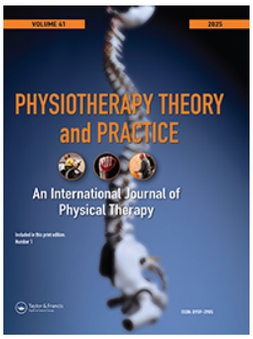

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RESEARCH REPORT

Trauma-informed physiotherapy and the principles of safety, trustworthiness, choice, collaboration, and empowerment: a qualitative study

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ABSTRACT

Introduction: Trauma is common and may lead to lasting adverse effects on health. Trauma-informed practice does not treat trauma but uses a strengths-based approach to encourage engagement in services.

Objective: To understand how physiotherapy attends to trauma-informed principles.

Methods: This qualitative ethnographic study was set in an Australian hospital. Three data collection methods were used, including observations of clinical practice, interactive reflexive group discussions with physiotherapists, and interviews with patients. Data analysis included an initial inductive phase followed by thematic mapping to trauma-informed principles. Critical reflexivity was used throughout to examine how the authors' perspectives and assumptions affected the analysis.

Results: Twelve observations of consultations, ten interviews with people receiving physiotherapy, and five group discussions with physiotherapists were conducted. Themes produced within each of five principles of trauma-informed care included: Safety: not just a number, uncertainty beyond managing physical risks, upbeat approach as default needs balance, pragmatic environments inadequate; Trustworthiness: touch needs further consideration, assumed consent; Choice: limited options; Collaboration: let's do it together, variable consideration of the patient as expert, task focus, pushing the "right" treatment, missing insight into power imbalance; Empowerment: extending function and independence, building nonphysical skills but lack of clarity.

Conclusion: Physiotherapy incorporates crucial aspects of trauma-informed care, but opportunities exist to enhance physiotherapists' skills and knowledge, particularly in relation to non-physical safety considerations.

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Introduction

Trauma is common, harmful, and has a significant impact on people's relationships, life, and health (Fallot and Harris, 2001; Substance Abuse and Mental Health Services Administration, 2014). Trauma is defined in a number of ways and relates to the experience and effects of overwhelming stress (Substance Abuse and Mental Health Services Administration, 2014). Trauma can be a single incident of assault or accident, or repeated exposure to negative interpersonal processes, including neglect or violence, that is experienced as physically or emotionally harmful or life threatening (Kezelman and Stavropoulos, 2019; Royal Australian College of General Practitioners, 2022; Substance Abuse and Mental Health Services Administration, 2014). Traumatic experiences are common; with nearly three quarters of Australians affected (Mills et al., 2011). Trauma can have lasting adverse effects on mental, physical, and social functioning, relationships, and emotional well-being (Kezelman and Stavropoulos, 2019; Substance Abuse and Mental Health Services Administration, 2014). Impacts of trauma can be wide-ranging, including increased risk of mental health issues such as panic attacks, anxiety and depression, and chronic physical health conditions such as diabetes, heart disease, cancer, stroke, and pain (Anda et al., 2006; Bateman, Henderson, and Kezelman, 2013). In particular, large epidemiological studies show

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the correlation between adverse childhood experiences and chronic physical health conditions in adulthood, independent of behavioral risk factors, as well as an increase the number of "medically unexplained symptoms" (Anda et al., 2006; Felitti et al., 1998).

Being trauma-informed is not about treating the sequelae of trauma. Instead, it focusses on being sensitive to related issues, employing an empowerment model with the goal of reducing the possibility of retraumatisation and promoting healing and recovery (Bargeman et al., 2022; Fallot and Harris, 2001; Substance Abuse and Mental Health Services Administration, 2014). Trauma-informed services implement frameworks to guide practice based on the core principles of safety, trust, choice, collaboration, and empowerment (Fallot and Harris, 2001; Kezelman and Stavropoulos, 2012). Self-protective mechanisms in coping with trauma may make it more difficult for survivors to feel the safety and trust necessary to engage in helpful relationships (Fallot and Harris, 2001), such as those with healthcare professionals.

