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Exploring how surgeons employ empathy in clinical practice: a qualitative study

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Abstract

Introduction Emotions are key factors in surgical disease and treatment, both in the surgeon and in the patient. Despite the recognition of the value of clinician empathy (Michalec and Hafferty, *Soc Theory Health* STH 20: 1–19, 2021), quantitative studies have shown that surgeons have lower empathy scores than other specialities (Walocha, et al., *Folia Med Cracov* 53:35–42, 2013, Hojat, *Med Educ* 52:456–7, 2018, Tariq, et al., *J Coll Physicians Surg–Pak JCPSP* 58:310–3, 2018). The reason for this is unclear, and little is known about how surgeons manage emotions in clinical settings. This study explored the role of empathy in surgical treatment and how surgeons respond to patient emotions, with the aim of creating a theory to explain this clinical process.

Methods We used an exploratory qualitative study in the Constructivist Grounded Theory tradition, utilising online individual semi-structured interviews with fourteen general surgeons.

Results Surgeons described multiple discrete approaches to patients' emotions. Participants were conscious of modulating their emotional response to patients depending on need, and systemic factors like urgency and setting. General approaches to patient emotions included emotion-facing and emotion-avoidant strategies. While the approach used was often tailored to the situation, surgeons usually had a preferred style. The degree of emotional engagement was particularly influenced by time available, and urgency. Participants described some techniques to influence the degree of emotional involvement, primarily by altering consultation times.

Conclusions The management of emotions by surgeons is nuanced and affected by contextual factors. Management is not entirely automatic or subconscious, but opportunities can be created or limited by the surgeon as required to facilitate effective treatment. The results offer a new perspective on surgeon empathy in the context of the limited existing literature.

Keywords Empathy, Clinical skills, General surgery, Consultation skills, Quality of care

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Introduction

Empathy is an individual social process to deal with the emotions of others. It can be defined as the ability to understand the perspective and emotions of a patient, communicate and respond to that understanding [1, 2]. It combines perception and processing, both emotional and cognitive [2–5], and can also encompass multiple pillars, such as empathic concern or curiosity, and compassionate care [6, 7]. While the experience of empathy is internal [3] and not entirely conscious, it may lead to outward behavioural manifestations [5, 8] thy is a key characteristic of interest in healthcare. Empathy in all practitioners is associated with higher patient satisfaction and improved patient compliance [1, 9, 10], lower rates of treatment-associated trauma and anxiety [1, 11], and even improved physiological recovery from illness [2]. It may also contribute to improved physician health and wellbeing [1, 12].

Empathy research has focussed on measurements of empathy in different demographic and specialty groups, with little exploration of the reasons for differences [13, 14]. Measures used have variable validity [1] and are mainly self-reported scales, which are prone to distortion, particularly by stress, burnout and self-image [1, 2], and don't correlate well to patient assessments [12, 15, 16]. Some studies also focus on factors associated with empathy, such as compassionate care, rather than a true response to emotions [2, 16]. Empathy varies in different settings, but generally procedural specialists, such as surgeons, anaesthetists, and radiologists demonstrate lower measured empathy than other physicians [10, 17–20]. The factors associated with the difference are unknown [10, 20], and the effect is inconsistent across studies [10]. There has been very little targeted investigation into the process of empathy in procedural specialists, or the practical aspects of empathy in any practitioner group [12, 13], even though empathy is known to be a complex construct and sensitive to context [2]. A common response to perceived deficiencies, is to formally teach empathy skills to procedural specialists [8, 12–14, 21] or even alter selection criteria [22] to procedural specialties. This approach aligns with a hypothesis that increasing empathy will cause an improvement of patient outcomes, without any negative effect on patient or surgeon. Although there is evidence that empathy training improves empathy scores [14, 21, 23, 24], there is only limited evidence of clinical impact, such as improved patient outcomes, patient or practitioner satisfaction or wellbeing [12, 14, 16].

This study was designed to explore the role of empathy in surgical treatment and develop a theory of how surgeons respond to patient emotions in clinical practice and how they develop and use clinical empathy. Interest will be given to the role of factors particular to surgical

practice. This knowledge is essential to facilitating any interventions to improve empathic care, as we can't hope to effectively intervene in a process that is not well understood. A deeper understanding of empathy in surgeons is vital to develop a response to perceived or real deficiencies.

