medicina durante o curso de graduação passou a ser alvo de pesquisa em educação médica.

Os primeiros estudos sobre o tema avaliaram a empatia de estudantes de medicina através de corte transversal ao logo do curso e verificaram uma tendência de queda de empatia (66-68). Estudos realizados posteriormente, porém com metodologia semelhante, relataram em sua maioria a mesma tendência de declínio da empatia (49,69,70), enquanto Todres et al. (71) encontraram níveis estáveis e Magalhães et al. (72) verificaram que estudantes no final do curso tinham empatia maior que aqueles no início do curso.

Outros pesquisadores fizeram uma avaliação longitudinal dos níveis de empatia de estudantes de medicina ao longo da graduação, e a maioria encontrou queda progressiva (7,11,73), especialmente durante a fase clínica do curso (7,11). Uma revisão sistemática de 2011 (10) concluiu que os resultados dos estudos realizados até então sugerem que existe queda de empatia ao longo do curso de graduação em medicina. Cabe ressaltar que a maioria dos estudos sobre o tema

foram realizados em escolas médicas americanas, e seus resultados podem estar associados a características culturais específicas. Estudos longitudinais de outros países, publicados depois dessa revisão, encontraram queda (74) ou estabilidade (75) dos níveis de empatia ao longo do curso médico.

Os dados descritos não levam a um consenso, o que desencadeia debates sobre os achados e seu significado (76-79). No entanto, o que temos de evidência até o momento aponta para uma tendência de queda de empatia ao longo do curso de graduação em medicina, especialmente em sua fase clínica, quando há maior contato dos estudantes com os pacientes.

A causa mais comumente relatada para esse processo de perda de empatia é o desconforto proveniente de diversos aspectos do currículo oculto (10). Este pode ser definido como um grupo de influências transmitidas aos estudantes de forma indireta, como parte integrante mas não abertamente aceita do aprendizado médico.

Usualmente, o estudante inicia o curso de graduação com entusiasmo e idealismo (70), o que pode diminuir quando do contato com algumas realidades da medicina como a doença o sofrimento e a morte, além da mudança de foco em direção à tecnologia (69). Somam-se a isso os eventos de assédio (49), a sobrecarga de trabalho (80) e a falta de suporte social dos pares ou da família (73).

Um estudo de Afghani et al (81) descreveu que a pressão do tempo e a falta de modelos positivos de prática médica são os principais fatores que

dificultam o aprendizado de empatia na perspectiva dos estudantes de medicina. Nesse contexto, com a falta de espaços formais para reflexão, podem surgir mecanismos de defesa como o distanciamento afetivo e o cinismo (11,70). Esse processo afeta diretamente a qualidade da relação médico-paciente e, portanto, limita o sucesso da consulta. Isso diminui a satisfação do paciente, a realização profissional do médico e os benefícios provenientes dessa interação quando positiva.

1.7. Intervenções propostas para o ensino de empatia

Cerca de metade dos estudantes de medicina acreditam que é possível ensinar empatia (81). Esse dado contribui para o debate que discute se empatia é um traço de personalidade estável ou um estado momentâneo que varia no tempo e pode ser influenciado. Nesse sentido, diversas intervenções didáticas já foram propostas com o intuito de manter ou aumentar a empatia de estudantes de medicina. Esse desfecho foi medido, na maioria dos estudos, através de questionários autoaplicados, sendo a JSPE a mais utilizada.

Alguns estudos relataram o uso de artes criativas como literatura, poesia e cinema para o ensino de empatia (82,83). Nesse tipo de atividade, as artes em si podem ser complementadas por discussões em pequenos grupos com o objetivo de permitir um melhor entendimento do ponto de vista do paciente em diferentes situações (84). Os resultados de grande parte desses estudos mostram aumento dos níveis de empatia.

O uso de narrativa reflexiva também tem sido relatado como benéfico à empatia de estudantes de medicina (85,86), seja através de ensaios sobre experiências pessoais de doença ou pelo ponto de vista dos pacientes. O mesmo foi feito com a prática teatral, na qual o estudante atua no papel do paciente (87) ou apresenta os desafios dos processos de envelhecimento e adoecimento (88). Ambos os estudos encontraram aumento de empatia, mas o último descreveu que essa mudança não se sustentou em reavaliação após algumas semanas.

Uma das estratégias mais utilizadas para o ensino de empatia é o treinamento em habilidades de comunicação e habilidades interpessoais (89-91), com foco no componente cognitivo da empatia. Assim como as intervenções descritas anteriormente, os resultados desses estudos foram, em sua maioria, positivos.

Observar entrevistas com pacientes ou entrevistá-los de fato também pode aumentar a empatia de estudantes de medicina. Esse tipo de atividade foi proposto por alguns autores (92-95) que apresentaram vídeos com a fala de seus pacientes ou proporcionaram a visita de estudantes à casa de pacientes com doenças crônicas. De forma similar, o aprendizado através da experiência, no qual o estudante assume o papel do paciente, também levou ao aumento de empatia (96,97).

Por fim, Bayne (98) associou algumas das intervenções acima descritas em um programa curricular desenvolvido especificamente para aumentar a empatia de seus estudantes. Esse estudo obteve o aumento de empatia de maior magnitude

já descrito e usou para essa avaliação a escala CARE, preenchida por pacientes simulados, antes e após as intervenções.

Uma revisão sistemática recente (84) sugere que, a partir dos resultados descritos na literatura, intervenções didáticas podem manter ou aumentar os níveis de empatia de estudantes do curso de graduação em medicina. A mesma revisão sugere que a medida da empatia seja realizada também a longo prazo, a fim de avaliar a longevidade dos efeitos das intervenções. Um estudo de Hojat et al. (99), publicado após essa revisão, mostrou que intervenções aplicadas de forma sequencial podem sustentar o ganho inicial de empatia.

1.8. Simulação como técnica de ensino

A Simulação é uma técnica que reproduz e amplifica experiências reais através de cenários dirigidos, que enfatizam os aspectos importantes do mundo real de uma maneira completamente interativa (100). Dessa forma, oferece aos participantes a oportunidade de resolver problemas e tomar decisões em um ambiente controlado, seguro, e mesmo assim semelhante ao original.

A origem da Simulação como técnica de ensino provavelmente remonta ao final do século XVII, quando foram usados na França manequins obstétricos para a instrução de parteiras (101). O objetivo da prática já era permitir algum grau de treinamento sem a necessidade do auxílio incômodo das pacientes.

Em 1910, uma extensa avaliação da educação médica nas escolas dos Estados Unidos e Canadá gerou o Relatório Flexner (102), que cita os mesmos manequins obstétricos e refere-se ao uso da Simulação de forma mais abrangente para o ensino e avaliação de alunos de medicina.

No início do século XX, quando foi introduzida na aviação, a simulação continuou sendo realizada com o intuito de desenvolver ou aprimorar comportamentos de profissionais envolvidos em atividades de risco. Um de seus maiores valores é a possibilidade de repetição, com o objetivo de aperfeiçoar uma ação, um procedimento ou até uma conversação sem expor nenhuma das partes a riscos (103).

Em medicina, a aquisição e manutenção de habilidades têm sido os objetivos educacionais mais comuns da simulação (104). Como a tecnologia necessária é de menor custo e a capacitação de instrutores é mais simples, esse tipo de treinamento é amplamente difundido nas escolas médicas. Devido à maior facilidade em mensurar os resultados obtidos, também é nessa área que se concentra grande parte da pesquisa em simulação. Há evidência da eficácia dessas técnicas, com retenção do aprendizado satisfatória (105,106).

A partir da década de 60, o desenvolvimento de manequins mais sofisticados permitiu a realização de cenários cada vez mais complexos. Desde então, a Simulação tem sido usada com sucesso para o treinamento de manejo de crise, trabalho em equipe (107) e liderança. Ao incorporar habilidades de

comunicação interpessoal e noções de profissionalismo, as práticas de simulação se tornaram mais autênticas (108) e humanas.

Uma forma de aumentar o realismo dos cenários de alta fidelidade e potencializar a experiência de aprendizado é a integração de pacientes simulados (109). Estes são pessoas treinadas para reproduzir de forma fidedigna a apresentação clínica de um paciente; não apenas sua história, mas também a linguagem corporal, os achados físicos, as características emocionais e de personalidade (110).

A interação de pacientes simulados com os participantes da simulação permite que os objetivos de cada cenário sejam alcançados de forma sistemática, mas ao mesmo tempo interativa. Em um ambiente controlado, os alunos têm a chance de avaliar e aprender com as ações que realizaram e decisões que tomaram, sem a pressão da realidade. Além disso, podem experimentar as sensações de um atendimento, e conhecer antecipadamente suas próprias reações pessoais.

O *feedback* é, provavelmente, a variável mais importante para a promoção de um aprendizado efetivo com simulação (111). Isso deriva do entendimento de que a reflexão é um passo crucial no processo de aprendizado por experiência, ao auxiliar o aluno a integrar as revelações da experiência com suas ações futuras (112,113). Existem evidências do impacto positivo do *feedback* na performance de seus participantes e até em desfechos relacionados às doenças. Um estudo com cenários de ressuscitação cardiopulmonar encontrou melhora de desfechos como

o retorno da circulação espontânea no grupo de participantes que recebeu o treinamento com feedback (114).

Uma das formas de *feedback* em simulação é o *debriefing*. Não há um termo na língua portuguesa que o substitua de forma satisfatória. Sua origem é militar, e se refere à prestação de contas dos soldados que voltavam das missões na guerra (115). Suas informações e impressões eram analisadas e usadas para o desenvolvimento de estratégias para missões futuras, tendo fins educacionais e operacionais (116). Ainda no contexto militar, o *debriefing* tinha o papel de auxiliar os soldados no processo de recuperação após eventos traumáticos, reduzindo o dano emocional e permitindo um retorno mais precoce às atividades de combate. Desde então, notou-se a importância da narrativa para reconstruir o que havia acontecido, e o papel do grupo no desenvolvimento de novas estratégias (116).

Em simulação clínica, o *debriefing* costuma ser feito logo após a experiência prática, e tem grande importância ao trazer à tona dilemas clínicos e situações de dúvida geradas pela experiência da simulação (117). Para que o *debriefing* funcione, o aluno deve encontrar um ambiente que seja ao mesmo tempo desafiador e emocionalmente seguro; e deve se sentir à vontade para compartilhar experiências de uma maneira franca, aberta e honesta (115).

Essas características do *debriefing* exigem a presença de um instrutor com formação especial. Ao contrário do instrutor tradicional, que monopoliza a verdade e nem sempre conquista a confiança dos participantes, o facilitador é o responsável pela criação de um ambiente acolhedor, no qual os alunos se sintam

valorizados, respeitados e livres para aprender. O facilitador conduz o *debriefing* de forma a envolver todos os participantes, e quando necessário direciona a discussão para alcançar os objetivos determinados previamente.

2. OBJETIVOS

2.1. Objetivos do Artigo 1

Schweller M, Ribeiro DL, Celeri EV, Carvalho-Filho MA. It is good to be a doctor: preserving empathy through a positive look into medicine. (SUBMETIDO)

Em resumo, o artigo 1 relata o desenvolvimento de uma série de atividades de ensino oferecidas a estudantes do primeiro ano do curso de graduação em medicina da Faculdade de Ciências Médicas (FCM) da Universidade Estadual de Campinas – UNICAMP em uma disciplina curricular, com o intuito de proporcionar uma apresentação positiva da prática médica, especialmente da relação médico-paciente.

Os objetivos desse artigo são:

(1) avaliar o impacto das atividades da disciplina curricular em questão nos níveis de empatia dos estudantes do primeiro ano de medicina, através da Escala Jefferson de Empatia Médica (JSPE);

(2) avaliar se os níveis iniciais de empatia desses estudantes têm relação com a variação da empatia após a conclusão das atividades da disciplina.

2.2. Objetivos do Artigo 2

Schweller M, Costa FO, Antônio MÂRGM, Amaral EM, Carvalho-Filho MA. The impact of simulated medical consultations on the empathy levels of students at one medical school. Acad Med. 2014;89(4):632-7.

O artigo 2 refere-se à elaboração de uma atividade de simulação de consultas médicas com pacientes simulados, representados por atores profissionais. Nessa atividade, estudantes do quarto ano e do sexto ano do curso de graduação em medicina da FCM-UNICAMP realizaram as consultas no papel de médicos de uma Unidade Básica de Saúde. Após as consultas, estudantes e professores participaram do *debriefing*, momento em que são discutidos os sentimentos do paciente e do estudante, além de outros temas relacionados à relação médico-paciente e à prática da medicina.

O objetivo desse artigo é:

(1) avaliar o impacto de um novo tipo de simulação de consultas médicas, com pacientes simulados e *debriefing* estendido, nos níveis de empatia dos estudantes, através da JSPE e do índice de Reatividade Interpessoal (IRI).

2.3. Objetivos do Artigo 3

Schweller M, Passeri SMRR, Carvalho-Filho MA. Simulation with standardized patients and an extended in-depth debriefing: dealing with students' emotions. (SUBMETIDO)

O artigo 3 refere-se à mesma atividade de simulação de consultas médicas com pacientes simulados, concentrando-se nas experiências e percepções dos estudantes relacionadas à participação em um *debriefing* com duração estendida (cerca de 2 a 3 horas por encontro) e focado nas emoções que surgem durante a consulta médica.

Os objetivos desse artigo são:

(1) avaliar a viabilidade de abordar diretamente as emoções do paciente e do estudante durante o *debriefing* da atividade de simulação de consultas, especialmente no que tange à aceitação do método pelo estudante;

(2) avaliar a percepção dos estudantes em relação aos desfechos educacionais e profissionais relacionados à atividade de simulação com *debriefing* estendido focado na abordagem das emoções.

3. CAPÍTULOS

3.1. Artigo 1

Schweller M, Ribeiro DL, Celeri EV, Carvalho-Filho MA. It is good to be a doctor: preserving empathy through a positive look into medicine. (SUBMETIDO)

It is good to be a doctor: preserving empathy through a positive look into medicine

Marcelo Schweller, MD, Diego Lima Ribeiro, MD, Eloisa Valler Celeri, PhD, and Marco Antonio de Carvalho-Filho, PhD

Dr. Schweller is assistant professor, Department of Emergency Medicine, Faculty of Medical Sciences, State University of Campinas (Unicamp), Campinas, Brazil.

Dr. Ribeiro is assistant professor, Department of Emergency Medicine, Faculty of Medical Sciences, State University of Campinas (Unicamp), Campinas, Brazil.

Dr. Celeri is professor of medicine, Department of Psychiatry, Faculty of Medical Sciences, State University of Campinas (Unicamp), Campinas, Brazil.

Dr. Carvalho-Filho is professor of medicine, Department of Emergency Medicine, Faculty of Medical Sciences, State University of Campinas (Unicamp), Campinas, Brazil.

Correspondence should be addressed to Dr. Schweller, Departamento de Clínica Médica, Faculdade de Ciências Médicas, Universidade Estadual de Campinas (Unicamp), Rua Tessália de Vieira Camargo, 126, Cidade Universitária Zeferino Vaz, Campinas – SP, CEP 13083-887, Brazil. Telephone: (+5519)99715-2818; email: mschweller@gmail.com.

Abstract

Purpose: To examine the impact of the reformulation of a curricular course, designed to be an initial outlook on the medical practice, on the empathy levels of first-year medical students of a Brazilian University.

Method: In 2012 and 2013, two consecutive classes of first-year medical students (n=166) participated in a curricular course with weekly meetings over the course of 4 months. Several activities were proposed with the intention of introducing students to the reality of medical practice and the doctor-patient relationship, including conversations with patients and experienced physicians, supervised visits to the hospital with selected physicians, and theatrical performances portraying caricatures of inadequate medical consultations. Every activity was followed by a group discussion based on reflection. Students' empathy levels were assessed using the Jefferson Scale of Physician Empathy (JSPE) before and after the course.

Results: The mean pretest JSPE score was 117.9 and increased to 121.3 after the intervention ($p<0.001$), with an effect size of 0.38. The increase was greater among students with lower initial JSPE scores.

Conclusions: These results suggest that early curricular interventions that present medicine in a positive way may enhance medical students' empathy levels. The interaction with positive role models and the empowerment of patients and actors in medical education may have played an important part in the learning process.