Due to growing awareness of the prevalence and impact of trauma and its effects on health outcomes, access, and engagement (Fallot and Harris, 2001), including among people with disabilities (Kezelman and Dombrowski, 2021), there is wide support for incorporating trauma-informed principles into care. Trauma-informed principles have been used in mental health services (Bateman, Henderson, and Kezelman, 2013; Butler, Critelli, and Rinfrette, 2011), general practice (Lynch, 2021; Royal Australian College of General Practitioners, 2022), social work (Levenson, 2017; Mersky, Topitzes, and Britz, 2019), women's health services (Brooks, Barclay, and Hooker, 2018), emergency departments (Ashworth et al., 2023), aged care (Cations et al., 2021). Trauma-informed care is complex, and therefore challenging to measure (New South Wales Health, 2022). Trauma-informed care (or principles) can contribute to better health outcomes (Fallot and Harris, 2001), with nascent evidence in general healthcare settings. However, trauma-informed care is a newly emerging phenomenon, and there is a gap in understanding how it can be conceptualized and operationalized partly due to a lack of empirical studies (Bargeman et al., 2022). Trauma-informed physiotherapy services have received little attention outside mental health contexts.

Trauma-informed approaches have been recommended for physiotherapists working with people who have been exposed to sexual trauma or intimate partner violence (Barudin and Zafran, 2019; Dunleavy and Kubo Slowik, 2012; Stirling, Chalmers, and Chipchase, 2021), adverse childhood experiences (Randall et al., 2020), torture (Singh et al., 2019), post-traumatic stress disorder (De Ruiter et al., 2018), or in mental health settings (Hodgson, 2022). However, given the prevalence of trauma experiences within the broader Australian population, the exposure of physiotherapists to distress (McGrath, Verdon, Parnell, and Pope, 2023), and the growing understanding that many health conditions and experiences are often linked to trauma and stress (Darroch et al., 2020), it is pertinent to consider how trauma-informed principles may be integrated into general physiotherapy care. Of fundamental importance, the body as a machine (the view that the body is purely physical and mechanical, which contributes much of physiotherapy's approach to working with patients) (Nicholls and Gibson, 2010), and traditional divisions of physical and psychological systems have not served healthcare recipients well (Lynch and Kirkengen, 2019). A significant shift in awareness is urgently needed to incorporate the interrelationship between a person's life experiences and their physical health in physiotherapy practice; a move toward a trauma-informed whole-person approach with respect to physical health will help to support such a shift (Lynch and Kirkengen, 2019). In order to consider a shift to trauma-informed practice, we must first study how physiotherapists attend to trauma-informed principles, therefore the aim of this study was to explore how these principles are attended to (or not) in an Australian public hospital setting. The secondary aim was to identify opportunities for training physiotherapists using trauma-informed or related principles and topics.

Material and methods

Study design and theoretical underpinnings

This qualitative ethnographic study was undertaken from 2020 to 2022. Multiple, iterative data collection methods were employed including observations of clinical practice, interactive reflexive discussions with clinicians, and interviews with patient-participants (although the "patient" identifier has passive connotations we are using it as it is the preferred term of healthcare recipients) (Costa et al., 2019). Analysis was conducted in parallel to data collection and involved collaborative discussions between researchers, clinicians, and a mental health consumer project worker. Our research was underpinned by a relativist paradigm (Nicholls, 2009), which is unlike other research paradigms that reduce phenomenon to a singular reality (e.g., the presence or absence of attendance to

trauma informed principles. For example, if there were differences of opinion between the researchers when interpreting data, we tried to include them in our findings rather than attempt to resolve them). This first phase of analysis involved critical reflexivity (Setchell and Dalziel, 2019). Critical reflexivity includes an examination of the assumptions, beliefs, and values that underpin established clinical practices and ways of thinking (Setchell and Dalziel, 2019), which, in this case, was physiotherapy practice. In the second stage of analysis, we used trauma-informed care principles as a theoretical framework (Fallot and Harris, 2001). Human research ethics approval was granted by the St Vincent's Hospital Melbourne Human Research Ethics Committee. Reporting of the study followed the consolidated criteria for reporting qualitative research guidelines (Tong, Sainsbury, and Craig, 2007).

Setting

The study was set in a government-funded metropolitan tertiary hospital in Melbourne, Australia. The hospital includes adult acute and sub-acute inpatient care and outpatient services.

Physiotherapy department staff are divided into acute cardiorespiratory, in- and out-patient musculoskeletal, acute neurological, and sub-acute rehabilitation teams. These physiotherapy teams service general and specialized medicine and surgery, orthopedic, neurology, geriatric, and rehabilitation units. The mental health units do not have permanent physiotherapy staffing, but the inpatient units may request respiratory, mobility or rehabilitation physiotherapy consultations as needed. The hospital was founded by the Sisters of Charity and is a public healthcare provider and teaching hospital, serving a diverse community. It has a specific commitment to supporting people who are marginalized. This support includes dedicated funding for projects with a focus on vulnerable groups, including some in trauma-informed care in nursing, social work, and in inpatient and outpatient settings across the hospital.