Methods

Study design

This study was designed to develop a theory explaining the role of empathy in surgeon-patient interactions, and how surgeons respond to the emotions of patients in clinical situations.

This qualitative study used semi-structured interviews with general surgeons, analysed in the Constructivist Grounded Theory [25, 26] tradition. The research paradigm was constructivist, which accepts that social phenomena and their meaning are subjective and in constant revision. Actors interact with the world, and knowledge is generated as they make sense of their experiences.

This study was facilitated by a group of researchers with diverse perspectives and research experience. This study was designed by Author A who works as a general surgeon and became uncomfortable with a perceived simplification of surgeons' communication skills, particularly with respect to emotional management. She had previously completed a PhD in Surgery but has more limited experience in educational and qualitative research. Author B is a clinical surgeon with extended experience in education research. Author C is an experienced educationalist with extensive experience in qualitative and quantitative research, who has often worked with surgeons and procedural specialists. Research Assistant D is a social worker with previous research in reflective practice, who collaborated particularly on coding and analysis. A balance of subject expertise allowed differences in perspective and promoted both detailed data collection with a surgeon interviewer, but also a balanced perspective on the analysis of that data.

Ethics approval and consent to participate

The relevant Human Research Ethics Committee¹ approved all research procedures. Informed consent was documented for all participants.

Participants

We chose to interview Australian general surgeons. All participants had current registration and were a Fellow of the Royal Australasian College of Surgeons (RACS). Surgeons who had ceased work more than six months prior

¹Monash University Human Research Ethics Committee – project reference 35445

to recruitment or worked clinically with the primary investigator were excluded.

Recruitment

Participants were recruited for a semi-structured interview. The recruitment was by email sent through General Surgeons Australia (GSA), the professional body of general surgeons in Australia under the umbrella of RACS. Additional surgeons were recruited by word of mouth and personal recommendation from interviewees.

Twenty one surgeons volunteered in response to the initial invitation. Two were ineligible for interview, as one worked with the primary researcher, and one was not in clinical practice. Four further surgeons were recruited by other means. Out of 22 eligible volunteers, 14 were interviewed, selected in chronological order of those who volunteered (Table 1). The selected interviewees represent an adequate representation of practicing general surgeons in Australia, within the limits of a small sample size.

Interviews

All interviews were conducted by Author A using online commercial meeting software (Zoom Video Communications, Inc). The initial interview prompts, and plan was designed for this project according to the research question. The interview focused on the experiences and perspectives of the interviewees on empathy in clinical practice. To avoid bias related to previous understanding of the term “empathy”, questions were focussed on perceiving and responding to the emotions of patients, and a definition of empathy was not supplied. All interviews progressed with an exploratory intent. The initial set of questions for the early interviews is presented in supplemental material. Interviews were recorded, transcribed and anonymised with alphanumeric codes based on recruitment order and initial. The median interview

length was 1 h 21 min. Transcripts were shared with the full research team for analysis. Interviews continued until theoretical sufficiency was reached (14 interviews total).

Analysis

Data analysis was conducted in the Constructivist Grounded Theory [25] tradition. Interview transcripts were analysed using constant comparative technique to identify and refine recurring themes [26]. The analysis of the transcripts was performed by Author A and Researcher D. Identified codes and themes were integrated into the interview guide for future interviews. Ineffective questions were removed, and new stems aiming to explore emerging codes were added. Using a codebook, initial codes were collated into refined codes, and themes were developed. As data collection continued, themes were challenged to ensure they were representative of a wide experience.

When collected data consistently fit existing themes, a theory was constructed to describe the data. This was proposed by the primary investigator and developed in discussion with all authors. After drafting the theory, three further interviews were held to discuss the theory and the contributing themes. These interviews were coded in turn and the theory was edited to encompass the new data.

Analysis choices

Themes developed from the data were diverse and represented topics from consultation skills and communication to personal distress and surgeon self-image. In development of a theory, a description of practice was prioritised that was value-neutral and explained both positive and negative experiences. This is compatible with the exploratory nature of the interviews, which did not attempt to determine best practice, but simply describe emotion management techniques.

Results

Our analysis demonstrated discrete strategies for approaching patient emotions in clinical settings. Surgeons described both conscious, deliberate and unconscious responses to patient emotions. When describing others, interviewees recognised that some strategies are more helpful for the patient, and in self-reflection, some could see benefits and issues with their own approach. Surgeons’ techniques could be universal, or they could employ different approaches, depending on the situation.