Throughout history, the practice of medicine was characterized by committed physicians who were satisfied with their profession, and this has always been recognized and admired by patients.[1] Recent decades have witnessed many changes in the way we practice medicine, and although there still are many physicians who are proud of their profession and patients proud of their physicians, this happy group of people is probably shrinking. Unfortunately, this process starts before the professional practice itself, during undergraduate medical education, when the medical students' empathy levels may begin to decrease.[2,3]

At first, medical students are often full of dreams and expectations and are fulfilled by the prospect of self-development and of contributing to the benefit of the community.[4] However, medical school is a period of immersive contact with disease, suffering and death that often occurs at an age at which the students have had little personal experience with these issues and few opportunities to reflect on them.

To address this challenge in a positive way, it would be essential for the student to have by his side a teacher who has reflected on it and who realizes the purpose and the meaning of the commitment necessary to be a good physician. However, teachers themselves may be dissatisfied with their profession, and eventually convey to the student the impression that he or she should be less personally involved with the issues raised by their patients in their daily practice.

Not infrequently, students are confused by these negative role models, questioning the motivations that led to their choice of career, and this ends up distorting the way they see the practice of medicine. These experiences throughout

the medical program, known as the hidden curriculum, interfere in the students' capacity of being empathic and of developing genuine bonds.

This process directly affects the patients: it has been shown that physician's empathic behavior is associated with patient satisfaction,[5,6] adherence to treatment[6,7] and treatment outcomes.[8,9] It is also harmful to the doctor, who loses sight of the meaning of his day-to-day practice and feels frustrated about having moved away from the practice of medicine he once believed in. In this context, a defense mechanism may emerge in reaction to an environment perceived as hostile, culminating in the development of a cynical[10] and even arrogant attitude.

With this in mind, we felt the need to stimulate, from the beginning of the medical program, discussion and reflection about the role of the doctor in the doctor-patient relationship. This occurred in a curricular rotation, through the development of several activities with real-world appeal, offered to first-year medical students in a Brazilian university. The purpose of this study is to examine the impact of those interventions on students' empathy levels.

Methods

Participants

The study was performed with two consecutive classes of first-year students (n=166) at a medical school in Brazil throughout 2012 and 2013. At the beginning of the activities of the curricular rotation that were the focus of this study, the students had already undergone a basic course in medical ethics, an introduction

to the study of the Brazilian public health system, and courses that comprised knowledge of anatomy, histology, biochemistry and physiology.

Health and Medicine

In the second half of the first academic year of the undergraduate medical program in our medical school in Brazil, the students participate in activities of a discipline called *Health and Medicine (H&M)*. This course was, at first, composed of traditional lectures and some visits to our teaching hospital, but the teachers were a little discouraged, and the students a little uninterested.

Through a partnership between the department of psychiatry and the discipline of emergency medicine, we had the opportunity to reformulate this course around one main idea: to present medicine in a positive way, reinforcing its meaning and the fulfillment that we can achieve in our everyday lives as doctors.

We made sure that all the issues were discussed based on real situations, including the suffering and difficulties encountered by the patients and the physician. Our idea was to show that sharing someone's pain is not necessarily painful. Moreover, contact with the experiences of our patients invites us to reflect on ourselves, which invariably leads to personal growth and development.

The activities of this course took place on Tuesday mornings during four months for the class of 2012 and for the class of 2013, and are described below.

Interviews with physicians

In the first meetings, students heard testimony from professors from different medical specialties (emergency medicine, internal medicine, oncology, surgery, pediatrics, OB&Gyn) who are notoriously satisfied with their profession. In these meetings, they shared with the students a bit of their life stories, including their paths in the medical profession, from the moment they chose medicine as their career, through the difficulties encountered on the way and how they handled them, up to the nature of their current practice. The students asked questions freely and were able to understand the meaning of the medical profession to these professionals. The sessions were often intense and emotional, and lasted up to two hours.

Interviews with patients

Although there are reports of the direct participation of patients in medical education at other institutions, our school had not yet taken that step in a systematic way. After the interviews with physicians, which occurred in the first few weeks of the course, we invited patients undergoing care at our teaching hospital and clinic to join us in the education of our medical students.

To this end, we instructed those patients to tell their stories to the students, emphasizing their experiences with the health services, especially with their physicians, and their perceptions and feelings about the disease. In 2012, we heard a female patient that had been admitted to our hospital due to Wegener's granulomatosis, and in 2013 we interviewed two patients with gynecologic cancer.

The students were able to notice that disease brings fear and limitations, but can also be a trigger for reflection and even an opportunity for change.

Supervised visits to the hospital

In the late morning, the students visited, in pairs, the emergency room, the intensive care unit, the internal medicine ward or the psychiatric emergency center of our hospital. They were supervised by selected physicians who outspokenly enjoy being doctors, and followed them during actual calls. Each student had one supervised visit to the hospital.

In this activity, the students were able to observe the actual functioning of these areas of the hospital, participating in rounds, consultations, conversations with family members and interactions among members of the healthcare team. Whenever possible, the instructors held discussions with patients or family members about the course of the disease, including issues related to death and end of life care. After the service, the doctors remained available to reflect on the sessions and answer questions from students.

At another moment, the students went to the hospital by themselves to talk to a patient who was waiting for a consultation in the outpatient clinic. In these conversations, the students listened to the opinions of the patients and were able to better understand the relationship of those patients with their physician and the health care system. After each visit to the hospital, supervised or not, the students were instructed to perform reflexive writing and their perceptions were discussed in a group of classmates and teachers.

Videotaped simulated consultations

At one of the weekly meetings, we displayed videotaped simulated consultations using standardized patients (SPs). The case was that of a male patient who was having difficulties in the treatment of his chronic arterial hypertension because of the medication's side effects. One of the authors (M.S.) conducted the same clinical situation three times, each time exhibiting a different attitude.

In the first consultation, the doctor clearly placed himself above the patient, conducting the interview in a distant and even rude manner. Throughout the second consultation, the doctor behaved politely and followed some of the patients' hints, but still displayed a critical and judgmental attitude towards the patient. Finally, in the last consultation, the doctor displayed genuine empathic behavior, and only then did the patient feel comfortable sharing his concerns and describing the uncomfortable side effects that accompanied the use of the prescribed medication.

The students were able to observe and discuss the doctor-patient relationship and imagine how the patient would feel in each consultation. They reported realizing that the attitude of the physician affects the outcome of the consultation, because in some situations the patient does not feel comfortable sharing what is actually happening with the physician. In addition, we were able to demonstrate that the last consultation was no longer than the previous ones, despite its considering the ideas and concerns of the patient. Students were

surprised by the fact there are studies demonstrating that the patient-centered consultation does not take longer.

Caricatures of medical consultations

Finally, teachers and SPs participated in simulated situations in front of the audience of first-year students, portraying caricatures of inadequate medical consultations. In this activity, the authors (MS and MACF) intentionally behaved inappropriately in the role of the physician, by embodying some common negative clichés of the doctor-patient relationship, such as interrupting the patients' speech, not following evident hints, blaming patients for their illnesses and being rude.

The SPs were instructed to stop the scene whenever they found it necessary to share with the audience what the patient thought and felt in response to certain of the doctors' actions. During the discussion held after the activity, the students shared with us their perceptions about the issues discussed and even personal stories in which they have experienced similar situations when they themselves or family members were patients.

Measurement of empathy

The first-year medical students completed the student version of the Jefferson Scale of Physician Empathy (JSPE) on the first day of class and after the end of the course. The JSPE is a 20-item, 7-point Likert scale (strongly agree=7, strongly disagree =1) that measures an orientation toward empathic engagement in patient care;[11] it has already been validated in Portuguese.[12] Because of a

skewed distribution of empathy levels, we used Wilcoxon's test in the pretest-posttest analysis.

Results

Empathy levels

The mean pretest JSPE empathy score of the first-year students was 117.9 (SD = 8.7); it increased to 121.3 (SD = 7.7) after the activities ($P < .001$), with an effect size (ES) of 0.38. *Figure 1* offers a visual presentation of the mean pre- and posttest JSPE scores for these students.

With the intention of determining which students had the greatest variations in empathy levels after the activities, the initial JSPE scores were divided into quartiles. We observed that the increase in empathy levels was significantly greater for those students that had a lower level of empathy before the activity. *Figure 2* summarizes these data.

Student participation

The participation of the first-year medical students in the proposed activities increased progressively over the weeks. In the first couple of weeks, only a few students actively participated in the interviews, asking questions of our guests and discussing the topics presented. Afterwards, particularly during interviews with the patients, we observed the active participation of a greater number of students and more in depth discussions.

During discussions of each of the activities, we confirmed our idea that medical students enter the undergraduate program with very positive attitudes towards the practice of medicine. However, we observed that even in the first year of medical school, some students already express questionable ideas regarding the doctor-patient relationship, such as the complete authority of the physician to control the consultation, the need to overtly blame the patients' lifestyles as the causes of their illnesses, and threatening the patients with the complications that may arise from the diseases if they do not follow their treatment properly.

From the moment at which students established a bond of trust with us, they began to share the difficulties they were having with classmates, teachers, and summative assessments, among other issues. The students also requested that the curriculum of the medical program could dispose additional moments in which they could freely discuss the issues of the hidden curriculum and personal issues, among themselves and with more experienced individuals.

Discussion

Although some studies have shown maintenance of[13] or increases in[14-17] medical students' empathy levels during the undergraduate course, a recent systematic review[18] indicated that most studies on the subject found a decline in empathy, with the hidden curriculum being the most reported cause for this phenomenon. This finding is in agreement with the students' perception that the main causes for the decline in empathy are the lack of positive role models and time pressure.[19]

In our study, we observed that the first-year medical students already show dissatisfaction with some aspects of their academic routines, particularly the interpersonal relationships, and with the lack of adequate opportunities to discuss and reflect on these issues. In this way, it became clear that the hidden curriculum starts from the first year of medical school, not only during the clinical course. Moreover, upon hearing some of these students' ideas regarding the doctor-patient relationship, we wondered whether this process begins even earlier. We may assume that their previous experiences as patients or accompanying their relatives in consultations prior to entering medical school may have created a conception that is only enhanced by the hidden curriculum.

Therefore, we believe that issues related to professionalism, such as empathy, must be addressed from the beginning of the medical program. In our study, we observed an increase in self-assessed empathy levels of first-year medical students after a series of targeted activities with real-world appeal. At this stage of academic training, most students believe they will enjoy being doctors, and we reinforced this idea throughout our discussions and by acting as positive role models when interacting with our real patients in the clinic or the hospital.

We rely on the hypothesis that the first contact of the medical students with the reality of the medical profession is critical to the development of their professionalism, especially regarding the way they see the doctor-patient relationship. In this sense, a positive first experience within the medical curriculum may shield or buffer the influence of negative role models in the future.

About half of medical students believe that empathy can be taught.[19] Some studies have demonstrated that targeted interventions may increase the empathy levels of medical students[20] and residents, and their results were summarized in a recent review.[21] There is also evidence that activities performed sequentially may sustain the initial gain.[22]

We know that medical students react in a very personal way to the challenges of medical school, but it seems to us that many students bring concepts that are not originally theirs; rather, they belong to the models that they have encountered over the course of their studies, or even earlier, as we have speculated. One of these concepts is the need for personal distance from the patient with the purpose of self-protection, an attitude that frequently culminates in cynicism and loss of empathy. As they participated in the proposed activities, we noticed that many of these students felt more comfortable with the idea of the physician being closer to patients and acting more empathically in his or her daily practice. The students with lower initial empathy might have been those who were the most susceptible to the hidden curriculum and to negative role models, and thus would have had the greatest gains in empathy after the interventions.

Empowering patients as medical teachers is probably the clearer way of transmitting the importance of listening to them and respecting their autonomy during a medical consultation. When we interviewed our patients in the classroom with the students, we had several lessons on what the patient thinks and feels, and it became evident that this is not always shared with the doctor. We expect that the students who participated in this activity can carry those lessons throughout their

professional lives, empowering their patients in the doctor-patient relationship, in developing the treatment plan and even in their daily learning as doctors.

Similarly, we believe that the actors also played an important educational role for our students. In the caricatured consultations, the actors offered feedback on how the characters were feeling and what they would probably answer to the doctor if they felt free to say anything. Clarifying those emotions can help us to avoid unnecessary constraints in the future.

By starting a good relationship with the students in the first year of medical school, an opportunity is created for the longitudinal follow-up of these students throughout the course, with the purpose of reinforcing ideas about empathy and professionalism and to encourage personal growth. Ideally, there would be in each rotation at least one instructor committed to those ideas, who enjoys being a physician and, of course, a teacher.

Study limitations

The observed increase in the empathy levels of our first-year medical students may have been overestimated by the maturation bias, a natural process that leads participants to change over time, and by the Hawthorne effect, the tendency of people to perform better when participating in an experiment and being observed. These phenomena may have led to higher posttest scores.

In a similar way, the finding that the students with lower initial empathy levels had higher increases after the intervention may have been overestimated due to the phenomenon of regression to the mean (the tendency of low scores to

increase and high scores to decrease on repeat testing) and the ceiling effect (those with higher scores have less room to improve).

The use of self-assessed empathy measures always raises the question about the impact of these results on the actual behavior of the students during their real clinical practice, when they are interacting with patients. However, we believe that the results demonstrate at least the intention of being empathic and the students' perceptions of the importance of empathy in the doctor-patient relationship.

Funding/Support: The authors received funding from the State of Sao Paulo Research Foundation (FAPESP) and the National Counsel of Technological and Scientific Development (CNPq).

Other disclosures: None.

Ethical approval: Granted by the Research Ethics Committee on Human Beings from the Faculty of Medical Sciences of the State University of Campinas (Unicamp).

Previous presentations: The authors presented portions of this work at the Association for Medical Education in Europe (AMEE) Conference in Prague, Czech Republic, August 2013.

References

1. Colgan R. Advice to the Young Physician: On the Art of Medicine. New York: Springer 2009.

2. Newton BW, Barber L, Clardy J, Cleveland E, O'Sullivan P. Is there hardening of the heart during medical school? Acad Med 2008;83:244-9.

3. Hojat M, Vergare MJ, Maxwell K, Brainard G, Herrine SK, Isenberg GA, et al. The devil is in the third year: a longitudinal study of erosion of empathy in medical school. Acad Med 2009;84(9):1182-91.

4. Ferrinho P, Sidat M, Fresta MJ, Rodrigues A, Fronteira I, Silva F, et al. The training and professional expectations of medical students in Angola, Guinea-Bissau and Mozambique. Human Resources for Health 2011;9:9.

5. Roter DL, Stewart M, Putnam SM, Lipkin M Jr, Stiles W, Inui TS. Communication patterns of primary care physicians. JAMA 1997;277:350–6.

6. Kim SS, Kaplowitz S, Johnston MV. The effects of physician empathy on patient satisfaction and compliance. Eval Health Prof 2004;27:237–51.

7. Squier RW. A model of empathic understanding and adherence to treatment regimens in practitioner–patient relationships. Soc Sci Med 1990;30:325–39.

8. Hojat M, Louis DZ, Markham FW, Wender R, Rabinowitz C, Gonnella JS. Physicians' empathy and clinical outcomes for diabetic patients. Acad Med 2011;86:359–64.

9. Del Canale S, Louis DZ, Maio V, Wang X, Rossi G, Hojat M, et al. The relationship between physician empathy and disease complications: An empirical study of primary care physicians and their diabetic patients in Parma, Italy. Acad Med 2012;87:1243–9.

10. Kopelman, L. Cynicism among medical students. JAMA 1983;250(15):2006-10.

11. Hojat M, Mangione S, Nasca TJ, Cohen MJM, Gonnella JS, Erdmann JB, et al. The Jefferson Scale of Physician Empathy: Development and preliminary psychometric data. Educ Psychol Meas 2001;61:349 –65.

12. Paro HB, Daud-Galotti RM, Tiberio IC, Pinto RM, Martins MA. Brazilian version of the Jefferson Scale of Empathy: Psychometric properties and factor analysis. BMC Med Educ 2012;12:73.

13. Quince TA, Parker RA, Wood DF, Benson JA. Stability of empathy among undergraduate medical students: A longitudinal study at one UK school. BMC Med Educ 2011;11:90.