Participants

There were two cohorts of participants eligible to participate in the study: 1) physiotherapists working in the hospital and 2) people completing physiotherapy treatment in inpatient or outpatient services with both physical and mental health conditions or symptoms (for full inclusion criteria see Table 1). We used convenience sampling to invite eligible physiotherapists to participate, via e-mail, with efforts to include staff in both inpatient and outpatient settings. Consenting physiotherapists reviewed their patient lists and their eligible patients were invited to participate by the research staff. Given the established links between physical and mental health and trauma (Anda et al., 2006; Substance Abuse and Mental Health Services Administration, 2014), the inclusion of patient-participants with mental health conditions or symptoms enabled us to identify participants that were likely to provide insights relevant to trauma-informed care.

Data collection

Following ethics approval, written informed consent was obtained from each participant at the time of recruitment and prior to any data collection. Demographic data was collected from each participant, including age and gender. A number of data points were collected from the medical record including unit admitted in, diagnosis, and past medical history (to identify participants' study eligibility regarding their mental health status or symptoms). Data were produced in three iterative methods with a focus on exploring physiotherapy practice including (1) ethnographic

Table 1. Inclusion and exclusion criteria.

Physiotherapist participants	People receiving physiotherapy treatment
Inclusion criteria: • Working as a physiotherapist in one of non-critical care units included in the study (medicine, surgery, orthopedic, geriatrics, rehabilitation) Exclusion criteria: • Clinicians working only in intensive care or palliative care.	Inclusion criteria: • 18 years of age or ol der • English speaking (for interviews) • Medically stable • Referred to the Physiotherapy Department as part of usual care for a physical health issue • Have a Physiotherapist that has been consented as a participant in the study • Have a mental health condition or symptoms connected to mental health such as anxiety or depression documented in their medical record. Exclusion criteria: • Cognitive impairment or acquired brain injury • Deteriorating medically, in intensive care or palliative care

observations of physiotherapy sessions and physical spaces (2) group interactive discussions with physiotherapists, and (3) interviews with people having physiotherapy. This approach was chosen to provide a variety of perspectives.

Ethnographic observations

Observations were conducted by four members of the research team (SH, SBl, NB, EB) who were all female physiotherapists working at the hospital. These researchers did not have a management or direct healthcare relationship with any of the participants and were introduced to participants as researchers, not as physiotherapists. They completed a full day of training in ethnographic methods and observation techniques, including a review of an observation of a clinical space by an experienced qualitative researcher (coauthor, JS). JS also provided specific feedback to all researchers on their observations during the data collection process. Observers wrote detailed notes describing the physical space, touch, body positions, emotions, exchanges, assessments, and treatments that occurred in the physiotherapy consultations. They also noted the formal and informal processes they observed. Notes included reflections from the researcher about factors such as their reactions to environment, connection with the participants, or moments of interest.

Interviews

Following each observation, the same researcher completed a semi-structured interview with the person receiving physiotherapy including, experience with physiotherapy (past and current) including communication, elements of discomfort (physical or emotional), and of trauma-informed principles including empowerment, choice, trust, goal setting, and decision-making. Interviews were audio-recorded, professionally transcribed, and deidentified.

Group discussions

Physiotherapy participants were invited to participate in five 60–90-minute-long reflexive interactive dialogue discussions which were held as a group. Dialogues were facilitated by two members of the research team (SH: colleague of the participants who were not directly working within any of their clinical teams and JS: who worked external to the organization the research was conducted in). The team members shared examples from the observation and interview data and asked the clinicians critical questions about the intended and unintended effects of clinical practice (Halman, Baker, and Ng, 2017). The dialogue also included discussing the emerging study findings so that clinicians could provide input. Key topics for discussion were how trauma-informed principles (Fallot and Harris, 2001) related to physiotherapy practice. The participating physiotherapists were invited to reflect on the relevance of these concepts to physiotherapy, and on how they did or did not employ these principles in their work. The final two dialogue meetings involved co-creating recommendations for how physiotherapy consultations could include more trauma-informed approaches. We also discussed gaps in understanding and application of trauma-informed principles and priorities for future training.