Conscious and unconscious approaches to empathy

Empathy threshold

If a clinical situation had parallels with the surgeon’s own life, then the emotional response was more likely to be spontaneous and have a stronger impact on the surgeon.

Table 1 Demographics of interviewees in context of Australian surgical workforce

	Demographics of General surgeons in Australia (26) (n = 3001)	Participants interviewed (n = 14)
Sex		
Male	2483 (82.7%)	11 (78.6%)
Female	517 (17.2%)	3 (21.4%)
Other/unknown	1 (<0.01%)	0
State		
NSW	821 (27.3%)	5 (35.7%)
VIC	660 (22.0%)	6 (42.9%)
QLD	462 (15.4%)	1 (7.1%)
WA	209 (7.0%)	2 (14.3%)
SA	206 (6.9%)	0
TAS	41 (1.4%)	0

One interviewee called this the “empathy threshold”. It was affected by previous patient interactions, one’s own life experiences, and other personal biases. This led to easier emotional engagement with some patients than with others.

[W]e bring a threshold into that interaction with us... The most obvious example is ... someone with a cancer diagnosis. I think society and med school and the whole thing has geared us towards that being a low threshold for developing empathy... Whereas if it was someone with something more stigmatised - mental health, addiction, obesity, ... There is a threshold that needs to be overcome. - A04.

Empathy as an optional tool

Participants talked about a deliberate choice to turn empathy on and off. The choice was often made around utility or efficiency. That is, surgeons could use time and energy to engage with emotions if it made a difference in the outcome or consultation.

The idea that surgeons lack empathy I think is a different one to surgeons don’t display empathy, don’t use empathy or however that should be worded. But I wonder if that’s what it is, whether empathy is something we see as a tool to use or not use depending on the situation in front of us. - A04.

This idea demonstrated that different aspects of surgical practice needed different attention to emotion. Surgeons used concrete methods, such as adjusting scheduling to facilitate or inhibit emotional discussions. Surgeons described predicting the degree of emotional stress in an upcoming consultation and deliberately increasing or reducing allocated time or arranging psychological support. This could also be used to reduce emotional engagement.

If it’s ... a situation that ..., may be quite distressing for you as the surgeon... You might want to avoid going and unpacking and moving them from a patient to a person, or a condition to a person because of the costs associated with that.... So, your choice of how much you choose to engage with that patient will then influence ...the depth and the richness of the empathy that actually is developed. - G08.

Strategies to deal with emotions

To describe the approaches of surgeons to emotions, diagnosis and treatment can be considered to have a biological component (illness) and an emotional component (emotional dysfunction), which vary in strength,

depending on the pathology and patient. Strategies ranged from directly addressing patients’ emotions to completely avoiding them. “Emotion-facing strategies” diffused emotions in some way, and “Emotion-avoidant strategies” bypassed emotions and focussed primarily on the biological illness. This could encompass other factors of treatment like psychological, social, and other stressors, via their impact on emotions.

Surgeons described different approaches to emotions depending on context and condition, but also on the personality and comfort level of the surgeon. For example, the interviewees felt that the emotion-facing strategies were easier in clinic consultations and that the emotion-deferred or emotion-avoidant strategies were more likely to be used in emergency or ward settings. However, many described feeling most comfortable with one particular strategy, even if they understood its limitations.

Emotion-facing strategies

Emotion-facing strategies (Fig. 1) included direct and indirect approaches. Direct approaches acknowledged the role of emotions and actively tried to address them. Indirect approaches usually focussed on developing a strong clinical rapport to reduce patient stress. Patient emotions may have been acknowledged, but they were primarily reduced by increasing the safety and security of the clinical relationship.

Address emotions Surgeons commonly addressed emotions directly. It was more common in settings where high emotions are expected, such as in cancer clinics, or metabolic surgery. The techniques included directly questioning and exploring emotions, to expanding consultation time, to employing psychologists or nurses who were routinely available for psychological care.

I think in the immediate preoperative period, one of the things that I do in the anaesthetic bay is make sure I acknowledge what I think the patient’s feeling and have a discussion about what they are feeling. - A01.

Prioritising recognition of emotions improved the patient’s experience. It helped developing rapport and maybe improved their treatment outcomes.

I mean, they leave happier from an emotional perspective, but [if] I’m not going to fix them medically... some of them probably walk out happier from an emotional point of view. - K14.