14. Kataoka H, Norio Koide N, Hojat M, Gonnella J. Measurement of Empathy among Japanese Medical Students: Psychometrics and Score Differences by Gender and Level of Medical Education. Acad Med 2009;84:1192-7.

15. Roh M, Hahm B, Lee D, Suh D. Evaluation of Empathy among Korean Medical Students: A Cross-Sectional Study Using the Korean Version of the Jefferson Scale of Physician Empathy. Teach Learn Med 2010;22:167-71.

16. Magalhães E, Salgueira AP, Costa P, Costa MJ. Empathy in senior year and first year medical students: a cross-sectional study. BMC Med Educ 2011;11:52.

17. Hegazi I, Wilson I. Maintaining empathy in medical school: It is possible. Med Teach 2013;35:1002-8.

18. Neumann M, Edelhäuser 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;86:996-1009.

19. Afghani B, Besimanto S, Amin A, Shapiro J. Medical Students' Perspectives on Clinical Empathy Training. Education for Health 2011;24(1).

20. Schweller M, Costa FO, Antônio MA, Amaral EM, Carvalho-Filho MA. The Impact of Simulated Medical Consultations on the Empathy Levels of Students at One Medical School. Acad Med 2014; Feb 19. [Epub ahead of print]

21. Batt-Rawden SA, Chisolm MS, Anton B, Flickinger TE. Teaching empathy to medical students: an updated, systematic review. Acad Med 2013;88(8):1171-7.

22. Hojat M, Axelrod D, Spandorfer J, Mangione S. Enhancing and sustaining empathy in medical students. Med Teach 2013;35:996-1001

Figures and Legends

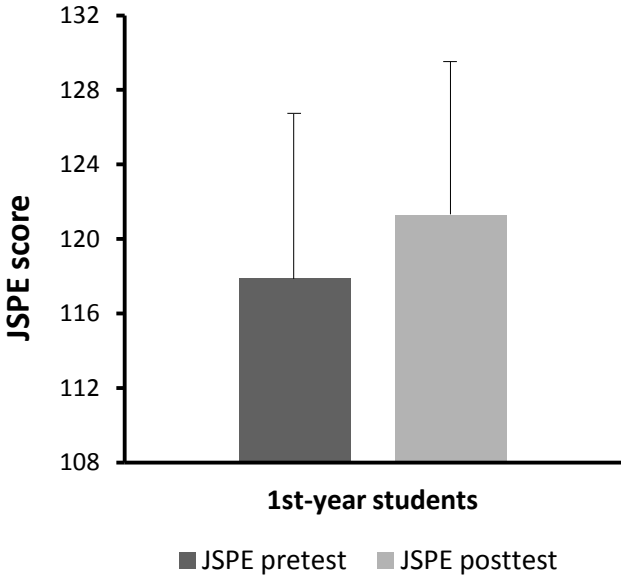


Fig.1 – Mean empathy levels of 166 first-year medical students before and after the activities. Students participated in several activities with real-world appeal related to the doctor–patient relationship and the practice of medicine. Empathy was measured with the Jefferson Scale of Physician Empathy (JSPE). There was a significant difference between pretest and posttest scores ($P < .001$).

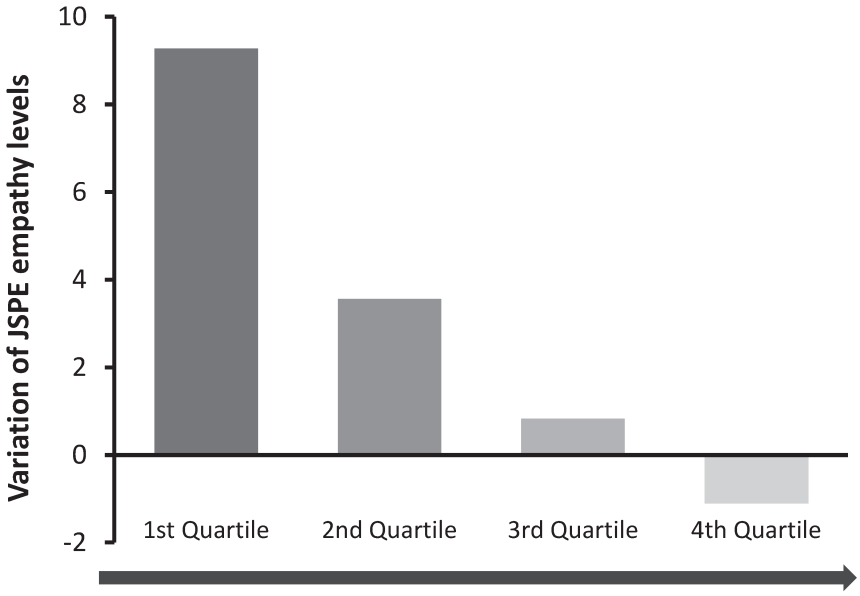


Fig.2- Variation of JSPE empathy levels of first-year medical students after the intervention according to the quartiles of pretest JSPE scores. The mean increase in scores for students in the 1st and 2nd quartiles (lower initial empathy) was significantly greater than the mean increase for the students in the 3rd and 4th quartiles (higher initial empathy) with *P*< .001. JSPE= Jefferson Scale of Physician Empathy, medical student version.

3.2. Artigo 2

Schweller M, Costa FO, Antônio MÂRGM, Amaral EM, Carvalho-Filho MA. The impact of simulated medical consultations on the empathy levels of students at one medical school. Acad Med. 2014;89(4):632-7.

AAMC

Association of
American Medical Colleges
655 K Street, N.W., Suite 100, Washington, D.C. 20001-2399
T 202 828 0400 F 202 828 1125
www.aamc.org

August 5, 2014

Dear Marcelo,

I am writing to grant you permission to reprint the following article:

Schweller M, Costa FO, Antônio MÂ, Amaral EM, de Carvalho-Filho MA. The impact of simulated medical consultations on the empathy levels of students at one medical school. Acad Med. 2014 Apr;89(4):632-7.

in your Ph.D. thesis, contingent upon the author agreement that was completed at the time of publication. Please make sure to include a credit line attributing the original publication to *Academic Medicine*.

If you have any questions, please contact the journal office at (202) 828-0590 or acadmed_online@aamc.org.

Sincerely,

John Remski

John Remski
Editorial Assistant
Academic Medicine

The Impact of Simulated Medical Consultations on the Empathy Levels of Students at One Medical School

Marcelo Schweller, MD, Felipe Osorio Costa, MD, Maria Ângela R.G.M. Antônio, PhD, Eliana M. Amaral, PhD, and Marco Antonio de Carvalho-Filho, PhD

Abstract

Purpose
To examine the impact of simulated medical consultations using standardized patients (SPs) on the empathy levels of fourth- and sixth-year students at the Unicamp medical school in Brazil.

Method
Throughout 2011 and 2012, the authors conducted this study with two classes of fourth-year (n = 124) and two classes of sixth-year (n = 123) medical students. Students completed the medical student version of the Jefferson Scale of Physician Empathy before and after simulated medical consultations with SPs, followed by an in-depth debriefing dealing with the feelings of the patient about the disease, such as fear, guilt, anger, and abandonment; the feelings of the doctor towards the patient; and other topics as they arose.

Results
The simulation activity increased the empathy scores of the fourth-year students (from 115.8 to 121.1, $P < .001$, effect size = 0.61) and of the sixth-year students (from 117.1 to 123.5, $P < .001$, effect size = 0.64).

Conclusions
Although the study results were obtained via self-report—a limitation—they suggest that the effective simulation of medical consultations with SPs may improve medical students' empathy levels. One unexpected result was that this activity, during the debriefing, became a forum for debating topics such as the doctor–patient relationship, the hidden curriculum, negative role models, and emotionally significant experiences of students in medical school. This kind of activity in itself may influence young doctors to become more empathetic and compassionate with their patients and foster a more meaningful way of practicing medicine.

A meaningful doctor–patient relationship is the foundation of the practice of medicine. Without it, the application of technical knowledge acquired by the doctor during his or her training would often not be nearly as effective. Empathy stands out as one of the most important factors to ensure the success of this relationship.[1] It has been shown that an empathetic attitude from a doctor can promote greater treatment adherence in patients,[2,3] better clinical outcomes,[4,5] and greater patient satisfaction,[2,6] in addition to bringing benefits to the doctors themselves.[7,8]

In spite of its importance in patient care, the concept of empathy is marked by a history of ambiguity,[1,9] and there is currently no consensus about its definition,[10] there being many and diverse definitions available in the literature.[1] *Empathy* has been defined as a multidimensional construct[11] with an affective component—the capacity to sensitize oneself with the experiences of others—and a cognitive component—the capacity of understanding other people and communicating to them this understanding, with the intention of helping.[1,12]

Recent studies[13–20] have assessed the empathy levels of students in medical school and have had divergent results. Most of the studies revealed a tendency for empathy loss during medical school. However, in one longitudinal study,[21] no significant change was observed, and in some cross-sectional studies,[22–24] greater levels of empathy were observed in students in their final year of medical school.

Several strategies have been proposed to preserve or heighten empathy levels in medical students,[25,26] but there has not been much objective study of the impact of these strategies. In spite of the fact that there are reports of increased empathy after training involving communication techniques,[27–32] literature courses,[33,34] theatrical performances,[35] reflective writing,[36] experiential learning,[37,38] and self-care activities,[39] most studies did not use instruments that measure empathy specifically in the context of clinical care.[26]

With this in mind, and given the importance of empathy to the practice of medicine, we created a simulation activity with standardized patients (SPs). We presented students with four different clinical situations that challenged them with issues related to the doctor–patient relationship. We performed a debriefing

Dr. Schweller is assistant professor, Department of Emergency Medicine, Faculty of Medical Sciences, State University of Campinas (Unicamp), Campinas, Brazil.

Dr. Costa is assistant professor, Department of Oncology, Faculty of Medical Sciences, State University of Campinas (Unicamp), Campinas, Brazil.

Dr. Antônio is professor of medicine, Department of Pediatrics, Faculty of Medical Sciences, State University of Campinas (Unicamp), Campinas, Brazil.

Dr. Amaral is professor of medicine, Department of Obstetrics and Gynecology, Faculty of Medical Sciences, State University of Campinas (Unicamp), Campinas, Brazil.

Dr. Carvalho-Filho is professor of medicine, Department of Emergency Medicine, Faculty of Medical Sciences, State University of Campinas (Unicamp), Campinas, Brazil.

Correspondence should be addressed to Dr. Carvalho-Filho, Departamento de Clínica Médica, Faculdade de Ciências Médicas, Universidade Estadual de Campinas (Unicamp), Rua Tessália de Vieira Camargo, 126, Cidade Universitária Zeferino Vaz, Campinas–SP, CEP 13083-887, Brazil; telephone: (+5519) 9603-6684; e-mail: macarvalhofilho@gmail.com.

Acad Med. 2014;89:00–00.
First published online
doi: 10.1097/ACM.0000000000000175

to address the emotions of the patient and the student, even those that were not verbalized during the consultation.

Our goal was to assess the impact of this activity on the empathy levels of fourth- and sixth-year medical students at our medical school, measured by the medical student version of the Jefferson Scale of Physician Empathy (JSPE).[1,12,40]

Method

Participants

In Brazil, the medical school course of study takes six years. The first two years address the basic sciences and an introduction to patient care and are followed by two years of clinical study, with students beginning to perform consultations on their own in the fourth year. The two final years of the course of study are devoted to learning by practicing in the major areas of medicine, such as internal medicine, surgery, pediatrics, and obstetrics–gynecology.

All of the students who participated in the medical consultation simulations described below had already finished, in their first years of the medical program, an introductory course on medicine and the doctor–patient relationship, three courses on clinical ethics, and one course on semiotics. These activities focused on learning how to nurture and build bonds with patients, interviewing techniques and communication, and empathy in the doctor–patient relationship.

Sixth-year students. All 123 students who were in their sixth year of medical school in the classes of 2011 and 2012 at the Faculty of Medical Sciences, State University of Campinas (Unicamp) in Campinas, Brazil, participated in the intervention, which was included as a curricular activity during their rotation in emergency medicine.

Fourth-year students. Participation in the activity was voluntary for students who were in their fourth year at the same medical school in 2011 and 2012. A total of 124 students participated, which represents around 60% of the total number of students in the two classes.

The simulation activity was consistently overseen by two of us (M.S. and M.A.C.F.). When the activity took place, the sixth-year students were involved in the emergency medicine rotation, in which M.S. and M.A.C.F. are professors. The fourth-year students were not involved in a rotation that any of us were responsible for evaluating.

Instruments

JSPE. The empathy levels of the students were measured before and after the simulation activity through the JSPE, medical student version,[40,41] a 20-question Likert scale specific to the medical context. For the sixth-year students, the interval between the two measurements was approximately one month, because each student filled out the scale at the beginning of the first day and after the last day of the 30-day period in which he or she participated in the activity. For the fourth-year students, although for each student the simulation activity was also performed over a 30-day period, the intervals between measurements were approximately three months, because each student filled out the pretest scale several weeks before the beginning of the simulation activity, at the time we presented the idea and requested informed consent.

Interpersonal Reactivity Index. The empathy levels of students were also measured, during the same times, with the Interpersonal Reactivity Index (IRI) scale,[42] a Likert scale with 28 questions, not specific to the medical context.

Simulation with SPs

The sixth-year students participated in the simulation activity (described below) and debriefings (described in the next section) during their emergency rotations. Each group was composed of seven to nine students and had four weekly meetings during a 30-day period. Because there were so many students, we carried out the activity throughout 2011 for all groups in the class of 2011 students, and we did the same throughout 2012 for all groups in the class of 2012. In other words, for the sixth-year students, we carried out the simulation activity and debriefing weekly over the two years, with a different group each 30 days.

The fourth-year students did not have an emergency medicine rotation. Each of their groups was also composed of seven to nine students. During 2011, we scheduled the eight 2011 fourth-year groups; during 2012, we scheduled the eight 2012 fourth-year groups. As with the sixth-year students, each group had four weekly meetings in a 30-day period, but on different days of the week than the days used by the sixth-year students.

Before the beginning of the activity for each group, we explained the exercise to the students and stated that the purpose of the activity was not summative but, rather, formative. Furthermore, we emphasized that the main focus of the activity was discussion and that the simulated consultations were an occasion to reflect more deeply on the doctor–patient relationship. We did not mention anything about empathy.

During each of the four weekly meetings when we carried out the simulation activity, two students, chosen at random, consulted individually with an SP (i.e., two consultations per meeting), while the rest of the group and professors watched the interaction from an adjoining room. Each student in a group consulted with an SP only once, but saw the consultations of his or her colleagues in the other three meetings and participated in the debriefings of all four meetings. At each of the weekly meetings, an SP portrayed one of four clinical cases (summarized in List 1), which we had created based on our clinical and teaching experience and with the aim of generating discussions of key issues related to the consultations that the students had carried out.

Three SPs participated in the 2011 exercise, and three other SPs participated in the 2012 exercise. The SPs were professional actors who constructed their characters influenced by Stanislavsky's system and Brecht's techniques. They were also experienced in teaching and were trained to bring out feelings triggered by the disease during the consultation in each clinical case, in a way that permitted the facilitators (M.S. and M.A.C.F.) to discuss these feelings during debriefing.

Debriefing

After the end of each of the simulated consultations and a brief 10-minute break, we joined the students and actors at the debriefing table and let the conversation flow freely, even when it turned to subjects unrelated to the activity. This initial

List 1

Summaries of the Four Cases, and Related Discussion Topics, Used in Simulated Consultations by Medical Students Participating in This Study[a]

Case 1. A young man complains of fatigue and says that he believes he is sick. He has lost his job and feels guilty because his mother had to go back to work. In this case we discuss issues related to loss and guilt.

Case 2. A young woman has just been diagnosed with type 1 diabetes mellitus. She has difficulty accepting the diagnosis and understanding how her plans and goals are affected by the need for treatment. In this case we discuss the question of autonomy.

Case 3. A 53-year-old man with a history of poorly controlled arterial hypertension is having trouble dealing with the various changes proposed to control his disease. He works hard and takes care of his wife who has breast cancer. In this case we discuss the patient's anger and what lies behind it.

Case 4. A young woman is accompanied by her mother. They have evident difficulties in their relationship. The young woman is four months pregnant and a user of crack cocaine. Debriefing this case, we discuss the role of the family in the context of disease and issues related to loneliness and abandonment.