Data analysis

Co-analysis was embedded in the study in two ways: 1) among researchers in team – based analyses meetings, including a mental health consumer project worker (coauthor, PH) and 2) between physiotherapist participants and researchers in participatory discussions. The analysis had two phases; an initial inductive critical reflexivity phase followed by a deductive thematic mapping phase. The co-analysis was an iterative and cyclical process (Gibson et al., 2017). The research team analysis involved meeting at regular intervals to review data using critical reflexivity in phase one. Data produced from all three data collection methods were discussed in seven 60–90-minute-long research team analysis meetings that took place iteratively throughout data collection. The research team included one senior researcher with a background in sociology and psychology as well as in clinical physiotherapy (JS), four physiotherapy clinician researchers (SH, SBl, NB, EB) with training in trauma-informed care (in a specific workshop for the researchers facilitated by two social work colleagues and full-day Blue Knot Foundation courses), and one team member with lived experience of physiotherapy as well as a professional background as a mental health consumer project worker (PH).

In the first phase of analysis, the research team discussed patterns in the data related to how physiotherapists did or did not attend to aspects of trauma-informed care. Patterns were identified inductively (identified from the data, minimizing pre-conceived ideas) and were negotiated and defined through ongoing team discussion. Key ideas formed in these meetings were discussed with physiotherapist participants during the group discussions for further input. In a second stage of analysis, these key ideas were deductively (using a framework) grouped within the

Table 2. Trauma-informed principles and their key components.

Principles	Key elements
Safety	Activities and settings ensure physical and emotional safety. Interactions welcoming, respectful, and engaging. Staff attentive to signs of unease. Clear and consistent information on services.
Trustworthiness	Tasks involved in services clear. Consistency in practice. Maintaining appropriate interpersonal boundaries Maximizing honesty and transparency. Informed consent process taken seriously with goals, risks, and benefits clearly outlined. Genuine choice to withhold consent or give partial consent. Realistic about lack of control in some circumstances.
Choice	Maximize experiences of choice and control over service. Program builds in small choices that make a difference. Informed about the choices and options available.
Collaboration	Maximise collaboration and the sharing of power. Prioritise "doing with" rather than "to" or "for." Communicate respect for the consumer's life experiences and history, and a conviction that people are the ultimate expert in their own experience. In service planning, goal setting, and the development of priorities, preferences given substantial weight.
Empowerment	Prioritize empowerment and skill-building. Recognize strengths and skills.

Adapted from (Fallot and Harris, 2001). Note that safety is considered the key and overarching principle in trauma-informed care. The term "psychological safety" was also used by participants potentially interchangeably with the term "emotional safety." The use of psychological safety could reflect the growth of this developing concept in healthcare and the workplace. Psychological safety is defined as being linked to a constructive environment, strong interpersonal relationships, open communication and an effective culture inclusive of collaboration, and trust (Ito et al., 2022).

five principles of trauma-informed services as described by Fallot and Harris': safety, trustworthiness, choice, collaboration, and empowerment (Fallot and Harris, 2001; Kezelman and Stavropoulos, 2012) (see Table 2 for further details).

Two additional physiotherapist researchers (no formal training in trauma-informed care, with expertise in qualitative research and psychosocial aspects of care) assisted in mapping these inductive patterns to the trauma-informed framework (SBu, MD). Inclusion of these two researchers ensured a meaningful application of the framework of trauma-informed principles as it had to be clearly understood by them. In this second phase, data were synthesized and compared, and confirmation and divergence from trauma-informed principles were discussed. In some cases, key ideas from the first phase had multiple components and were divided to be most accurately mapped to one of the trauma-informed principles. Descriptive statistics were used to summarize participant demographic data.

Results

Participants were 16 physiotherapists and 12 patients from four different clinical settings (see Table 3 for further details). None of the physiotherapy participants had completed any specific or formal training in trauma-informed care. We conducted a total of twelve observations of physiotherapy consultations (ranging from 20 to 75 minutes), four physical space observations (acute wards, rehabilitation gym, musculoskeletal outpatient physiotherapy department), ten interviews with people having physiotherapy (mean duration 19.8 minutes; standard

Table 3. Participant and consultation details.