Unresolved emotions also inhibited the surgical treatment process. That is, dealing with emotions in some way improved the efficiency of treatment.

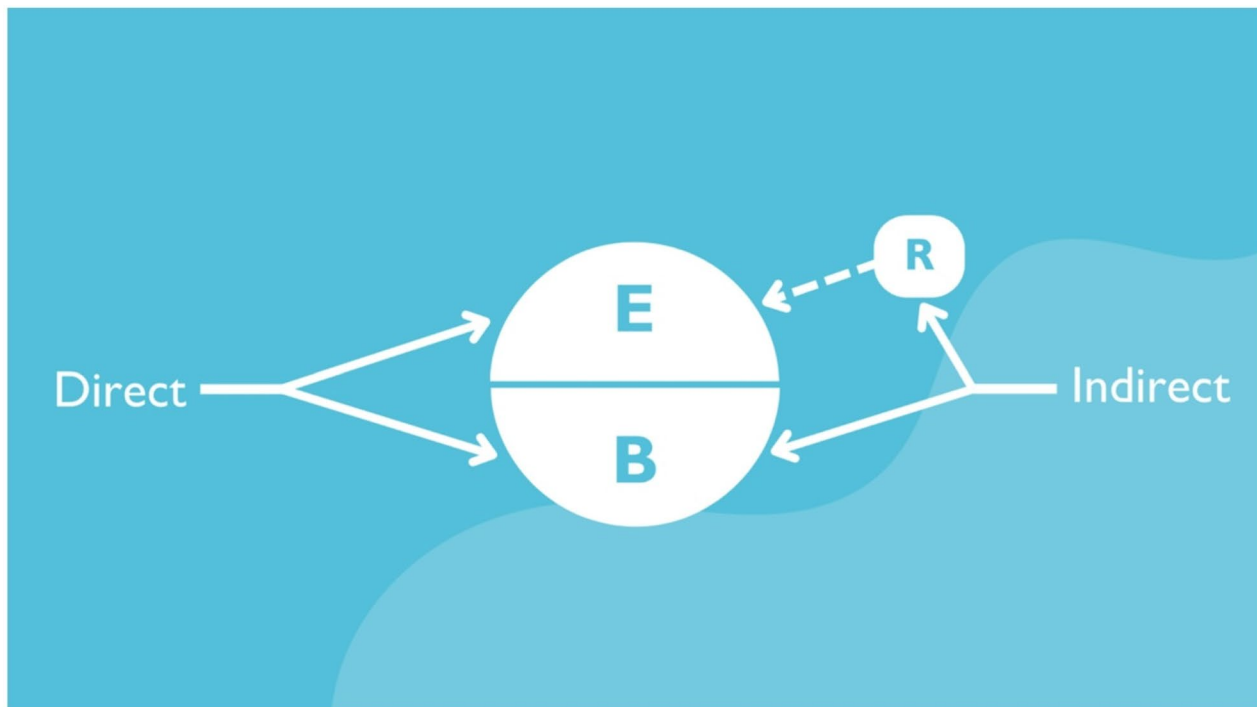


Fig. 1 Emotion-facing strategies used in surgical practice (E = Emotional dysfunction; B = Biological illness; R = Relationship with patient). The direct approach to emotions aimed to openly diffuse any emotional stressors. The indirect approach prioritised forming a strong relationship and trust with the patient, without openly discussing emotions

It's a false economy to try and speed somebody out of a room because a clinic's running late, because it's actually going to take you more time in the long term. ...Spending a bit of extra time, as frustrating as it can be, will actually be [more] beneficial. - A01.

Pursue rapport (indirect) Some interviewees prioritised forming a good clinical relationship with the patient. This led to increased trust and better understanding. After multiple interviews, it became clear that some saw this as an emotion-ameliorating technique. A good relationship may reduce some of the fear and anxiety surrounding surgery (clinical partnership) or may transfer some of the responsibility for the good outcome to the surgeon (clinical dependence).

Trust and empathy go along with each other. It will be easier to build up trust if they feel that you can kind of understand what they are worried about and what their concerns are. - M02.

Surgeons talked about the need for rapport as an accepted requirement for treatment. It did not seem to be consciously examined. The idea of good rapport was almost always referenced in the context of a poor treatment outcome. A good relationship was seen as a buffer if the clinical relationship is stressed by unexpected results or complications.