[a]During 2011 and 2012, the authors presented a total of 123 sixth-year and 124 fourth-year students at their medical school with simulated consultations using standardized patients. The consultations were based on the four clinical situations summarized above, and challenged the students with issues related to the doctor–patient relationship. Empathy levels of the students were measured before and after the simulated consultations using the Jefferson Scale of Physician Empathy. The discussion topics shown above helped guide an extensive and in-depth debriefing dealing with the feelings of the patient about the disease, the feelings of the doctor towards the patient, and other topics as they arose.

conversation was useful in alleviating possible tensions and thus creating a more relaxed environment.

After this introductory conversation, the students who participated in one of the simulated consultations on that day were encouraged to share with the group their insights about the experience of performing a medical consultation while being observed by their professors and colleagues. Most of the students reported an initial anxiety related to being observed during the consultation. This feeling decreased progressively while students began to get involved with the scenes and had to face the challenges brought by the SPs. The actor's ability to lend realism to the scenes was fundamentally important in this process.

Students were then invited to describe the clinical case that had just been portrayed by an SP. The students' descriptions, which were always rich in hints of additional issues and connections to other clinical and personal experiences and the students' feelings, served as starting points for most of the reflections and discussions on each day of the activities. In this way, parts of each debriefing varied according to the needs of each group. However, a consistent outline was followed so that each group would discuss the feelings of the patient and of the students, as well as other important topics related to the doctor–patient relationship.

The debriefing was structured to allow a discussion about the frailty of the human condition, especially when persons are challenged by disease. During debriefing, the group reflected on the feelings of the patient about the disease, such as fear, guilt, anger, and abandonment, and the feelings of the doctor towards the patient, based on the students' experiences with the SP and on their previous experiences. Given the nature of the issues discussed and the variety of students' reactions, debriefing each case took approximately two to three hours.

To foster a constructive debate and a safe environment for the student, it was essential for us, as facilitators, to promote a situation free of hierarchy, opting for education through positive reinforcement. All the facilitators' suggestions for improvement in students' behavior during the consultation, when necessary, were expressed in a way that ensured that the students did not feel negatively judged by the facilitator.

The main resource we used for the development of the debriefing was our clinical experience, as well as our reflections on the human condition. Using case observations and student comments, we discussed feelings related to illness, such as fear, guilt, anger and loneliness. Knowledge of philosophy, especially the field of ethics, was an important element in our preparation for the depth of the discussions.

At the end of each weekly session, each student and the facilitators had the opportunity to draft a final report on the day's activities. At this point, the students frequently commented on the clinical case and the difficulties they encountered, and shared with the group the most important lessons that they had learned. It was also common for students to relate previous experiences in their professional or even their personal lives, which sometimes led to the discussion of new subjects or further insight into something that had already been discussed.

Statistical analysis

Before we chose the statistical test for analyzing results, we assessed the distribution of the empathy scores. Because we found a skewed distribution, we decided to use the nonparametric Wilcoxon test to compare the changes in JSPE scores after the simulation activity.

Institutional review

Our research project was first registered with the National Committee for Ethics in Research and then submitted to the research ethics committee in human beings at the Faculty of Medical Sciences of the State University of Campinas (Unicamp), which granted us ethical approval, authorizing us to carry out our research. The activity was also presented to the students, who signed a form indicating their free and informed consent.

Results

The mean pretest score on the JSPE of all the female students was higher than that of all the male students (men: 114.6, n = 107; women: 118.1, n = 140; $P = .003$). The gender mix in the fourth year was 71 women and 53 men; in the sixth year, it was 69 women and 54 men.

The mean pretest JSPE empathy score of the fourth-year students was 115.8 (SD = 8.8); it increased to 121.1 (SD = 8.6) after the activity ($P < .001$), with an effect size (ES) of 0.61. We also observed an increase in the mean IRI empathy score, from 64.6 (SD = 11.2) to 66.8 (SD = 12.0; $P = .003$), with an ES of 0.19. Figure 1 gives a visual presentation of the mean pre- and posttest JSPE scores for these students.

The mean pretest JSPE empathy score of the sixth-year students was 117.1

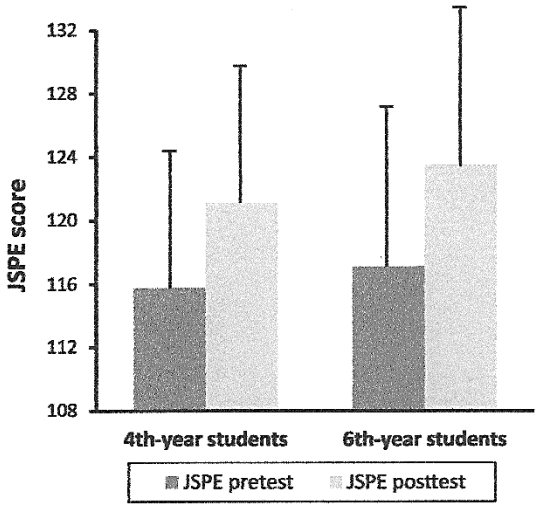


Figure 1 Mean empathy levels of 124 fourth-year and 123 sixth-year students before and after simulated medical consultations with standardized patients. Students were presented with four different clinical situations (see List 1) that challenged them with issues related to the doctor–patient relationship. Empathy was measured with the Jefferson Scale of Physician Empathy. As the figure indicates, there was a significant difference between pretest and posttest scores ($P < .001$). This study was carried out throughout 2011 and throughout 2012 at the Unicamp medical school in Brazil.

(SD = 10.0); it increased to 123.5 (SD = 9.9) after the activity ($P < .001$), with an ES of 0.64. We also observed an increase in the mean IRI empathy score, from 66.1 (SD = 11.1) to 68.3 (SD = 12.9; $P < .001$), with an ES of 0.20. Figure 1 gives a visual presentation of the mean pre- and posttest JSPE scores for these students. Although the sixth-year students had higher pretest and posttest mean empathy scores than the fourth-year students, these differences were not statistically significant.

Because the posttest was administered within 30 days for the sixth-year students but after three months to the fourth-year students, we wondered whether there was any evidence for a decrement in empathy after the exercise. We are using questionnaires to periodically reassess all the fourth-year students and to reassess the sixth-year students who have remained at our institution as residents. However, we do not yet have these follow-up findings.

Also, because the simulations were weekly for four weeks, we wondered whether there was any evidence of improvement of empathy from week to week. Although we did not formally assess empathy levels during the four weeks of simulation activities for each group, we did informally observe changes in students' behavior during that period. The students who consulted an SP on the second, third, and fourth meetings used, in their consultations, ideas and conclusions they had gained from the previous meetings; many of them also demonstrated more empathetic attitudes every week in their activities within the hospital.

Discussion and Conclusions

In the reality of Brazilian medical education, students are frequently found to have difficulties in establishing channels of communication with their patients and in demonstrating the sort of empathetic attitude necessary to the success of the doctor–patient relationship. We believe that this situation may lead the student to be dissatisfied with the quality of his or her own consultations and give rise to a feeling of impotence, which may lead to cynicism and the deterioration of medical professionalism.

The students who participated in the medical consultation simulation activity reported here showed a significant posttest increase in empathy as measured by the JSPE, with ESs of 0.61 for fourth-year students and 0.64 for sixth-year students. Several factors related to the simulation activity may have contributed to the increase in empathy levels observed in these students.

One of these factors is adequate time to reflect. Professional competence depends on developing the ability to reflect critically on past actions, but medical students' overload may limit their time and ability to make the commitment necessary for adequate reflection after each professional action. Thus, the student will not reinforce those attitudes that lead to good outcomes, nor will he or she always notice those attitudes that lead to negative patient outcomes, especially when it comes to the doctor–patient relationship. Furthermore, the student may not easily understand that the outcome of a consultation (good or bad) also affects his or her satisfaction in practicing medicine.

In our simulation activity, students were invited to reflect on their own and as a group about the consultations performed. This exercise was guided by professionals accustomed to reflection, so that the students, by example, might be encouraged to incorporate this practice into their daily lives. Furthermore, students were able to watch their colleagues' consultations and reflect on what they could have done in the same situation, many times displaying relief on noting that their colleagues' challenges were the same as their own, both during the consultation and during the discussion.

We believe that a distinguishing characteristic of our activity is the fact that it was performed by professors who practice medicine daily with their students in an emergency unit, an intensive care unit, an internal medicine ward, and an outpatient clinic. In this way, the topics discussed during the activity were not viewed by the students as idealized, intangible, or detached from reality, because they were discussing models of real medical practice.

During the debriefing, the students were encouraged to truly reach out to understand the feelings of the patient. We sought for students to realize that each one of us, as a basic challenge in life, must deal with the perception of time, which gives us a past, with both its successes and joys and also its regrets and possible feelings of guilt, and a future, with both its hopes and goals and also its fears and angst, particularly those related to death. Although this challenge is universal, the form it takes for each individual is

extremely personal. Thus, there is no way of knowing what is best for patients without listening to them, getting to know and understand them, including their feelings. In this context, the doctor can help the patient to see that being sick can be an opportunity for reflecting on positive elements of his or her life, such as past accomplishments and future goals.

Because our study's participants were undergraduate students, the discussion focused on themes of how to communicate and provide comfort to the patient, as well as on the phenomena of transference and countertransference. This approach facilitated the understanding of certain feelings of the patient brought about by disease, such as anger, which is often projected onto the doctor and should not interfere with the task of comforting the patient.

The perception of the need for recognizing and promoting patient autonomy permeated every discussion. Also part of the discussion were some situations that bother students, such as prolonged silences during medical consultation and moments when patients cry. The discussions also involved the patient's feelings of loneliness and abandonment brought about by disease, and how the availability and support of the doctor, and the development of a shared treatment plan, may relieve these tensions.

In the case 4 debriefing (see List 1), we took the opportunity to discuss the importance of recognizing the presence of the family in the consultation, their interactions with the patient, and how identifying the dynamics of conflicts may be important to uphold the treatment plan. In that moment, we discussed how a hasty judgment of the behavior of the patient or family members may jeopardize the resolution of conflicts that, if left unresolved, could interfere with the treatment plan.

One limitation of our study is the possibility that our results were affected by the maturation bias, a natural process that leads participants to change over time, and by the Hawthorne effect, the tendency of people to perform better when participating in an experiment and being observed, which may have led to higher posttest empathy scores.

The main limitation of our results is that empathy was assessed through self-report. Even though our students had higher empathy scores after the simulation activity, this does not necessarily translate into future empathetic behavior. In other words, we do not know whether the increase in self-assessed empathy after the simulation activity correlates with real empathy, perceived by the patients in real consultations.

We believe that patients' evaluations, rather than self-reports, are the most fitting method of assessing the empathetic attitude of the doctor and the quality of the consultation. However, we also believe that the increase in the levels of empathy observed in our study may indicate at least the *intention* of being more empathetic, which is important, because the will precedes the act and the attitude.

Our study approach is generalizable, provided that excellent SPs are used and that the faculty involved are imaginative, empathic, and have good clinical and reflection skills.

Our findings show that the simulation of medical consultations with SPs may improve medical students' empathy levels. One unexpected result was that this activity became a forum for debating topics such as the doctor–patient relationship, the hidden curriculum, negative role models, and emotionally significant experiences of students in medical school. This kind of activity in itself may influence young doctors to become more empathetic and compassionate with their patients and foster a more meaningful way of practicing medicine.

Acknowledgments: The authors gratefully acknowledge the actors who participated as standardized patients and contributed to this project: Adilson Ledubino, Leticia Frutuoso, Nadia Morali, Carlos Gontijo, Thaís Rossi, and Marina Regis.

Funding/Support: The authors received funding from the State of Sao Paulo Research Foundation and the National Counsel of Technological and Scientific Development.

Other disclosures: None reported.

Ethical approval: Granted by the research ethics committee on human beings from the Faculty of Medical Sciences of the State University of Campinas (Unicamp).

Previous presentations: The authors presented portions of this work at the Association for Medical Education in Europe (AMEE) Conference in Lyon, France, August 2012.

References

1 Hojat M. Empathy in Patient Care: Antecedents, Development, Measurement, and Outcomes. New York, NY: Springer; 2007.
2 Kim SS, Kaplowitz S, Johnston MV. The effects of physician empathy on patient satisfaction and compliance. Eval Health Prof. 2004;27:237–251.
3 Squier RW. A model of empathic understanding and adherence to treatment regimens in practitioner–patient relationships. Soc Sci Med. 1990;30:325–339.
4 Hojat M, Louis DZ, Markham FW, Wender R, Rabinowitz C, Gonnella JS. Physicians' empathy and clinical outcomes for diabetic patients. Acad Med. 2011;86:359–364.
5 Del Canale S, Louis DZ, Maio V, et al. The relationship between physician empathy and disease complications: An empirical study of primary care physicians and their diabetic patients in Parma, Italy. Acad Med. 2012;87:1243–1249.
6 Roter DL, Stewart M, Putnam SM, Lipkin M Jr, Stiles W, Inui TS. Communication patterns of primary care physicians. JAMA. 1997;277:350–356.
7 Larson EB, Yao X. Clinical empathy as emotional labor in the patient–physician relationship. JAMA. 2005;293:1100–1106.
8 Shapiro J. How do physicians teach empathy in the primary care setting? Acad Med. 2002;77:323–328.
9 Kataoka HU, Koide N, Hojat M, Gonnella JS. Measurement and correlates of empathy among female Japanese physicians. BMC Med Educ. 2012;12:48.
10 Hojat M, Spandorfer J, Louis DZ, Gonnella JS. Empathic and sympathetic orientations toward patient care: Conceptualization, measurement, and psychometrics. Acad Med. 2011;86:989–995.
11 Davis MH. Measuring individual differences in empathy: Evidence for a multidimensional approach. J Pers Soc Psychol. 1983;44:113–126.
12 Hojat M, Gonnella JS, Nasca TJ, Mangione S, Vergare M, Magee M. Physician empathy: Definition, components, measurement, and relationship to gender and specialty. Am J Psychiatry. 2002;159:1563–1569.
13 Hojat M, Vergare MJ, Maxwell K, et al. The devil is in the third year: A longitudinal study of erosion of empathy in medical school. Acad Med. 2009;84:1182–1191.
14 Hojat M, Mangione S, Nasca TJ, et al. An empirical study of decline in empathy in medical school. Med Educ. 2004;38:934–941.
15 Newton BW, Barber L, Clardy J, Cleveland E, O'Sullivan P. Is there hardening of the heart during medical school? Acad Med. 2008;83:244–249.
16 Kliszcz J, Hebanowski M, Rembowski J. Emotional and cognitive empathy in medical schools. Acad Med. 1998;73:541.
17 Austin EJ, Evans P, Magnus B, O'Hanlon K. A preliminary study of empathy, emotional intelligence and examination performance in MBChB students. Med Educ. 2007;41:684–689.
18 Chen D, Lew R, Hershman W, Orlander J. A cross-sectional measurement of medical student empathy. J Gen Intern Med. 2007;22:1434–1438.
19 Thomas MR, Dyrbye LN, Huntington JL, et al. How do distress and well-being relate to medical student empathy? A multicenter study. J Gen Intern Med. 2007;22:177–183.

20 DiLalla LF, Hull SK. Effect of gender, age, and relevant course work on attitudes toward empathy, patient spirituality, and physician wellness. Teach Learn Med. 2004;16:165–170.

21 Quince TA, Parker RA, WoodDF, Benson JA. Stability of empathy among undergraduate medical students: A longitudinal study at one UK school. BMC Med Educ. 2011;11:90.

22 Kataoka HU, Koide N, Ochi K, Hojat M, Gonnella JS. Measurement of empathy among Japanese medical students: Psychometrics and score differences by gender and level of medical education. Acad Med. 2009;84:1192–1197.

23 Roh MS, Hahm BJ, Lee DH, Suh DH. Evaluation of empathy among Korean medical students: A cross-sectional study using the Korean Version of the Jefferson Scale of Physician Empathy. Teach Learn Med. 2010;22:167–171.

24 Magalhães E, Salgueira AP, Costa P, Costa MJ. Empathy in senior year and first year medical students: A cross-sectional study. BMC Med Educ. 2011;11:52.

25 Hojat M. Ten approaches for enhancing empathy in health and human services cultures. J Health Hum Serv Adm. 2009;31:412–450.