Participants/Consultations	Characteristic	n
Physiotherapist participants	n	16
	Age in years: mean (SD)	29.5 (4.3)
	Gender: Women $n = 14$ Men $n = 2$	
	Clinical experience in years: mean(SD)	6.6 (4.6)
	Additional qualifications (beyond graduate physiotherapy degree): PhD $n = 2$; Masters $n = 4$; Graduate certificate $n = 2$	
Patient participants	n	12
	Age in years: mean (SD)	56.8 (15.1)
Physiotherapy consultations (unit/setting)	General medicine or surgery inpatient	6
	Geriatric evaluation inpatient	2
	Sub-acute rehabilitation inpatient	2
	Musculoskeletal outpatient	2

n: number; PhD: Doctor of Philosophy; SD: standard deviation

Table 4. Themes mapped to each principle of trauma-informed services (Fallot and Harris).

Trauma-informed care principle	Themes	Theme definition
Safety	Not just a number	Physiotherapists are friendly, approachable, and caring. They are interested, active listeners, validate reported symptoms, and are attentive to signs of discomfort. This all contributes to people feeling listened to and understood as unique individuals which will bolster interpersonal safety.
	Safety is uncertain beyond managing physical risks	Physiotherapists have a limited understanding and lack of confidence with safety (beyond physical safety) but they recognize this gap and have an interest in learning more to improve their approach.
	The upbeat approach as a default needs balance	The motivating, positive, and upbeat default setting for physiotherapists may not always be appropriate. The need to sit with all types of emotion and meet people where they are at needs work.
	Pragmatic environments may be inadequate	Clinical spaces are noisy, lack privacy and are practical rather than welcoming, with limited support for emotional safety for vulnerable people or situations.
Trustworthiness	Potential hazards of touch as a "go to" in physiotherapy	Touch is central to physiotherapy in showing empathy, supporting patients physically, and in treatment but needs greater consideration, discussion, and options for people who may not feel comfortable with it.
	Assumed consent	Physiotherapists may deprioritise explicit consent "in the best interests of the patient" and this may impact on transparency of physiotherapy sessions and the trustworthiness of physiotherapists.
Choice	Limited options provided within physiotherapy	Restricted small choices are offered in physiotherapy which may impact on control and engagement for people. Consideration for more meaningful choices to increase control may be needed.
Collaboration	Let's do it together	Physiotherapists use a doing "with" approach and language which supports collaboration.
	Variable consideration of the patient as the expert	Enhanced with clinician experience and insight.
	Task focus impedes collaboration	Time constraints, workload or discharge pressures may impact on collaboration.
	Pushing the "right" treatment	A narrow interpretation of evidence-based practice and the best intentions in trying to help, overshadows collaboration.
	Insight into power imbalance missing	Lower physical function and difficulties for people receiving healthcare speaking up not clearly understood by physiotherapists.
Empowerment	Extending physical skills, function, and independence	Empowering people in physiotherapy with their mobility and goals.
	Awareness of building nonphysical skills	Education and equipping people with knowledge is linked to physiotherapists implicitly supporting other skillsets
	Lack of clarity beyond "getting the physical stuff done"	Limited understanding of how to recognize, acknowledge and build emotional skills or psychological health.

See supplementary material for infographic.

deviation 11.7), and five one-hour long dialogue discussions with physiotherapists between 2020 and 2022.

Co-analysis of how physiotherapy attended to (or not) the five principles of trauma-informed care produced a number of themes. We grouped these themes under the five trauma-informed principles with between one and five themes per principle – see Table 4 for an overview. These themes were observed across the different settings (e.g. outpatient or inpatient); any nuance related to the setting, context, or individual is highlighted and discussed below. Participants are distinguished by pseudonym in extended quotes and observations.

Safety

Not just a number

The first theme was about physiotherapists providing a welcoming environment for care, being attentive listeners, validating symptoms, and being aware of discomfort, which implicitly promoted a sense of psychological safety. Physiotherapists were observed in consultations to be "upbeat" and "friendly." Patients described their physiotherapists in interviews as "friendly," "kind," "approachable" who made them "feel at ease" and these qualities were discussed by physiotherapy participants as being positive with the potential to contribute to a sense of emotional safety. Further, in consultations in both inpatient and outpatient settings, physiotherapists appeared to be attentive to signs of unease, monitoring facial expressions, eyes or body posture and they checked-in with patients often, mainly related to concerns in the physical realm. There were regular questions in sessions such as "how does that feel?" or "how are you going?" A number of patient participants suggested in interviews that the healthcare experience could be "pretty scary," "hard at times and challenging" and "emotional." In the observations, physiotherapists appeared to be aware of this, responding to patients by saying, for example, "I'm right here for you" as well as offering opportunity for questions. Some clinicians explicitly described how they "openly and actively" listen to patients as outlined by Heidi (physiotherapist): "We're looking not just for the verbal cues, we're on the lookout for the nonverbal cues as well, not necessarily pain or low blood pressure, but potentially

those psychological, non-verbal cues that might come through as well."