If you want to be selfish about it, it's absolutely the best possible investment, 'cause if that person has a leak or a bleed or doesn't get the treatment effect that you want... well, you are partners, and it's already set up and you're already in a partnership and it's ok. ... More importantly it's a much more rewarding way to practice medicine. It does, it does make it more rewarding. - A04.

Emotion-avoidant strategies

Emotion-avoidant strategies (Fig. 2) were commonly used to reduce the time taken for a consultation or encounter or improve time-efficiency. They were commonly described in life-threatening situations but were not always overtly signposted for patients.

Not now strategy The “not now” strategy paused or deferred emotional engagement. It could be done overtly with a verbal request or explanation from the surgeon, or emotion were simply ignored without explanation. This was a common approach in emergency settings, where there may not be enough time to deal with emotional factors due to the urgency of the physical condition. Eventually, this delay must be resolved, or it becomes a variant of avoiding emotions.

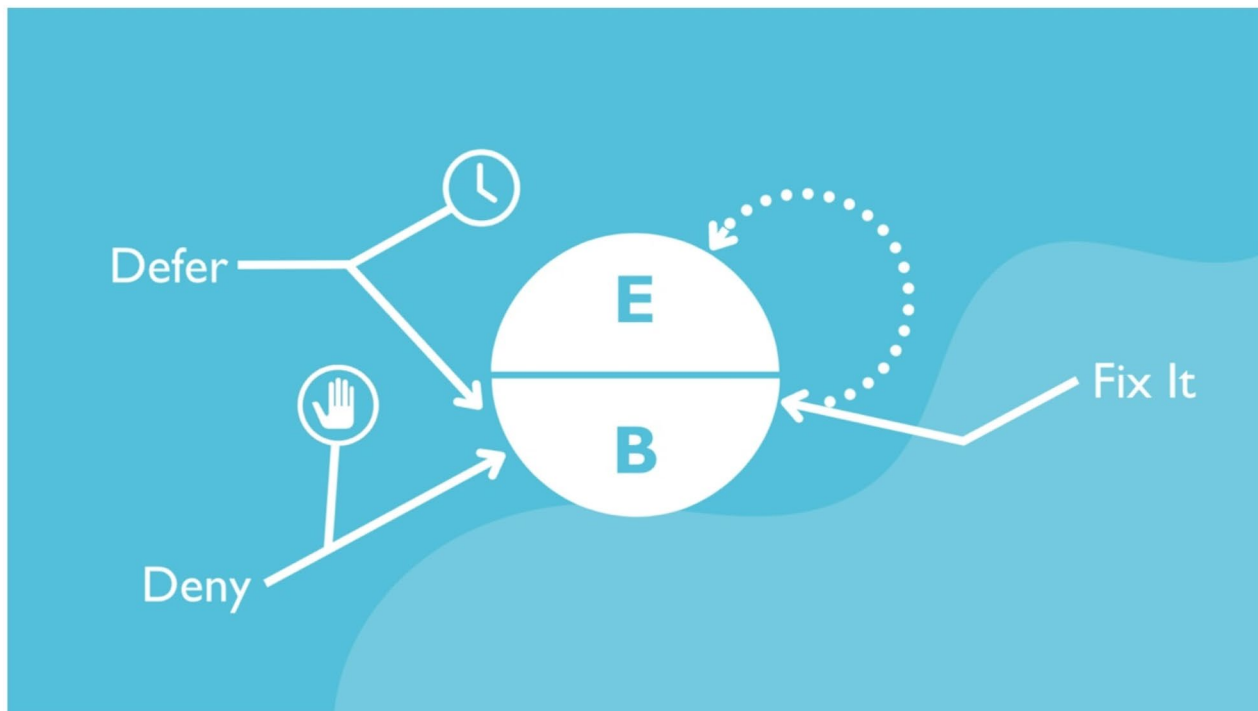


Fig. 2 Emotion avoidant strategies used in surgical practice (E = Emotional dysfunction; B = Biological illness). The "Not now" strategy to emotions deferred any resolution of emotions. The "Fix it" strategy focused on resolution of biological illness to reduce overall emotional intensity and avoid the need to deal with emotions. The "Avoid" strategy avoided addressing patient emotions entirely

I've learnt over time to say, right at this moment we need to talk about this a bit more, but I need to organise a couple of things... Can you hold that thought, write anything down that you want to ask me? I'm going to be 15 min, and I'm going to come back and give you some time because I think this is important. - A12.