26 Stepien KA, Baernstein A. Educating for empathy. A review. J Gen Intern Med. 2006;21:524–530.

27 Evans BJ, Stanley RO, Burrows GD. Measuring medical students' empathy skills. Br J Med Psychol. 1993;66(pt 2):121–133.

28 Fine VK, Therrien ME. Empathy in the doctor–patient relationship: Skill training for medical students. J Med Educ. 1977;52: 752–757.

29 Sanson-Fisher RW, Poole AD. Training medical students to empathize: An experimental study. Med J Aust. 1978;1:473–476.

30 Kramer D, Ber R, Moore M. Increasing empathy among medical students. Med Educ. 1989;23:168–173.

31 Poole AD, Sanson-Fisher RW. Long-term effects of empathy training on the interview skills of medical students. Patient Couns Health Educ. 1980;2:125–127.

32 Winefield HR, Chur-Hansen A. Evaluating the outcome of communication skill teaching for entry-level medical students: Does knowledge of empathy increase? Med Educ. 2000;34:90–94.

33 Shapiro J, Morrison E, Boker J. Teaching empathy to first year medical students: Evaluation of an elective literature and medicine course. Educ Health (Abingdon). 2004;17:73–84.

34 Lancaster T, Hart R, Gardner S. Literature and medicine: Evaluating a special study module using the nominal group technique. Med Educ. 2002;36:1071–1076.

35 Shapiro J, Hunt L. All the world's a stage: The use of theatrical performance in medical education. Med Educ. 2003;37:922–927.

36 DasGupta S, Charon R. Personal illness narratives: Using reflective writing to teach empathy. Acad Med. 2004;79:351–356.

37 Wilkes M, Milgrom E, Hoffman JR. Towards more empathic medical students: A medical student hospitalization experience. Med Educ. 2002;36:528–533.

38 Henry-Tillman R, Deloney LA, Savidge M, Graham CJ, Klimberg VS. The medical student as patient navigator as an approach to teaching empathy. Am J Surg. 2002;183:659–662.

39 DiLalla LF, Hull SK, Dorsey JK. Effect of gender, age, and relevant course work on attitudes toward empathy, patient spirituality, and physician wellness. Teach Learn Med. 2004;16:165–170.

40 Hojat M, Mangione S, Nasca TJ, et al. The Jefferson Scale of Physician Empathy: Development and preliminary psychometric data. Educ Psychol Meas. 2001;61:349–365.

41 Paro HB, Daud-Gallotti RM, Tibério IC, Pinto RM, Martins MA. Brazilian version of the Jefferson Scale of Empathy: Psychometric properties and factor analysis. BMC Med Educ. 2012;12:73.

42 Davis MH. Measuring individual differences in empathy: Evidence for multidimensional approach. J Pers Soc Psychol. 1983;44:113–126.

3.3. Artigo 3

Schweller M, Passeri SMRR, Carvalho-Filho MA. Simulation with standardized patients and an extended in-depth debriefing: dealing with students' emotions. (SUBMETIDO)

Title: Simulation with standardized patients and an extended in-depth debriefing: dealing with students' emotions.

Running Head: In-depth debriefing: dealing with students' emotions

Authors:

- MARCELO SCHWELLER, MD, is an assistant professor, Discipline of Emergency Medicine, State University of Campinas (Unicamp).
- SILVIA MARIA RICETO RONCHIM PASSERI, PhD, is a pedagogic assistant; Medical Course, State University of Campinas (Unicamp).
- MARCO ANTONIO DE CARVALHO FILHO, PhD, is a professor of medicine, Discipline of Emergency, State University of Campinas (Unicamp)

Institution: State University of Campinas (Unicamp), Brazil

Corresponding Author: correspondence should be addressed to Dr. Marcelo Schweller, Departamento de Clínica Médica, Faculdade de Ciências Médicas, Universidade Estadual de Campinas (UNICAMP), Rua Tessália de Vieira Camargo, 126, Cidade Universitária Zeferino Vaz, Campinas – SP, Brazil, CEP 13083-887; telephone: (+5519) 99715-2818; email: mschweller@gmail.com.

Keywords: medical education; patient simulation; medical students; emotions.

Abstract

Objectives: To assess students' perception of the learning outcomes related to a simulation activity with an extended in-depth debriefing.

Methods: The authors conducted a simulated medical consultations activity using standardized patients with an in-depth debriefing based on the feelings of the patient and the student. Fourth- and sixth-year medical students (n=344) participated and completed a questionnaire about the activity and the learning outcomes.

Results: Due to the depth of the topics discussed and the constant reflection on students' emotions, debriefing had potential to be embarrassing or even negative. However, students felt comfortable during the activity, due to "openness to dialogue", "proximity with colleagues and professors" and the "environment free of judgment". More than half of them were motivated to study, especially the "doctor-patient relationship", "treatment", "common diseases" and "medicine in general". Approximately 90% reported that what they learned would be useful in their professional and personal lives, providing a greater "understanding of emotions", "empathy", "ability to listen" and "ability to deal with conflicts".

Conclusions: It is possible and worth dedicating a portion of the medical curriculum to the discussion of the emotions involved in a medical consultation. The results suggest that medical students are able to expose their emotions and reflect on them during an in-depth debriefing after simulated consultations. This practice may even motivate learning in medicine, allowing for the recovery of the personal and social meaning of its practice.

Keywords: medical education; patient simulation; medical students; emotions.

Introduction

The traditional medical school curriculum is based on two components: one theoretical, made up mainly of expository lessons, and the other practical, based on learning in real situations, at the bedside.

Throughout the past several decades, there has been a sharp increase in the production of medical knowledge, as well as a veritable revolution in the way through which this knowledge is disseminated. Students in the new generations consume this information at the same time as they engage in other online activities, and this multitasking is often accompanied by a diminished capacity for reflection on what is being learned and on the meaning of each activity.

In this context, the undergraduate medical education should incorporate new teaching methods to promote a safe environment for reflection, an essential aspect of lifelong learning.[1] Among the various techniques available for learning new competencies, simulation has been incorporated into the curriculum of various schools, and its importance has already been consolidated in a few areas of medical education,[2] such as in emergency medicine training.[3]

The participation of standardized patients in simulation activities has increased,[4] especially for training in specific competencies related to physical examinations, communication and assessment in objective structured clinical examinations (OSCE). However, the medical consultation is an extremely complex interaction[5] that involves, among other competencies, the formation of a bond, empathy, and negotiation of a shared treatment plan. These elements have not yet

been extensively explored through practical activities in the training of undergraduate medical students and residents.

With this in mind, we developed a medical consultation simulation activity with standardized patients (SPs) to provide training for the real practice of medicine. The clinical cases were developed with a mixture of technical and human challenges related to the doctor-patient relationship, and a particular concern in defining the emotions of the patient during the consultations. We also tried to predict the potential emotions that students would have during the consultation, so that the way these emotion would be shared with the patient could influence the outcome of the interaction.

After the consultations, feedback was conducted in the form of an extended in-depth debriefing, lasting at least 2 hours, with the participation of students, teachers and actors. The structure of the debriefing, especially the availability of time, allowed us to address the students' and patients' feelings coming from the simulated consultations, as well as the consequences of this emotional interaction. The purpose of this study was to record the opinions of students about this new kind of training, especially regarding the way they handled a feedback that allows and encourages a great deal of personal exposure.

Methods

The research project was submitted to the Research Ethics Committee in Human Beings at the Faculty of Medical Sciences of the State University of Campinas (Unicamp), which granted the ethical approval.

Participants

The study was performed with 344 fourth- and sixth-year students at a medical school in Brazil. The fourth-year students participated in the simulation activity voluntarily, while the students of the sixth year participated through their curricular rotation in emergency medicine.

Standardized Patients

We recruited a group of professional actors with experience in education for this activity. Initially, we presented to them the idea and objectives of the course, emphasizing its formative character. Later, we discussed the clinical cases and the themes that we wanted to debate with the students in each case. Before the construction of the characters, we discussed in detail the patients' emotions regarding their disease, and the impact of this new reality in their lifestyle. The characters were developed by the actors through the methods of Realist Theater, with an emphasis on the theories of Constantin Stanislavsky. The didactic acting of the actors was inspired in the theater of Bertolt Brecht.

After this initial phase, we tested the cases with the purpose of developing the patients' stories, discussing the themes involved and predicting students' reactions when facing each situation. The actors were trained to create verbal and nonverbal cues that enabled the identification of the patients' emotions during the consultations by students. It was essential to refine the emotional atmosphere of

the consultations so that different attitudes of students would lead to different outcomes.

Facilitators

During the development phase of this activity, we discussed situations from our real clinical practice, with special attention to the doctor-patient relationship. These discussions were essential in defining the main themes to be approached with the students and attempting to objectively formulate questions that were present in our day-to-day practice.

In this context, it was important to be conscious of our attitudes as teachers, especially of our reactions and attitudes towards the students' roles, both in simulated consultations and in the debriefing. We concluded that, if one of our core messages was to be the importance of avoiding preconceived ideas and judgments with regard to the patient, it would be necessary that we, as teachers, be trained not to make negative or moral judgments towards the students. Thus, it was possible to conduct the discussions with an emphasis on positive reinforcement, which allowed us to approach difficult topics about the doctor-patient relationship and the hidden curriculum.

Simulation of Medical Consultations

The activity was performed in groups of from seven to nine students in four weekly meetings throughout 2011, 2012 and 2013. In each of the meetings, the SP was seen by two students individually, while the other students and facilitators

watched these consultations in an adjoining room through a CCTV system. The facilitators who participated in the activity (M.S. and M.A.C.F.) already worked with the students in the emergency unit and the internal medicine infirmary.

The clinical cases utilized were fictitious but based on various real primary care situations. All the cases involved feelings related to the disease and its consequences to the relationship of the patient to his family, to society and to his own life story.

Debriefing

After a brief break, students would share with the group their initial feelings regarding the consultation they had just experienced and would make a summary of the clinical case. The students' own speech, always rich in clues, worked as a trigger for discussion of the topics that had been planned. Furthermore, other themes frequently came up based on the needs of each student and each group.

The main reflection made in the debriefing revolved around the importance of realizing the frailty of the patient when faced with his or her disease. A diagnosis and its prognosis bring unplanned changes in the life of the patient, possibly setting off emotions like fear, guilt and helplessness. The patients react to these emotions in different ways, showing indignation, sadness or even anger, a feeling that may be directed towards the physician. These reactions may confuse the young physician, who is not always alert to the hidden feelings that lie behind a patient's negative or even bad attitude.

Facing the patient's diagnosis, the medical student is also more likely to feel similar emotions such as fear, guilt and uncertainty. In addition, the student must deal with the patient's emotions, even when projected towards the own student, and to have a contextualized approach that enables and encourages the improvement of the patient's emotional state.

During debriefing, students reacted to this discussion in several ways. Sometimes, they have shown immediate understanding of the patient's point of view and the direct applicability of this understanding in clinical practice, denoting a positive comprehension of the doctor-patient relationship. However, some students had ambiguous or even negative reactions when dealing with these issues, and we tried to reflect on it based on the idea that it is truly a challenge, inherent to the medical profession, and not a heavy load we have to carry as physicians. It is always preferable to be aware of the affective dynamics related to the consultation so that we can positively influence the outcomes of the patient-physician interaction, and therefore optimize the treatment plan.

Because of the complexity of the topics discussed and the reactions of the students, who often became emotional and shared their difficulties, the debriefing lasted, on average, 2 to 3 hours per meeting.

Instrument and Data Analysis

On the last day of the activity, after the debriefing, the students filled out an anonymous questionnaire in which they were asked to score on a scale of 1 to 10 the activity as a whole and specific aspects of it, like the facilities, the realism of the

scenes, the acting and the feedback from the facilitators. Moreover, they answered questions about how they felt during the activity and about its impact on their professional and personal lives. These questions had as possible answers “yes”, “no” and “indifferent”, and were recorded and analyzed.

After certain questions, there was space for students to explain their answers or write in comments. These questions were: (1) “did this simulation activity motivate you to study? Study what?”; (2) “Did you feel comfortable during the feedback? Why?”; (3) “Do you think you will use what you have learned in your personal life? How?”.

The students’ answers were read by the authors, categorized and then classified based on most frequent to least frequent. Some complete sentences written by the students which seemed most representative of the opinions as a whole were selected and transcribed in full in this report.

Results

The 344 fourth- and sixth-year medical students rated particular elements of the activity, as shown in ***table 1***.

The following questions regarded students’ perceptions on other aspects of the simulation activity and on the impact of what they learned on their academic and professional daily lives. These results may be found in ***table 2.***

Initially, we were worried about how the students would feel in discussing their emotions and exposing their doubts and opinions. However, 96% of students

felt comfortable during debriefing. The main reasons given to explain this feeling were (1) openness to dialogue, (2) proximity of classmates and professors, (3) a constructive environment and (4) absence of judgment. A student response that exemplifies these reactions was as follows:

"I realized that I have much to improve, but I see a positive outlook regarding this".

When we asked if the activity had brought motivation to study, 59% of students responded in the affirmative, especially the topics of (1) the doctor-patient relationship, (2) treatment, (3) most prevalent diseases and (4) medicine in general. One response that exemplifies these answers was as follows:

"I believe that the doctor with the most knowledge is more confident, so I think that the activity motivated me to study everything, in general".

In the opinion of 94% of the students, the activity had a positive impact on their ability to listen to patients, and to 91% this impact also extended to the ability to listen to others in general. When asked about the effect of the activity on their interactions with their classmates within the simulation group, 70% of students reported a positive impact. Sometimes, during the debriefing, students reported that throughout the week they encountered real situations to which they could

apply their ability to listen to patients or listen to others and that this brought them personal satisfaction.

When asked about the practical applicability of the activity, 99% of students reported believing that they would apply what they had learned in their professional lives and 91% reported believing that they would apply it in their personal lives, through the following competencies: (1) understanding emotions, (2) empathy, (3) ability to listen, and (4) ability of dealing with conflicts. The following responses written by students characterize these attitudes:

"I believe that I will apply what I learned in my personal life, paying attention to the real needs of others rather than what I think is important";

"The doctor-patient relationship is an exercise in improving your relationship with anyone. It makes you a better person, more willing to listen".

In the final space of the questionnaire, set aside for comments and spontaneous remarks from the students, there were several significant responses from the students, one of them being as follows:

"A more human contact and special attention to each patient reaffirms your passion for medicine and makes you remember the somewhat utopian views of the first year, which are often lost throughout the years and the infirmaries".

It is worth emphasizing that, during the meetings with most groups, the students frequently brought up the need to talk about the hidden curriculum, often in an intense and emotional way. They shared with us the difficulty that they had in building their own way of practicing medicine when exposed to examples of negative role models, and its consequences to their academic, professional and personal satisfaction.

Discussion

The use of simulation as a teaching tool in medicine has grown along with discussions of patient safety,[6-8] and the students recognized the importance of prior training to clinical practice. Nevertheless, the fact of being filmed and exposed to the observation of classmates and professors may cause discomfort and embarrassment[9] during the simulated consultations and the debriefing, and this might limit the effectiveness of this kind of activity.

In our study, the vast majority of students felt at ease during the simulated consultation and was able to become involved in the scenes. We believe that this result may be partly due to the clear exposure of the objectives of the activity before its beginning, and the clarification that the intervention was purely formative and not summative.

Before performing the activity, we had concerns about the students' reaction to an in-depth debriefing based on the emotions that arise in their consultations. Nevertheless, our students felt comfortable during debriefing, thanks to the openness to dialogue, the proximity with classmates and professors, the

constructive environment and the absence of judgment. We thus realized that the performance of the simulation activity by professors who also work with students in real clinical practice situations might be a positive factor for the effectiveness of the course, both because of their proximity to the students and of the understanding that the doctor-patient relationship is real, not merely theoretical and idealized. We must have confidence in educational activities that demonstrate the coherence between what the teacher says and what the teacher does.

Furthermore, the effort to foster a debriefing environment that was free, safe, devoid of judgment, and based on positive reinforcement seemed to allow students to share their experiences and their thoughts. In this way, the teacher's role with the student is similar to the physician's role with the patient. This kind of environment is, in our opinion, the same that must exist in a medical consultation, so that the patient feels at ease to share his or her experiences and thoughts, and so that the doctor has the legitimacy and intimacy necessary to make suggestions and comments that make sense to patient's life.