Physiotherapy participants also outlined communication strategies to address the challenges involved in healthcare interactions, for example, Julie (physiotherapist) commented, "I am more forward with asking, how can I make this interaction more positive for you, more comfortable for you?" and Georgina (physiotherapist) suggested that she would "talk it out and make them feel more at ease." Many clinicians expressed an understanding that healthcare experiences can be overwhelming and stressful, leading patients to feel unsafe "in hospital surrounded by really loud sounds, bright lights, unfamiliar people … can be traumatic in itself" Julie (physiotherapist). Similarly, they noted that past experiences might also affect patients' sense of safety, for example, Stephanie (physiotherapist) said that patients may "have had really bad experiences in hospital because they haven't felt listened to or (had) their needs met."

Physiotherapists were observed in consultations acknowledging the patient's story, validating patient-reported symptoms, and "listening with intent." In alignment with these observations, in her interview, Susan (patient) discussed the importance of physiotherapists validating the symptoms she reported and expressing understanding of the gravity of her injury experience: "[the physiotherapist] really understood and talked me through how it was a traumatic injury, and it was a substantial injury and that the things that I was feeling around it were completely valid." In the group discussions, physiotherapists discussed listening and "validating" symptoms as examples of how they built rapport and formed strong therapeutic relationships which is likely to contribute to interpersonal safety between clinician and patient.

In some patient interviews, participants discussed the care they perceived their physiotherapist had for them and the sense that they were heard as being part of being recognized as a unique individual and by the feeling that "you're not just a number" Julieanne (patient) and Antonia (patient).

Safety is uncertain beyond managing physical risks

This second theme explores how, in contrast to their implicit contributions to psychological safety, physiotherapists generally expressed little confidence or skill at managing safety beyond physical risks. In their group discussions, physiotherapist participants were in agreement that safety was understood in a quite limited way by both individual physiotherapists and at profession level. Mostly safety was only considered to be a physical issue, for example, related to falls or mobility. While there were some implicit emotional safety considerations observed as outlined above, there was a stronger content focus on physical safety.

Some physiotherapists discussed having lower confidence communicating about emotional safety or mental health concerns with patients, instead choosing to "avoid it if we can" or not addressing it "until it obstructs our regular practice." As one clinician described "I think you attend to (psychological safety) as much as you need to achieve the physical side of [the consultation]" Stephanie (physiotherapist). This lower confidence or lack of attention to distress was observed to result in missed opportunities to provide support and emotional safety. For example, in one outpatient observation, Cath (physiotherapist) misses an opportunity to discuss psychological and physical safety when Susan (patient) hints that she has had suicidal ideation. Susan comments on a stick figure drawn by Cath to explain an exercise, "That looks like a hangman" says Susan. "That moment, has passed, I'm ok now."

Cath comments, "we shouldn't joke about that" as she writes directions on the paper without looking up but does not follow up any further. There was limited or no explicit checking in on psychological status or emotional distress observed in consultations. Some patients described negative interactions with physiotherapists which may be linked to a lack of insight into broader aspects of safety (as well as time constraints, workload, or discharge pressures), for example, in this patient interview, Julianne described feeling forced to get out of bed and walk when feeling unwell: "I felt like she just didn't understand. And she was just pushing and pushing and pushing."

Despite a limited understanding and confidence with safety, beyond physical safety, physiotherapists recognized this gap and expressed an interest in learning more to improve their approach. All clinicians in the interactive discussions indicated interest in training in trauma-informed principles to "change our interactions," bridge gaps in understanding and skills to improve patient experience, provide holistic care, and improve person-centredness and engagement in physiotherapy. Most physiotherapists felt they had a lack of skills and confidence in psychology, emotional and mental health, and limited understanding of trauma in a broader context (beyond a fracture or motor vehicle accident). "We don't have the training," Heidi (physiotherapist) went on to outline: "reflecting back we had maybe two or three lectures at most over a four-year course, related to psychology and patient trauma." The lack of skills and attention was also attributed by clinicians to the definition of the role of the

physiotherapist: "Physical vs emotional safety priorities. Ours is physical" Stephanie (physiotherapist).