Ideally, this was discussed openly with the patients as described above, but it also happened without explanation to the patient.

You just have to go, "Well, if this is the path you're gonna take, you've gotta take it now. Sorry." And then I probably came across as a bitch in that situation... They're kind of circling the drain at the moment. Like we can sit here and chat about your feelings, and they're going to be dead? Like, if you want, if you really want to do this, then do this now. - K14.

The benefits of deferral depended on the situation but often related to perceived urgency and triage. If life-threatening or urgent, the biological condition always took priority and emotional and psychological interaction was delayed.

So, I think it's incredibly important that you recognise from an empathic point of view the difficulty and the stress that they're in. But I would then argue that that's not the time for you to then stop... You would need to recognise that, and we need to put that aside for the moment or five. And I guess that's still showing empathy. - G08.

Fix-it strategy Emotional intensity was often significantly reduced when there was a successful resolution of the biological or physical problem. Uncertainty, fear, and ongoing symptoms (including pain) were seen as key drivers in ongoing emotional stress. Successful treatment of the underlying physical illness could completely resolve some of these emotions. This approach was described by most interviewees. Surgeons viewed it as particularly useful when they perceived the underlying biological condition to be straightforward and predicted that the outcome of treatment would be successful. The surgeon saw solving the physical symptom as the key to successful treatment, and emotional management.

I think that probably would be my response in that setting. So even if someone came in and said I am really worried about this. Don't worry, we'll fix it, rather than what's got you worried? - A04.

Avoid emotions The final strategy was to ignore or avoid emotional factors. This approach seemed easier to recognise in others. This showed discomfort with intentionally avoiding emotions. Furthermore, when asked for examples of surgeons who were particularly poor in empathy, this was the typical approach described.

That depends on what you want to be. It comes down to what the surgeon wants to be. If he just wants to be the technical expert, you can have zero empathy. - M02.

Most of the interviewees were uncomfortable with the idea of avoiding emotions, and felt it delivered inadequate care for the patient. It was commonly linked with being indifferent, implying a deficiency or failure. However, it was described as a choice or technique, rather than incompetence. This did not usually equate to being an inadequate or even poor surgeon, if the approach to the underlying physical condition was correct.

In technical terms, the guy who can fix you up but not necessarily talk to you about it in a way that you understand... These guys may get the respect of their patients because they can fix them up, but that is probably not the whole experience that a patient needs to overcome their condition. - M02.

The perceived advantage of this approach was that it was easier and more time efficient for the surgeon. When speaking about other surgeons or hypothetically, the interviewees linked the behaviour with financial advantage due to efficiency gains. Emotional regulation of self and one's own resources were also suggested as a reason to choose this approach.

Well, if you are the God who provides the care, then patients will probably not bother you as much. And if you have separated yourself from emotional engagement with the patient, then when things go wrong, it's just that things went wrong. And I don't have to engage with that distress. - S05.

Value and difficulty of addressing emotions

Addressing patient emotions is seen as a functional approach. Unresolved or unaddressed emotions served as a barrier to many of the surgeons' tasks, particularly educating patients and having a positive outcome at the end of surgical treatment.

I think acknowledging an emotion, showing an understanding of emotion or even seeking out an understanding of emotion, I think that is a very powerful rapport building tool and almost to me it's like emotion is, rather than getting in our way, it's almost

like not seeking emotions, there is an opportunity cost there. - A04.

It's probably hard because I have to keep bringing it back and managing the emotion at the same time as ensuring they're actually hearing what I need them to hear. - K14.

Barriers to addressing emotions

The reluctance to deal with emotions directly was not ubiquitous. However, there was a general perspective from interviewees that exploration and resolution of emotions is not the core business of surgery. There were perceived barriers to dealing with emotions, which explain why some surgeons spent at least some of their clinical encounters deferring or avoiding participation at this level. The most cited barrier to dealing with patient emotions was time available or the risk of delaying other unrelated clinical tasks.

Let the person talk. Find out what their real concerns are. That takes a lot of time and energy and a lot of us just don't have that energy or the patience anymore, to just see and wait for the emotions to come and then address them. - M02.

When dealing with urgent or emergency cases, the emotional load was often high, but the time before deterioration of the biological pathology was short. This was a clear conflict, and surgeons openly talked about the compromises they consciously made in those situations.

There's just less time for you to be able to deal with the emotional side of things in that setting. ... in those urgent settings you have to be even more blunt and sometimes you have to push the emotional stuff aside a little bit in order to try and get the message through. - D07.