When medical students are encouraged to share what they feel about the doctor-patient relationship in an academic activity, they may feel more comfortable to encourage their patients to share their feelings about the disease and its consequences. Moreover, if we deal with the students' emotions in a positive way, guiding them and giving legitimacy to what they feel, they will probably do the same with their patients in a consultation.

The act of listening during the medical consultation has well-established benefits.[10] The simulation activity, according to the students, improved their ability

to listen to the patient and to listen to others in general. This result may be partly due to the training in communication abilities, but we had the impression that, during the simulated consultations and the debriefing, the students were able to realize that truly listening brings immediate results to the doctor-patient relationship and to the outcomes of consultations. Subjectively, we confirmed our hypothesis that to motivate the medical students to listen, we would have to create an environment in which the students themselves were heard.

This predisposition to listen to and notice others may also explain the results obtained in terms of the improvement in the students' interaction with the group that participated in the activity. We noticed that, throughout the weeks, the students displayed growing confidence in sharing their ideas and troubles and reported to us that this change occurred outside the context of the simulation activity as well.

The students reported believing that they will use what they have learned in their professional and personal lives. The first question that emerges from this is whether it is even possible to separate our lives as physicians from our personal lives. Our work is a fundamental part of all our lives and is intertwined with our perception of the future. In addition to taking up much of our time, it offers us the social and financial conditions to plan our lives as a whole. We believe that an accomplished professional has a greater chance of being a fulfilled person.

In this same context, the students realized that many of the factors that improve our clinical practice and doctor-patient relationship can also improve our personal lives and our other relationships. When asked to explain how they believe they will apply what they have learned in their personal lives, the main categories

of answered given by students were “understanding emotions”, “having empathy”, “listening” and “dealing with conflicts”.

During debriefing, we had intense discussions of the impact of disease on the life of the patient, and how all of his or her convictions, objectives and values can be questioned by the prospect of living with the disease. This causes a feeling of frailty, and the attentive doctor may, initially, understand and validate this feeling, to later offer positive suggestions that may help the patient to deal with this challenge. In this way, the doctor acts supportively in the rebuilding of relationships and of the meaning of things, which is fundamental for the patient to come to believe that happiness remains possible in the context of the disease.

In discussing these elements of the doctor-patient relationship during the debriefing, the students naturally had insights regarding how to conduct their consultations in the future. They noticed that it is often not enough to run down checklists of exam results and that treatment goes beyond prescribing medicine.

This approach may explain the increase in motivation reported by students to study various aspects of the medical profession, as they understand that the nature of our profession is complex and that the necessary competencies to perform it should not be limited to just the technical aspects of treatment.

The deepening of the discussion of the social and cultural role of the physician brought to light the topic of the hidden curriculum and of negative role models, which during the medical program teach emotional distance as the way of dealing with the conflicts inherent in our professional activities. The cynical attitude that so often prevails in the negative role models of the practice, in addition to

being ineffective for patient outcomes, also compromises the doctor's own professional fulfillment. This served as an opportunity to share with the students the fact that there are other ways of dealing with difficulties encountered during the practice of medicine, and that professional maturity, together with reflection, bring more effective and fulfilling answers to the questions that emerge in our daily work as doctors.

There are limitations related to the kind of questionnaire that we used. When we ask a question about something that the students were not aware of, we may be inducing the positive answer, which would overestimate the quantitative results of this study. Besides of that, medical students are often motivated by innovative teaching methods, and the use of SPs and technology in our activity may also have inflated our positive results.

Acknowledgements

Declaration of interest: The authors report no conflicts of interest. All authors have read and approved the final manuscript and agree to the submission of the manuscript to the IJME. Financial support for this study was received from the State of Sao Paulo Research Foundation (FAPESP) and the National Counsel of Technological and Scientific Development (CNPq).

Notes on contributors

MARCELO SCHWELLER, MD, is an assistant professor, Discipline of Emergency Medicine, State University of Campinas (Unicamp).

SILVIA MARIA RICETO RONCHIM PASSERI, PhD, is a pedagogic assistant; Medical Course, State University of Campinas (Unicamp).

MARCO ANTONIO DE CARVALHO FILHO, MD, PhD, is a professor of medicine, Discipline of Emergency, State University of Campinas (Unicamp).

References

1. Sandars J. The use of reflection in medical education: AMEE Guide No. 44. *Med Teach* 2009; 31(8):685-95.
2. Okuda Y, Bryson EO, DeMaria Jr S, Jacobson L, Quinones J, Shen B, Levine AI. The Utility of Simulation in Medical Education: What Is the Evidence? *Mt Sinai J Med* 2009; 76:330–343.
3. Weller JM. Simulation in undergraduate medical education: bridging the gap between theory and practice. *Med Educ* 2004; 38(1):32-8.
4. Levine AI, Swartz MH. Standardized patients: the “other” simulation. *J Crit Care* 2008; 23(2):179-84.
5. Street RL Jr, Gordon HS, Ward MM, Krupat E, Kravitz RL. Patient participation in medical consultations: why some patients are more involved than others. *Med Care* 2005; 43(10):960-9.

6. Nishisaki A, Keren R, Nadkarni V. Does simulation improve patient safety? Self-efficacy, competence, operational performance, and patient safety. *Anesthesiol Clin*; 25(2):225-36.
7. Aggarwal R, Darzi A. Simulation to enhance patient safety: why aren't we there yet? *Chest* 2011; 140(4):854-8.
8. Griswold S, Ponnuru S, Nishisaki A, Szyld D, Davenport M, Deutsch ES, Nadkarni V. The emerging role of simulation education to achieve patient safety: translating deliberate practice and debriefing to save lives. *Pediatr Clin North Am* 2012; 59(6):1329-40.
9. Brimble M. Skills assessment using video analysis in a simulated environment: an evaluation. *Paediatr Nurs* 2008; 20(7):26-31.
10. 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):369-74.

Tables and Legends

Table 1- Students' rating of the medical consultation simulation activity	
Facilities	9.4
Acting	9.8
Realism of the scenes	9.2
Debriefing	9.6
General grade for the activity	9.5

Table 1 – Average students' rating of specific elements of the consultation simulation activity, with a score of "1" denoting an entirely inadequate element and the score of "10" an entirely adequate element.

Table 2- Students' perceptions on other aspects of the simulation activity and the impact of the activity on their academic and professional daily lives	
Regarding the medical consultation simulation activity:	***% of students who answered YES***
Did you feel comfortable during the consultation with the simulated patient?	86%
Were you able to be involved with the scenes, despite their being simulated?	96%
Did you feel comfortable during the debriefing with the professors?	96%
Did this simulation activity motivate you to study?	59%
Do you think the activity improved your interaction with the simulation group?	70%
Do you think that the activity improved your ability to listen to the patient?	94%
Do you think the activity improved your ability to listen to others?	91%
Do you think you will use what you learned in your professional life?	99%
Do you think you will use what you learned in your personal life?	91%

Table 2 – Students' perceptions on other aspects of the simulation activity and the impact of this activity on their academic and professional daily lives. For each question, the student could answer "YES", "NO" or "INDIFFERENT".

4. DISCUSSÃO GERAL

Desde sua origem, o termo empatia contém em si o sentido de enxergar-se no que se observa e sentir-se ali. Curiosamente, os alvos originais da observação eram obras de arte ou a natureza, e não seres humanos (3,4).

Ao ser incorporada formalmente na linguagem que descreve as relações humanas, a empatia passou a ser encarada como uma habilidade desejável na relação com pacientes, e foi associada a desfechos positivos relacionados às consultas (6). Mesmo assim, nunca houve consenso sobre sua definição, significado e uso (1), o que gerou recomendações como a necessidade de um distanciamento afetivo em relação ao paciente, a fim de manter a imparcialidade do médico na tomada de decisões e sua própria segurança emocional (23).

Apesar das controvérsias, a percepção de sua existência e importância práticas garantiu a longevidade do estudo sobre o tema e permitiu melhor entendimento do papel da empatia no cuidado de pacientes e na educação médica.

A partir do desenvolvimento de instrumentos psicométricos para a medida de empatia foi possível confirmar sua associação com desfechos positivos para o paciente e para o médico (58-65). Verificou-se também uma tendência de maiores níveis em mulheres (26,29) e em estudantes que pretendem seguir especialidades com mais contato pessoal com pacientes (52,53). Por fim, as evidências sugerem que há queda de empatia ao longo do curso de graduação em medicina, especialmente em sua fase clínica (10,74).

As principais causas relatadas para a perda de empatia do estudante de medicina estão relacionadas ao currículo oculto (10), como a sobrecarga de trabalho, a pressão do tempo e a influência negativa de modelos negativos de prática médica. Nesse contexto, a falta de espaços formais para reflexão contribui para o desenvolvimento de mecanismos de defesa como o cinismo e dificulta a formação da identidade profissional do estudante e, portanto, sua satisfação com a medicina.

A percepção desse processo motivou o oferecimento de diversas atividades educacionais voltadas ao ensino de empatia (82-99). Os resultados desses estudos, em sua maioria positivos, agregam informações ao debate que questiona se empatia é uma habilidade passível de ser ensinada e aprendida.

A intuito dessa pesquisa foi propor intervenções didáticas baseadas em metodologias ativas para o ensino da empatia, desenvolvidas especificamente para estudantes em diferentes fases do curso de graduação em medicina. Para o primeiro ano médico, foram realizadas diversas atividades com apelo prático e espaço para reflexão, de modo a apresentar a medicina de maneira positiva através de uma disciplina curricular. Para os estudantes do quarto ano e do sexto ano, foi oferecida a simulação de consultas médicas com pacientes simulados, seguida por *debriefing* baseado nos sentimentos do paciente e do estudante, com duração estendida.

A dificuldade histórica em se definir empatia, exemplificada pelo debate sobre sua origem, se cognitiva ou afetiva, indica que o significado do conceito é

amplo e sujeito a variações individuais. Se essa falta de consenso conceitual pode, por um lado, limitar a interpretação dos resultados de pesquisas científicas e sua generalização, por outro sugere ao educador em medicina que trate o tema de forma igualmente ampla e, se possível, individual.

Os estudantes do primeiro ano já se mostraram heterogêneos em sua forma de encarar a relação médico-paciente. Enquanto alguns acreditam que o médico deve sempre tentar estabelecer uma parceria próxima com o paciente, outros relatam receio de se envolver com as questões do paciente e preferem a ideia de uma "distância segura". É possível supor que experiências anteriores de contato com serviços de saúde, pessoais ou familiares, podem influenciar uma primeira concepção sobre a medicina, a ser reforçada ou refutada por situações experimentadas durante o curso de graduação.

Ainda, os mesmos estudantes já demonstram insatisfação com alguns aspectos de sua rotina acadêmica, como suas eventuais dificuldades nas relações interpessoais, a pressão das avaliações somativas, nem sempre percebidas como justas, e a falta de oportunidades adequadas para discutir e refletir sobre essas questões. Portanto, a influência do currículo oculto parece ter início precoce, e não apenas durante o curso clínico, o que impõe contraste às expectativas iniciais e ao idealismo trazidos por muitos estudantes quando de seu ingresso na faculdade de medicina.

Nesse contexto, a reformulação da disciplina do primeiro ano permitiu que os estudantes tivessem contato próximo com médicos que apreciam sua profissão

e conseguem realizar e vivenciar em sua prática profissional o idealismo dos primeiros dias de faculdade. Nesta fase da formação acadêmica, os estudantes acreditam que vão gostar de ser médicos. Essa ideia foi reforçada durante as discussões e as atividades práticas. Essa visão positiva da medicina também contemplou a relação médico-paciente, que foi tratada de uma forma bastante positiva e, é fundamental que se diga, real. Nesse momento, os estudantes entraram em contato com a ideia de que ser empático é, além de possível, fundamental para o melhor desfecho da consulta e para a satisfação profissional do médico.

Ao final do semestre, houve aumento significativo dos níveis de empatia autoavaliada dos estudantes de medicina do primeiro ano. Isso sugere que as questões relacionadas com profissionalismo, tais como a empatia, devem ser abordadas a partir do início do curso médico. Uma hipótese a ser verificada é a de que esse tipo de experiência e vivência da prática da medicina pode proteger ou minimizar a influência de modelos negativos no futuro.

Vários estudos têm demonstrado que intervenções direcionadas podem aumentar os níveis de empatia dos estudantes de medicina (82-99), e seus resultados foram resumidos em uma revisão sistemática recente (84). Há também evidências de que atividades executadas de forma sequencial podem sustentar o ganho inicial (99). No entanto, existe pouca informação sobre o aproveitameno individual dos estudantes após intervenções para o ensino da empatia.

Os resultados dessa tese sugerem que os estudantes com menores níveis iniciais de empatia são os que obtém maior benefício com as atividades propostas, enquanto aqueles com níveis iniciais mais elevados tiveram variação menor da empatia. Esse dado pode ter sido superestimado pelo fenômeno de regressão à média (a tendência de pontuações baixas aumentarem e pontuações altas diminuirem com a repetição do teste), e pelo efeito teto (o menor espaço para aumento de pontuação em um teste em sujeitos com maior pontuação inicial).

No entanto, a diferença entre os estudantes com menor empatia inicial e aqueles com maior empatia inicial foi grande, e pode estar relacionada ao fato de que os estudantes de medicina reagem de uma maneira muito individual às situações que experimentam. Por vezes, parecem trazer conceitos que não são originalmente deles, mas dos modelos que têm encontrado ao longo de seus estudos ou mesmo antes do ingresso no curso, no caso do primeiro ano. Um desses conceitos é a necessidade da distância afetiva em relação paciente, com o objetivo de autoproteção, atitude que pode levar ao cinismo e à perda de empatia.

Por fim, ao iniciar um bom relacionamento com os estudantes no primeiro ano da faculdade de medicina, cria-se uma oportunidade para acompanhá-los ao longo do curso a fim de reforçar conceitos relacionados à empatia e profissionalismo.

Estudantes do quarto e do sexto anos de medicina participaram da simulação de consultas com pacientes simulados, seguida de *debriefing* com maior duração, a fim de permitir uma ampla discussão sobre a relação médico-

paciente e a prática da medicina. Esses estudantes tiveram aumento significativo de empatia medida pela JSPE após a atividade, resultado reforçado por valores de tamanho de efeito de pelo menos 0,60, próximo dos melhores resultados disponíveis na literatura (84).

Em fases mais avançadas do curso, o estudante já carrega uma bagagem maior de informações e experiências. Com isso, sua forma de encarar a medicina está mais consolidada, o que se reflete em suas atitudes durante o atendimento de pacientes. No entanto, essas atitudes frequentemente estão em desacordo com princípios prévios do estudante e da sociedade, o que gera um conflito de ordem moral a cada decisão e atitude relacionadas ao atendimento de seus pacientes, ao contato com outros profissionais e à sua própria vida pessoal. Trata-se de uma contradição entre o que é socialmente desejável e o que o estudante acredita ser a realidade da prática da medicina depois de sua vivência na faculdade.

Essa situação de conflito prejudica significativamente a disponibilidade do estudante de medicina para estabelecer canais de comunicação sinceros com seus pacientes e demonstrar a atitude empática necessária para o sucesso da relação médico-paciente. Isso pode levar à insatisfação do estudante com a qualidade de suas próprias consultas, fazendo-o reavaliar negativamente sua capacidade profissional e a escolha da medicina. Nesse contexto, é comum o surgimento de sentimentos de raiva, culpa e impotência, entre outros.

Apesar de extremamente negativo, esse pano de fundo emocional do estudante o coloca em uma condição indiscutivelmente semelhante àquela de um paciente em contato com seu diagnóstico e seu prognóstico: a condição de fragilidade, associada aos mesmos sentimentos de revolta, medo, culpa, impotência e desamparo. Quando o estudante vislumbra a necessidade de contar com o apoio de alguém que lhe auxilie no desenrolar desse processo, surge uma oportunidade imperdível de aprendizado sobre o que é ser paciente e o que é ser médico. Além disso, o papel do professor nesse momento pode ser intuitivamente vinculado ao papel do médico, através da disponibilidade de ouvir, da empatia, do diálogo, da parceria e de um plano compartilhado.