Although the focus in the group discussions was on patient safety, some physiotherapists highlighted their interest in, and the importance of, understanding emotional safety for the clinician. Amanda commented: "I hadn't thought about it like that . . . putting strategies in place for the patient so they [the patient] felt safe . . . but also recognizing the impact of the behavior on staff" and from Stephanie: "Sometimes with very challenging patients you leave the room and think: Social work or Clinical Psych. You need that input from the MDT [multi-disciplinary team], as it's almost too much to hold yourself."

The upbeat approach as a default needs balance

In the clinical interactions, we observed, most clinicians used encouragements such as "you're doing really well." A number of clinicians in the interactive discussions described physiotherapists as "good motivators" or "positive reinforcers" and one patient also described their physiotherapist as a "motivator." In later group discussions, physiotherapists suggested that they may be unintentionally controlling the emotional environment when they are very positive and upbeat, and they may not always be meeting someone where they are at emotionally with a consistently positive default approach. It was discussed that an "upbeat" mood may sometimes prevent important discussions of difficult topics or sharing of so-called "negative" emotions. By attempting to make people feel comfortable, there might be an implicit sense that it is not safe for patients to express discomfort. This may also be connected to previous comments around lower confidence in addressing psychological distress or mental health challenges.

Pragmatic environments may be inadequate

Spaces in specific observations on the ward, outpatient areas and gyms were often described as noisy, lacking in privacy, and utilitarian, which may impact on feelings of emotional safety for some patients. Although practical, these spaces may not be welcoming or private enough to support for emotional safety for some people or situations as outlined in this observation of a gym environment "the space is busy and bustling, and some patients may feel 'on display' and hence vulnerable. There are no options for privacy" and in this outpatient setting "each treatment space is concealed by a pull across curtain when in use, offering visual privacy but offering no auditory privacy. Each conversation is clearly audible from each space."

Trustworthiness

Clinicians described in group discussions that physiotherapists were "professional" and aimed "to develop trusting relationships" Jane (physiotherapist). One patient reflected "I trust them. My body is in their hands" Antonia. Despite the overall professional approach, both the use of touch and informed consent were two areas, observed and discussed by clinicians, that may have an impact on trustworthiness.

Potential pitfalls of touch as a "go to" in physiotherapy

Touch is used frequently and is "second nature" to physiotherapists – with the potential to impact negatively on trust, particularly for patients with a history of trauma. In the observed clinical interactions, there were numerous examples of the use of touch related to connection, or support (for example, a hand on the arm or back), in addition to manual supports and manual therapy. As Elizabeth (physiotherapist) described "being physically intimate as physios with patients, I think there's a lot of inherent trust that we gain from them." However, for some people, their circumstances related to trauma or abuse may have involved trusting relationships being broken, sometimes by violent or inappropriate touch. Understandably, the use of touch for connection and support (or any touch) might feel uncomfortable for patients with these experiences. Touch was described in discussions by physiotherapists as "second nature" and "our go to mechanism" but also that clinicians may not consider touch comprehensively for each individual patient, for example, Tom (physiotherapist) noted: "Our mode of empathy is putting a hand on someone's shoulder . . . our mode of keeping someone [physically] safe is 'hands on' with them as well . . . physical touch, it's the first thing that we go to. For certain populations . . . that may not be appropriate." No instances of what we would call inappropriate physical touch or blurring of interpersonal boundaries linked to touch were noted in the observations. The non-treatment touch we observed was also professional and respectful and what many people would expect from a physiotherapy or medical interaction. However, related to being trustworthy, there was a clinician rather than patient focus of most of this touch, with little understanding perceived that for people who have experienced trauma, touch might feel like a violation of trust, with need for clear and careful consent and/or non-touch options. None of the observations included any examples where the patient was given the option of an interaction that did not involve touch. Similarly, when touch or manual support was needed for physical safety, none of the physiotherapist participants provided an explicit verbal description of why they had

touched the patient, nor did they offer alternatives. This may indicate limited consideration and options related to touch that may be important for people who do not feel comfortable with it.

It was not only physiotherapists who discussed that touch is an inherent part of physiotherapy, some individuals having physiotherapy described touch as essential to their care. For example, "I just felt, "What's the use of coming in and talking? Physio is hands-on. If it's not hands-on, I'm wasting my time coming" Antonia (patient). Managing expectations by discussing the use of touch in sessions, offering alternatives, and asking for ongoing consent will impact on the trustworthiness of physiotherapists for those expecting it (and those that may find it traumatizing).