Surgeons also were not confident of their own skills at managing emotions and overwhelmed at the complex psychological and emotional situations they were exposed to. They felt confident and skilled at dealing with physical illness but felt less well-equipped to manage patients' distress.

So, I think those that those that deal with greyness ... such as psychiatrists or whatever who, that is a big part of their training, I think would feel much more comfortable than the average surgeon surgical registrar. - G08.

Discussion

The purpose of this research was to explore empathy in surgeons and to explore how surgeons experience emotions of patients, with reference to the limits and demands of surgical practice. These data demonstrate surgeons' perception of how they deal with emotions and the choices they make to manage their responses. As empathy is a partially unconscious process [2], first person interviews can't measure or value empathy in surgeons, but this data does shed light on the pressures on empathic practice.

Surgeons were able to describe their internal responses and attitudes, and strategies that they consciously adapt to respond to the emotions of patients according to clinical pressures. In addition to involuntary responses, surgeons adapt their behaviour depending on the time available, and other factors, like their own personal resources. Although able to discuss this approach, it is not necessarily selected or intentional behaviour. The aim of these behavioural approaches is often to improve treatment efficiency, and approaches are often adapted according to the degree of the patients' emotional stress [27], which usually varies over the course of treatment.

Analysis demonstrated two broad approaches to patient emotions – emotion facing or emotion avoidant strategies. These strategies were further divided into sub-groups. Emotion facing strategies included addressing emotions openly and the more indirect approach of pursuing emotional and relationship rapport and therefore improving trust and reducing anxiety. Emotion-avoidant strategies included deferral, focussing on the biological illness (fix-it strategy) and frank avoidance. Deferral is not a definitive approach and can naturally grow into avoidance if the situation is not deliberately resolved. It is tempting to rank approaches, as empathy is aspirational in our society [8] and there is a bias toward assuming that dealing with emotions openly is “correct” and avoiding emotions is “incorrect”. This bias may have contributed to our current poor understanding of empathy in clinical practice. It is much more likely that all approaches to emotion have some validity in different clinical situations. Certainly, the interviewees were aware that they used more than one of these different approaches, depending on the situation.

There is research showing surgeons have a variety of responses to emotions in consultations. Levinson studied responses to emotional clues in surgical consultations [28], and demonstrated that surgeons are adept at detecting emotion cues. Surgeons were more likely to respond openly to signals than primary care physicians, but inadequate exploration of emotions is common in most of the clinicians studied [28, 29]. Surgeons commonly missed clues, but also actively introduced emotional clues in 20% of consultations [29]. Surgeons can also actively avoid

facing emotions, using inadequate or partial responses, or by open denial, not acknowledging, or creating conversational blocks [28, 29]. Doctors are also likely to respond to emotional statements with biological or physical information [30]. There is also evidence that surgeons emphasise narratives about ‘fixing’ problems, even in complex consultations [31]. These studies reflect the strategies that surgeons are aware of in their own practice. However, the current study demonstrates that surgeons are aware of using different strategies at different times, depending on emotional need and time available, which has not previously been described.

Surgeons in this study described adapting their responses to patients from consultation to consultation. Empathy can be seen as a clinical skill or a personality trait, but in this study, surgeons described empathy as an optional tool which is consistent with previous work in surgical trainees [32]. The evidence contradicts this, in that a response to emotions of others is usually intuitive, immediate, and unconscious [3, 33]. Contemporary models of empathy describe an involuntary emotional response, with surrounding layers of cognitive modulation or processing [1, 4]. Based on this concept, it is unlikely that surgeons are turning off their own emotional response but may be modulating the cognitive or behavioural output. Empathy does vary in intensity [7], and there may be some component of emotional regulation [33, 34] or empathy accommodation [35]. However, in this instance, the surgeons interviewed are aware of the changes and describe them as voluntary.

There is a nexus in the medical literature between true empathy, an internal process that is difficult to measure, and external actions that are perceived as empathy [3, 8]. These can be considered complex consultation or communication skills. These skills can be taught in empathy training interventions [8, 11, 12, 23, 24, 36] but may not reflect the emotional/cognitive empathy response [8]. It is plausible that surgeons describe this set of communication skills when they talk about turning on and off their empathy. That is, their underlying emotional-cognitive response is intact, but they choose whether to superimpose a compassionate communication, or empathic curiosity [6, 12] on top of that, depending on the situation. This seems to match an established medical cultural trait that values detached concern, in preference to deliberate emotional involvement [12, 16, 35]. It does seem likely that empathy as measured by scores is not fixed, and there is evidence that it can be affected by training and experience, as well as demographic factors such as gender [16].