Na atividade de simulação de consultas médicas, os estudantes do quarto e do sexto anos foram estimulados a realmente entrar em contato com os sentimentos do paciente, e a perceber como estes influenciam o desenrolar da consulta médica e o sucesso do plano terapêutico. No mesmo sentido, uma das questões mais prevalentes no *debriefing* foi a percepção do tempo, desafio fundamental que nos dá um passado, com os seus arrependimentos e fantasias de culpa, e um futuro, com seus medos e angústias, particularmente aqueles relacionados à morte. A doença nos lembra, médicos e pacientes, de que existe uma realidade a ser encarada e, com ela, mudanças inevitáveis. A parceria com o médico pode ajudar o paciente a ressignificar elementos do passado e do futuro de forma positiva, em busca do equilíbrio necessário para viver bem.

A forma de lidar com os desafios da medicina depende do desenvolvimento da capacidade de reflexão crítica sobre cada atitude, consulta e desfecho. No entanto, a sobrecarga de atividades dos estudantes por vezes limita o tempo e a disponibilidade necessários para uma reflexão adequada após cada ato profissional. Dessa forma, o estudante não reforça as atitudes que levam a um bom resultado, e nem sempre percebe as atitudes que levam a resultados negativos para o paciente, especialmente no que se refere à relação médico-paciente.

Durante o *debriefing* da simulação de consultas, os estudantes foram estimulados a refletir por conta própria e com o grupo sobre diversos aspectos das consultas realizadas, guiados por profissionais habituados a refletir. Isso se deu através de um olhar cuidadoso direcionado aos detalhes da interação com o paciente simulado, e ao entendimento do conjunto dos acontecimentos da consulta como base do processo de reconhecimento empático do outro.

Para que surgissem em cada consulta simulada os detalhes e acontecimentos que juntos compõem um atendimento médico, foi fundamental que cada caso clínico tivesse uma atmosfera emocional refinada e bem definida. Por isso, os casos foram inspirados em situações reais e exaustivamente treinados com os atores, de modo a garantir reações realistas às atitudes de cada estudante e aparecimento de determinados gatilhos para tópicos importantes de discussão.

Nesse sentido, a participação de atores profissionais trouxe à simulação de consultas um nível alto de realismo, verificado pelo envolvimento dos estudantes durante os atendimentos. Além disso, trabalhar com profissionais em sintonia com o caráter formativo da atividade aumenta a segurança de que os objetivos serão atingidos sem a interferência de eventuais julgamentos pessoais direcionados aos estudantes em função de suas atitudes e opiniões.

O professor-facilitador também deve se dedicar a criar um ambiente de *debriefing* livre, seguro, e sem julgamentos, utilizando rotineiramente a educação pelo reforço positivo. Isso parece permitir que os estudantes compartilhem suas experiências e pensamentos, mesmo quando possivelmente negativos ou inadequados. Dessa forma, é possível inclusive abordar temas difíceis e fazer eventuais correções, sempre de forma sincera e gentil.

Esse tipo de ambiente é similar àquele que deve prevalecer entre médico e paciente durante uma consulta, para que o paciente sinta-se à vontade para compartilhar suas experiências e pensamentos, e para que o médico tenha a legitimidade e intimidade necessárias para fazer propostas, sugestões e comentários.

O professor também precisa de legitimidade para ensinar, e uma característica importante da simulação de consultas foi o fato de ser realizada por professores que atuam profissionalmente em uma unidade de emergência, uma unidade de terapia intensiva, uma enfermaria de medicina interna e em medicina ambulatorial. A maioria dos estudantes que participaram dessa atividade puderam

observar a interação desses professores com pacientes reais e suas famílias. Assim, o que é discutido durante o *debriefing* não é visto pelos estudantes como algo utópico, inatingível ou fora da realidade, pois eles sabem que estão discutindo com modelos reais da prática médica.

Como a atividade foi desenvolvida para estudantes do curso de graduação, inclusive do quarto ano médico, a discussão contemplou temas relacionados a habilidades de comunicação e acolhimento do paciente, bem como os fenômenos de transferência e contratransferência. Foram também discutidos alguns mitos da consulta médica como os períodos de silêncio e os momentos de choro dos pacientes. Outras questões foram frequentemente abordadas como a autonomia do paciente, os sentimentos do paciente em relação à doença e ao médico, e os sentimentos do estudante.

Com o aprofundamento da discussão em direção ao papel social e cultural do médico, os estudantes frequentemente trouxeram à tona a temática do currículo oculto, especialmente os modelos negativos. Em outras palavras, a ideia de uma prática médica pautada na ética, com os interesses do paciente em posição de destaque, e com o médico satisfeito com o que faz entra em conflito uma outra ideia, construída ao longo do curso.

O estudante sente o desconforto proveniente desse conflito, mas não reflete sobre ele. Ao contrário, vivencia suas experiências de maneira anestesiada ou cínica, o que adia o estabelecimento de uma identidade profissional. Durante a atividade de simulação foi possível trazer esse tema à consciência a fim de

encontrar formas positivas, baseadas na reflexão, para lidar com as dificuldades encontradas. As respostas que surgem desse processo são, possivelmente, mais eficazes e mais realizadoras no sentido do amadurecimento profissional.

A diversidade de temas discutidos e a necessidade de atender às demandas de cada estudante exigiu que o *debriefing* não tivesse um horário definido para terminar. Em média, cada encontro de simulação teve duração de 4 horas, com cerca de 1 hora para as consultas e 3 horas para o *debriefing*. Assim, a realização desse tipo de atividade precisa de períodos exclusivos e dedicados a ela.

O aumento observado nos níveis de empatia dos nossos estudantes pode ter sido superestimado pelo viés de maturação, um processo natural que leva os participantes a mudar ao longo do tempo, e pelo efeito Hawthorne, a tendência das pessoas para um melhor desempenho quando observadas. Além disso, os resultados obtidos através de medidas autoavaliadas de empatia não indicam diretamente o comportamento empático dos estudantes no atendimento de pacientes reais. No entanto, demonstram ao menos a intenção de ser empático e a percepção do papel da empatia no cuidado de pacientes

Alguns resultados ultrapassaram os objetivos iniciais propostos pelos projetos de pesquisa. Segundo os estudantes, a atividade de simulação teve impacto positivo em sua capacidade de ouvir o próximo, em situações alheias à prática da medicina. Ao perceber os benefícios do ato de ouvir na relação médico-

paciente e para os desfechos da consulta, muitos estudantes relataram o uso das mesmas técnicas ao conversar com amigos e familiares, com bons resultados.

Essa predisposição de ouvir e perceber o outro pode também justificar ~~o~~ a melhora da interação dos estudantes dentro do próprio grupo que participou da atividade de simulação. Ao longo das semanas, eles demonstraram cada vez mais segurança para compartilhar suas ideias e angústias, e notaram essa mudança mesmo fora do ambiente de simulação. Provavelmente, um ambiente no qual os próprios estudantes são ouvidos estimula os próprios estudantes a ouvir.

Esta abordagem pode justificar a motivação relatada pelos estudantes a estudar diversos aspectos da profissão médica. Ao discutir a relação médico-paciente os estudantes puderam entender que a natureza de sua profissão é complexa e que as competências necessárias para exercê-la não se devem limitar aos aspectos técnicos do diagnóstico e da terapêutica. Com esse olhar, a atividade de simulação de consultas pode ter facilitado o processo de conscientização do sentido fundamental da profissão médica.

5. CONCLUSÃO GERAL

O contato com estudantes em diversas fases da formação médica permite a afirmação de que enquanto alguns demonstram empatia e a vivenciam puramente através do entendimento e do raciocínio lógico, outros percebem mais emoção durante o processo. Essa dicotomia está presente na concepção que estudantes do primeiro ano têm sobre a medicina e nas consultas, simuladas ou reais, conduzidas por estudantes que cursam a fase clínica do currículo. Ainda, as duas formas de vivenciar a empatia podem ocorrer em momentos diferentes de uma mesma consulta, e o professor pode estimular o estudante a conscientizar mecanismos e motivos que o levaram a agir de cada maneira, permitindo maior autoconhecimento e desenvolvimento profissional.

No início do curso de graduação, intervenções de ensino que ofereçam uma apresentação positiva da medicina e da relação médico-paciente podem ser bem sucedidas em promover a empatia dos estudantes. Nessa fase da formação, o estudante parece se beneficiar com atividades baseadas na prática real do médico e no contato com modelos positivos. Além disso, é o momento ideal para que se inicie a prática reflexiva.

Para estudantes no curso clínico ou no internato, os resultados dessa tese sugerem que a atividade de simulação de consultas com pacientes simulados tem impacto positivo nos níveis de empatia. Além da participação de atores profissionais e da construção de casos com atmosfera emocional estabelecida, a característica que distingue essa atividade é a realização de um *debriefing* com duração estendida, baseado nos sentimentos do paciente e do estudante.

A criação de um ambiente seguro, livre de julgamentos e com objetivo assumidamente formativo, permite que o estudante de medicina inicie o processo reflexivo que em última análise vai lhe colocar como protagonista do seu futuro profissional. O professor, nesse contexto, precisa estar preparado para lidar com reações muitas vezes intensas e emocionadas dos estudantes, disponibilizando-se como ponto de apoio.

Durante o curso de medicina os estudantes são frequentemente expostos a experiências emocionalmente intensas e entram em contato com as ideias e atitudes de colegas, residentes, médicos assistentes e professores de diversas especialidades. Esse conjunto de acontecimentos influencia cada estudante de forma individual. Assim, é provável que haja benefício no ensino de empatia e profissionalismo através de um eixo longitudinal ao longo de todo o curso, para que as experiências possam ser contextualizadas, entendidas e elaboradas.

O ensino de empatia nos cursos de graduação em medicina caminha em paralelo à atitude empática dos médicos durante suas consultas, refletindo-a em certo grau. Ambos, ensino e atitude, podem estar consolidados no extremo ideal ou ignorados no extremo oposto. A educação médica deve atribuir à empatia o mesmo destaque gozado por ela na boa prática da medicina. É provável que uma forma eficiente de fazê-lo seja apresentar ao estudante a boa prática médica, garantida por outra, a da reflexão crítica sobre experiências cognitivas e afetivas vivenciadas no curso e na atividade profissional.

6. REFERÊNCIAS

1. Hojat M. Empathy in Patient Care: Antecedents, Development, Measurement, and Outcomes. New York, NY: Springer; 2007. 226p.
2. American Board of Internal Medicine. Evaluation of humanistic qualities in the internists. Ann Intern Med. 1983;99:720–4.
3. Hunsdahl JB. Concerning Einfühlung (empathy): A concept analysis of its origin and early development. J Hist Behav Sci. 1967;3:180-91.
4. Pigman GW. Freud and the history of empathy. The International Journal of Psychoanalysis. 1995;76:237-56.
5. Titchener EB. Lectures on the experimental psychology of the thought process. New York: Macmillan. 1909.
6. Southard EE. The empathic index in the diagnosis of mental diseases. Journal of abnormal psychology. 1918;13:199-214.
7. Newton BW, Barber L, Clardy J, Cleveland E, O'Sullivan P. Is there hardening of the heart during medical school? Acad Med. 2008;83:244–9.
8. Hemmerdinger JM, Stoddart SD, Lilford RJ. A systematic review of tests of empathy in medicine. BMC Med Educ. 2007 Jul 25;7:24.
9. Tavakol S, Dennick R, Tavakol M. Psychometric properties and confirmatory factor analysis of the Jefferson Scale of Physician Empathy. BMC Med Educ. 2011;11:54.
10. Neumann M, Edelhäuser 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;86:996-1009.

11. Hojat M, Vergare MJ, Maxwell K, Brainard G, Herrine SK, Isenberg GA, et al. The devil is in the third year: a longitudinal study of erosion of empathy in medical school. Acad Med 2009;84(9):1182-91.
12. Spiro H. The practice of empathy. Acad Med. 2009;84:1177-9.
13. Wispe L. The distinction between sympathy and empathy: to call forth a concept, a word is needed. Journal of Personality and Social Psychology. 1986;50:314-21.
14. Levy J. A note on empathy. New Ideas in Psychology. 1997;15:179-84.
15. Mehrabian A, Young AL, Sato S. Emotional empathy and associated individual differences. Current Psychology. 1988;7(3):221-40.
16. Dymond RE. A scale for measurement of empathic ability. Journal of Consulting Psychology. 1949;14:127-33.
17. Basch MF. Empathic understanding: A review of the concept and some theoretical considerations. J Am Psychoanal Assoc. 1983;31:101–26.
18. Stotland E. Exploratory investigations of empathy. Em Berkowitz L. Advances in experimental social psychology (vol.4):271-314. New York/London: Academic Press.
19. Eisenberg N. Empathy and Related Emotional Response. San Francisco, Calif: Jossey-Bass; 1989.
20. Hoffman ML. The development of empathy. In: Rushton J, Sorrentino R (eds). Altruism and Helping Behavior: Social Personality Developmental Perspectives. Hillsdale, NJ: Erlbaum; 1981:41– 63.
21. Aring CD. Sympathy and empathy. JAMA. 1958;167:448:52.

22. Nightingale SD, Yarnold PR, Greenberg MS. Sympathy, empathy and physician resource utilization. J Gen Intern Med. 1991;6:420-3.
23. Jensen N. The empathic physician. Arch Intern Med. 1994;154:108.
24. Rogers CR. The necessary and sufficient conditions of psychotherapeutic personality change. J Consult Psychol. 1957;21:95-103.
25. Mead GH. Mind, self and society. 1934. Chicago: University of Chicago Press.
26. Davis MH. Measuring individual differences in empathy: Evidence for a multidimensional approach. J Pers Soc Psychol. 1983;44:113–126.
27. Hojat M, Gonnella JS, Nasca TJ, Mangione S, Vergare M, Magee M. Physician empathy: Definition, components, measurement, and relationship to gender and specialty. Am J Psychiatry. 2002;159:1563–9.
28. Carkhuff R. Helping and human relations: selection and training (vol.1). New York: Holt, Rinehart & Winston.
29. Hogan R. Development of an empathy scale. Journal of Consulting and Clinical Psychology. 1969;39:307-16.
30. Mehrabian A, Empstein NA. A measure of emotional empathy. Journal of Personality. 1972;40:525:43.
31. Mehrabian, A. Manual for the Balanced Emotional Empathy Scale (BEES). 1996. (Available from Albert Mehrabian, 1130 Alta Mesa Road, Monterey, CA, USA 93940).
32. Feletti GI, Sanson-Fisher RW, Vidler M. Evaluating a new approach to selecting medical students. Medical Education. 1985;19:276-84.

33. Koller SH, Camino C, Ribeiro J. Adaptação e validação interna de duas escalas de empatia para uso no Brasil. Estudos de Psicologia. 2001;18(3):43-53.
34. Sampaio LR, Guimarães PRB, Camino CPR, Formiga NS, Menezes IG. Estudos sobre a dimensionalidade da empatia: tradução e adaptação do Interpersonal Reactivity Index (IRI). Psico. 2011;42(1):67-76.
35. Hojat M, Mangione S, Nasca TJ, Cohen MJM, Gonnella JS, Erdmann JB et al. The Jefferson Scale of Physician Empathy: Development and preliminary psychometric data. Educational and Psychological Measurement. 2001;61:349-65.
36. Paro HB, Daud-Galotti RM, Tiberio IC, Pinto RM, Martins MA. Brazilian version of the Jefferson Scale of Empathy: Psychometric properties and factor analysis. BMC Med Educ 2012;12:73.
37. Hehazi I, Wilson I. Maintaining empathy in medical school: it is possible. Med Teach. 2013;35:1002-8.
38. Jarski RW, Gjerde CL, Bratton BD, Brown DD, Matthes SS. A comparison of four empathy instruments in simulated patient-medical student interactions. J Med Educ. 1985;60:545–51.
39. Squier RW. A model of empathic understanding and adherence to treatment regimens in practitioner-patient relationships. Soc Sci Med. 1990;30:325–39.