It became clear that surgeons are conscious of patients with heightened emotional stress. Although the aim of the study was to investigate surgeon empathy, we discovered surgeons implemented deliberate techniques

to help them manage highly emotional situations, particularly by restricting or expanding available consultation time. Surgeons sometimes purposefully create more time in consultation when they anticipate higher emotions, like patients with life-threatening conditions [37], by rearranging appointments, or booking extra reviews. Conversely, they can limit their own emotional involvement when they have limited reserve or time, by reducing the time for discussion. Without knowledge of how these approaches are perceived, we can't comment on their effectiveness. There is evidence that focussing on emotions increases consultation time [30], but consultation time is unrelated to perceived empathy [10, 38]. The use of time restrictions to deliberately reduce engagement or formalise relationships has not previously been described.

This paper has implications for ongoing research and intervention in the field of empathy. Surgeons recognise that participating in surgical treatment is an acute emotional stress for patients, and their strategies to deal with that may not be perceived as compassionate or caring. Although there is evidence that patients do better with empathic doctors, it is not known how these sorts of approaches are perceived in practice. It would be useful, for example, to explore patients' perception of acknowledged deferral of emotional engagement, and whether this is seen as an empathic behaviour or not. Better understanding of these interactions would be vital information for developing educational strategies. Surgeons described a need to prioritise biological illness in emergency situations when patients are openly emotional. Further investigation might be able to clarify which approaches to this conflict are accepted by patients, and which are unpleasant or unhelpful. Generally, empathy education programs are limited by poor understanding of the compromises that procedural clinicians manage in consultations, because we don't have enough evidence from the surgeon's perspective. As empathy education is increasingly introduced, it is vital to continue to investigate the pressures and processes of clinicians behaviours in order to avoid the rise of performative caring, and improve patient experiences [3, 21]. Furthermore, if the issues of lower empathy in procedural specialties relate to work processes and time pressure, then proposed solutions like selecting for empathy [22] are unlikely to effect a significant improvement.

Limitations

This study was limited to general surgeons in Australia, so the results are likely to be culturally biased. It is likely that the practice of empathy in surgeons is affected by cultural and biological factors [39, 40], as well as structural healthcare factors, such as the role of surgeons in caring for patients [20]. The interviewees represented

varied subspecialties and geographic areas within Australia, although females were relatively over-represented (21% of interviewees vs. 17% of general surgical fellows in 2023) [41]. As expected, most of the interviewees were interested in empathy and consultation skills, which limited the exploration of different perspectives.

Conclusions

This research has demonstrated that surgeons are aware of their responses to the emotions of patients and the need to manage them in some way. They have described approaches to either actively resolve emotions, or defer or deny emotions, to manage the impact those emotions have on clinical situations. These strategies can be used to balance urgency, time available and their own psychological resources. Surgeons may have preferred approaches to emotions, but also selectively adjust their technique according to multiple factors, which may not prioritise the patient's wishes. These factors demonstrate the complexity of surgeon-patient interactions and the need for further research in this area .

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12909-025-08075-w>.

Supplementary Material 1.

Supplementary Material 2.

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Dr Helen Hickson - performed qualitative analysis in conjunction with CC and participated in development of theories Dr Michaela Ryan and Ms Sharon Appla performed and edited transcripts of the semi-structured interviews. Mr Luke Cuthbertson designed the images in the paper.

Authors' contributions

CC conceived and submitted the project as part of a Masters in Surgical Education (University of Melbourne). She did the primary research and analysis in conjunction with two research associates. DN and JM were supervisors for the research project and helped develop the plan, discussed issues and analysis outcomes. CC wrote the main manuscript text, which was reviewed and edited by all authors prior to submission. 06/2025 CC discussed the reviewer recommendations with DN and JM to decide a strategy for revising the manuscript. CC edited the manuscript in response, after which it was revised by JM and DN prior to resubmission.

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Data availability

The raw data used for this study (interview transcripts) is not available publicly due to the limitations of participant consent, but can be obtained from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

Monash University Human Research Ethics Committee ID 35445

Competing interests

The authors declare no competing interests.

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