40. Wallace DS, Paulson RM, Lord CG, Bond CFJ. Which behaviors do attitudes predict? Meta-analyzing the effects of social pressure and perceived difficulty. Review of General Psychology. 2005;9:214-27.
41. Mercer SW, Maxwell M, Heaney D, Watt GC. The consultation and relational empathy (CARE) measure: development and preliminary validation and reliability of an empathy-based consultation process measure. Family Practice. 2004;21:699-705.
42. Mercer SW, McConnachie A, Maxwell M, Heaney D, Watt GCM. Relevance and practical use of the Consultation and Relational Empathy (CARE) measure in general practice. Family Practice. 2005;22:328-34.
43. Kane GC, Gotto JL, Mangione S, West S, Hojat M. Jefferson Scale of Patient's Perceptions of Physician Empathy: Preliminary Psychometric Data. Croat Med J. 2007;48:81-6.
44. Krupat E, Frankel R, Stein T, Irish J. The Four Habits Coding Scheme: Validation of an instrument to assess clinicians' communication behavior. Patient Education and Counseling. 2006; 62:38-45.
45. Paro HBMS, Silveira PSP, Perotta B, Gannam S, Enns SC, Giaxa RRB, et al. Empathy among Medical Students: Is There a Relation with Quality of Life and Burnout? PLoS ONE. 2014. 9(4):e94133.
46. Eisenberg N, Lennon R. Sex diferences in empathy and related capacities. Psychological Bulletin. 1983;94:100-31.

47. Pennington RE, Pierce WL. Observation of empathy of nursing-home staff: a predictive study. International Journal of Aging and Human Development. 1985;21:281-91.
48. Hall JA, Dornan MC. Meta-analysis of satisfaction with medical care: description of research domain and analysis of overall satisfaction level. Social Science & Medicine. 1988;27:637-44.
49. Thomas MR, Dyrbye LN, Huntington JL, Lawson KL, Novotny PJ, Sloan JA, et al. How Do Distress and Well-being Relate to Medical Student Empathy? A Multicenter Study. J Gen Intern Med. 2007;22:177-83.
50. Brazeau CMLR, Schroeder R, Rovi S, Boyd L. Relationships between medical students burnout, empathy and professional climate. Acad Med. 2010;85:S33-6.
51. Magalhaes E, Costa P, Costa MJ. Empathy of medical students and personality: evidence from the Five-Factor Model. Med Teach. 2012;34(10):807–12.
52. Coutts-van Dijk LC, Bray JH, Moore S, Rogers J. Prospective study of how students' humanism and psychosocial beliefs relate to specialty matching. Acad Med. 1997;72:1106-8.
53. Hojat M, Zuckerman M, Magee M, Mangione S, Nasca T, Vergare M, et al. Empathy in medical students as related to specialty interest, personality, and perceptions of mother and father. Pers Individ Dif. 2005;9:1205-15.
54. Hojat M, Gonnella JS, Nasca TJ, Mangione S, Veloksi JJ, Magee M. The Jefferson Scale of Physician Empathy: further psychometric data and

differences by gender and specialty at item level. Acad Med. 2002;77(10):S58-60.

55. Colliver JA, Willis MS, Robbs RS. Assessment of empathy in a standardized-patient examination. Teaching Learning Med. 1998;10:8-11.
56. Hojat M, Gonnella JS, Mangione S, Veloksi JJ, Erdmann JB, Callahan CA, et al. Empathy in medical students as related to academic performance, clinical competence and gender. Med Educ. 2002;36:522-7.
57. Novack DH. Therapeutic aspects of the clinical encounter. J Gen Intern Med. 1987;2:346–55.
58. Barski AJ. Hidden reasons some patients visit doctors. Ann Intern Med. 1981;94:492-8.
59. Dubnicki C. Relationships among therapist empathy and authoritarianism and a therapist's prognosis. J Couns Clin Psychol. 1977;45:958-9.
60. Kim SS, Kaplowitz S, Johnston MV. The effects of physician empathy on patient satisfaction and compliance. Eval Health Prof. 2004;27:237–51.
61. Suchman AL, Roter D, Green M, Lipkin Jr M. Physician satisfaction with primary care office visits. Collaborative Study Group of the American Academy on Physician and Patient. Med Care. 1993;31:1083–92.
62. Zolnierek KB, Dimatteo MR. Physician communication and patient adherence to treatment: a meta-analysis. Med Care. 2009;47:826–34.
63. Beckman HB, Frankel RM. Training practitioners to communicate effectively in cancer care: It is the relationship that counts. Patient Educ Couns. 2003;50:85-9.

64. 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):359-64.
65. Del Canale S, Louis DZ, Maio V, Wang X, Rossi G, Hojat M, et al. The relationship between physician empathy and disease complications: an empirical study of primary care physicians and their diabetic patients in Parma, Italy. Acad Med. 2012;87(9):1243-9.
66. Kliszcz J, Hebanowski M, Rembowski J. Emotional and cognitive empathy in medical schools. Acad Med.1998;73:541.
67. DiLalla LF, Hull SK. Effect of gender, age, and relevant course work on attitudes toward empathy, patient spirituality, and physician wellness. Teach Learn Med. 2004;16:165–70.
68. Newton BW, Savidge MA, Barber L, Cleveland E, Clardy J, Beeman G, et al. Differences in medical students' empathy. Acad Med. 2000;75:1215.
69. Chen D, Lew R, Hershman W, Orlander J. A cross-sectional measurement of medical student empathy. J Gen Intern Med. 2007;22:1434 –8.
70. Stratton TD, Saunders JA, Elam CL. Changes in medical students' emotional intelligence: An exploratory study. Teach Learn Med. 2008;20:279-84.
71. Todres M, Tsimtsiou Z, Stephenson A, Jones R. The emotional intelligence of medical students: An exploratory cross-sectional study. Med Teach. 2010;32:e42–8.
72. Magalhães E, Salgueira AP, Costa P, Costa MJ. Empathy in senior year

and first year medical students: a cross-sectional study. BMC Med Educ 2011;11:52.

73. Hojat M, Mangione S, Nasca TJ, et al. An empirical study of decline in empathy in medical school. Med Educ. 2004;38:934–41.
74. Chen DC, Kirshenbaum DS, Yan J, Kirshenbaum E, Aseltine RH. Characterizing changes in student empathy throughout medical school. Med Teach. 2012;34(4):305-11.
75. Quince TA, Parker RA, Wood DF, Benson JA. Stability of empathy among undergraduate medical students: A longitudinal study at one UK school. BMC Med Educ 2011;11:90.
76. Colliver JA, Conlee MJ, Verhulst SJ, Dorsey JK. Reports of the decline of empathy during medical education are greatly exaggerated: a reexamination of the research. Acad Med. 2010;85(4):588-93.
77. Hojat M, Gonnella JS, Veloski J. Rebuttals to critics of studies of the decline of empathy. Acad Med. 2010;85(12):1812; author reply 1813-4.
78. Newton BW. Rebuttals to critics of studies of the decline of empathy. Acad Med. 2010;85(12):1812-3; author reply 1813-4.
79. Sherman JJ, Cramer AP. Rebuttals to critics of studies of the decline of empathy. Acad Med. 2010;85(12):1813; author reply 1813-4.
80. Bellini LM, Baime M, Shea JA. Variation of mood and empathy during internship. JAMA. 2002;287:3143–6.
81. Afghani B, Besimanto S, Amin A, Shapiro J. Medical Students' Perspectives on Clinical Empathy Training. Education for Health 2011;24(1).

82. Muszkat M, Yehuda AB, Moses S, Naparstek Y. Teaching empathy through poetry: A clinically based model. Med Educ. 2010;44:503.
83. Shapiro J, Morrison E, Boker J. Teaching empathy to first year medical students: Evaluation of an elective literature and medicine course. Educ Health (Abingdon). 2004;17:73–84.
84. Batt-Rawden SA, Chisolm MS, Anton B, Flickinger TE. Teaching empathy to medical students: an updated, systematic review. Acad Med. 2013;88(8):1171-7.
85. DasGupta S, Charon R. Personal illness narratives: Using reflective writing to teach empathy. Acad Med. 2004;79:351–6.
86. Shapiro J, Rucker L, Boker J, Lie D. Point-of-view writing: A method for increasing medical students' empathy, identification and expression of emotion, and insight. Educ Health (Abingdon). 2006;19:96–105.
87. Lim BT, Moriarty H, Huthwaite M. "Being-in-role": A teaching innovation to enhance empathic communication skills in medical students. Med Teach. 2011;33:e663-9.
88. Van Winkle LJ, Fjortoft N, Hojat M. Impact of a workshop about aging on the empathy scores of pharmacy and medical students. Am J Pharm Educ. 2012;76:9.
89. Bombeke K, Van Roosbroeck S, De Winter B, Debaene L, Schol S, Van Hal G, et al. Medical students trained in communication skills show a decline in patient-centered attitudes: An observational study comparing two cohorts during clinical clerkships. Patient Educ Couns. 2011;84:310–8.

90. Fernández-Olano C, Montoya-Fernández J, Salinas-Sánchez AS. Impact of clinical interview training on the empathy level of medical students and medical residents. Med Teach. 2008;30:322–4.
91. Tiuraniemi J, Läärä R, Kyrö T, Lindeman S. Medical and psychology students' self-assessed communication skills: A pilot study. Patient Educ Couns. 2011;83:152–7.
92. Mullen K, Nicolson M, Cotton P. Improving medical students' attitudes towards the chronic sick: A role for social Science research. BMC Med Educ. 2010;10:84.
93. Yuen JK, Breckman R, Adelman RD, Capello CF, LoFaso V, Reid MC. Reflections of medical students on visiting chronically ill older patients in the home. J Am Geriatr Soc. 2006;54:1778–83.
94. Kommalage M. Using videos to introduce clinical material: Effects on empathy. Med Educ. 2011;45:514–5.
95. Shapiro SM, Lancee WJ, Richards-Bentley CM. Evaluation of a communication skills program for first-year medical students at the University of Toronto. BMC Med Educ. 2009;9:11.
96. Bunn W, Terpstra J. Cultivating empathy for the mentally ill using simulated auditory hallucinations. Acad Psychiatry. 2009;33:457–60.
97. Varkey P, Chutka DS, Lesnick TG. The aging game: Improving medical students' atitudes toward caring for the elderly. J Am Med Dir Assoc. 2006;7:224–9.

98. Bayne HB. Training medical students in empathic communication. J Spec Group Work. 2011;36:316–29.
99. Hojat M, Axelrod D, Spandorfer J, Mangione S. Enhancing and sustaining empathy in medical students. Med Teach 2013;35:996-1001.
100. Gaba DM. The future vision of simulation in health care. Qual Saf Health Care. 2004;13(Suppl1):i2–10.
101. Buck GH. Development of simulators in medical education. Gesnerus. 1991;48:7-28.
102. Flexner A. Medical Education in the United States and Canada. Bulletin No. 4. New York, NY: Carnegie Foundation for the Advancement of Teaching 1910.
103. Hunt EA, Shilkofsky NA, Stavroudis TA, Nelson KL. Simulation: Translation to Improved Team Performance. Anesthesiology Clin. 2007;25:301-19.
104. McGaghie WC, Issenberg SB, Petrusca ER, Scalese RL. A critical review of simulation-based medical education research: 2003-2009. Medical Education. 2010;44:50-63.
105. Crofts JF, Bartlett C, Ellis D, Hunt LP, Fox R, Draycott TJ. Management of shoulder dystocia: skill retention 6 and 12 months after training. Obstet Gynecol. 2007;110:1069–74.
106. Lammers RL. Learning and retention rates after training in posterior epistaxis management. Acad Emerg Med. 2008;15:1181–9.
107. Salas E, DiazGranados D, Weaver SJ, King H. Does team training work? Principles for health care. Acad Emerg Med. 2008;11:1002–9.

108. Kneebone R, Nestel D, Wetzel C, et al. The human face of simulation: patient-focused simulation training. Acad Med. 2006; 81(10): 919–24.
109. Cantrell MJ, Deloney LA. Integration of Standardized Patients into Simulation. Anesthesiology Clin. 2007;25:377–83.
110. Barrows HS. Simulated (standardized) patients and other human simulations. Chapel Hill (NC): Health Sciences Consortium; 1987. Primary guide to the basics of SP training.
111. Issenberg SB, McGaghie WC, Hart IR et al. Simulation technology for health care professional skills training and assessment. JAMA.1999;282:861-6.
112. Darling M, Parry C, Moore J. Learning in the thick of it. Harv Bus Rev. 2005;83(7):84-92.
113. Dismukes RK, Smith GM. Facilitation and debriefing in aviation training and operations. Aldershot (UK): Ashgate; 2001.
114. Edelson DP, Litzinger B, Arora V et al. Improving in-hospital cardiac arrest process and outcomes with performance debriefing. Arch Intern Med. 2008;168:1063-9.
115. Pearson M, Smith D. Debriefing in experience-based learning. Simulation/Games for Learning. 1986;16:155-72.
116. Fanning RM, Gaba DM. The Role of Debriefing in Simulation-Based Learning. Simul Healthcare. 2007;2:1-11.
117. Rudolph JW, Simon R, Rivard P et al. Debriefing with Good Judgement: Combining Rigorous Feedback with Genuine Inquiry. Anesthesiology Clin. 2007;25:361-76.

7. ANEXO

Escala Jefferson de Empatia Médica – Versão para Estudantes

Por favor, indique o seu nível de concordância com as seguintes afirmações:

(Assinale a opção escolhida na seguinte escala com um [x] ; em caso de erro, preencha por completo o quadrado ■ e assinale com um [x] a opção correta)

Discordo fortemente 1 2 3 4 5 6 **Concordo fortemente** 7

	1	2	3	4	5	6	7
1. A compreensão dos médicos em relação aos sentimentos dos seus pacientes e de seus familiares não tem influência no tratamento clínico ou cirúrgico.	□	□	□	□	□	□	□
2. Os pacientes sentem-se melhor quando os médicos compreendem os seus sentimentos.	□	□	□	□	□	□	□
3. É difícil para um médico ver as coisas na perspectiva dos pacientes.	□	□	□	□	□	□	□
4. Compreender a linguagem não verbal (corporal) é tão importante quanto compreender a linguagem verbal nas relações médico-paciente.	□	□	□	□	□	□	□
5. O senso de humor de um médico contribui para resultados clínicos melhores.	□	□	□	□	□	□	□
6. Considerando que as pessoas são diferentes, é difícil ver as coisas na perspectiva dos pacientes.	□	□	□	□	□	□	□
7. Prestar atenção às emoções dos pacientes não é importante ao se obter a história clínica.	□	□	□	□	□	□	□
8. A atenção às experiências pessoais dos pacientes não influencia o resultado dos tratamentos.	□	□	□	□	□	□	□
9. Os médicos deveriam tentar colocar-se no lugar dos seus pacientes quando estão cuidando deles.	□	□	□	□	□	□	□
10. Os pacientes valorizam a compreensão que o médico tem dos seus sentimentos, o que é terapêutico por si próprio.	□	□	□	□	□	□	□
11. As doenças dos pacientes só podem ser curadas por meio de tratamentos médicos ou cirúrgicos; assim, os laços emocionais estabelecidos entre médicos e seus pacientes não têm influência significativa no tratamento clínico ou cirúrgico.	□	□	□	□	□	□	□
12. Fazer perguntas aos pacientes sobre o que se passa na sua vida privada não ajuda na compreensão das suas queixas físicas.	□	□	□	□	□	□	□
13. Os médicos deviam tentar compreender o que se passa na cabeça dos seus pacientes, prestando mais atenção aos sinais não verbais e à sua linguagem corporal.	□	□	□	□	□	□	□
14. Eu acredito que as emoções não têm qualquer participação no tratamento das doenças.	□	□	□	□	□	□	□
15. A empatia é uma habilidade terapêutica sem a qual o sucesso do médico é limitado.	□	□	□	□	□	□	□
16. A compreensão dos médicos acerca do estado emocional dos seus pacientes e das famílias dos seus pacientes é um componente importante da relação médico-paciente.	□	□	□	□	□	□	□
17. Os médicos deveriam tentar pensar como os seus pacientes para prestarem melhores cuidados.	□	□	□	□	□	□	□
18. Os médicos não deveriam se deixar influenciar pela existência de fortes relações pessoais com os seus pacientes e as famílias.	□	□	□	□	□	□	□
19. Não aprecio literatura não médica ou outras formas de arte.	□	□	□	□	□	□	□
20. Eu acredito que a empatia é um fator terapêutico importante no tratamento médico.	□	□	□	□	□	□	□

Portuguese (Brazil) translation by Helena Paro, Iolanda Tibério and Renata Daud-Gallotti, University of São Paulo, Brazil

For permission to use the scale contact: Empathy.Scales@Jefferson.edu