Assumed consent

Another "gray area" connected to trustworthiness (establishment of trust) was consent. Although we did not observe any cases of physiotherapists doing anything against patient's wishes, physiotherapists described using implied consent or undertaking treatments "in the best interest of the patient" and although they describe some activities before doing them, they may not always be explicit about consent or what is involved in sessions. Consent was often linked to a short explanation and a check-in that it would be acceptable to the patient to proceed but many of the clinicians working in acute settings were in agreement that consent to participate in treatment was "opt-out." Eve (physiotherapist) described it as "a fine line" of explaining and keeping someone engaged "... but obviously, it's good to let the patient know what they're going to be doing." Thus, the priority was at times ensuring that patients were compliant with treatment rather than ensuring trustworthiness.

A number of physiotherapists discussed that by assuming consent, for example, when getting someone out of bed to walk even though they may be reluctant to do so due to pain or fatigue, that they had the best of intentions in deprioritising consent, with "the mentality that they [the patient] might thank us at the end of this" related to the broader goal of improved physical independence, improved physical function, or preventing a chest infection, for example. These examples suggest that, despite the best of intentions from physiotherapists, clinicians may not always maximize honesty and transparency in elements of their sessions which may impact on trustworthiness (as well as safety, building rapport, and the therapeutic relationship).

Choice

Limited options provided within physiotherapy

This theme is about the limited nature of choices offered by physiotherapists. Small choices were offered in sessions by physiotherapists related to time of treatment, elements of exercise, mobility, and goals, for example, as seen in several observations: "you can walk as far as you like" says Gabrielle (physiotherapist) "you can choose which way we go" or from Amanda (physiotherapist), "Do you want to roll this way?" and Tom (physiotherapist) asks if now is a good time for a session. Choices offered in physiotherapy sessions were described as limited by most clinicians in the discussions connected to "the goals of what we think is best" or balanced against "risks," for example, the risk of falls. When interviewed, a number of patients struggled to identify where choices were offered to them. For some, this was fine, they wanted to be directed by the therapist, "I wasn't really looking for choice. I'm there because they know what to do" Susan (patient). However, for many people who have experienced trauma, ensuring that the option to choose and control what happens in a healthcare interaction means that they can stay engaged actively in their healthcare without being retraumatized. Although never overtly forceful, physiotherapists that we observed in consultations tended to offer little real choice and the small choices that were offered may not have been meaningful enough to impact on control and engagement for people.

Collaboration

Let's do it together

During group discussions, physiotherapists identified strongly with using a doing "with" approach and language which supported collaboration, this collaborative approach was often also evident in observations. During group discussions, physiotherapists said that they considered the "whole person" and improving independence of people, their goals and prioritizing collaboration for optimal outcomes; "they're more prone to participate if they feel like ... it's for them, and it's going to help them in the long run" Eve (physiotherapist).

Patients in the interviews also referred to this collaborative approach, for example, saying the physiotherapist was "doing the exercise with me." Similarly, in group discussions with clinicians, they described using what one of them called "inclusive language" for example "Let's do this together." Collaboration was also detailed in observations, for example, in a session involving inpatient rehabilitation

in a gym setting, the observer wrote that the physiotherapist (Elizabeth) asked Leila to move her leg "You can try it yourself," but Leila finds it difficult, so Elizabeth supports the leg and says "Let's do it together."

Variable consideration of the patient as the expert

Most clinicians discussed collaboration as part of physiotherapy and "making sure that the patient knows that they're the expert. And we're just trying to work with them" Eve (physiotherapist). Respect for the patient as an expert and "building collaborative practice" was outlined by physiotherapists as being linked to the clinician's experience and emotional intelligence. Michael (physiotherapist) outlined this approach to care in one of the group discussions: "I will recognize that you're the expert of your symptoms, you're the expert of what you've found works before we can bring maybe another viewpoint, another approach, and offer some more suggestions to help you get through this."

Another indicator of the patient being considered an expert and collaborator was when physiotherapists acknowledged the limitations of their own insight into individual patient's healthcare experiences. For example, Gabrielle (physiotherapist) said "You really don't have any idea what their experience is" and Tom said, "We like to think that we've seen the surgery 100 times before, we should know how you should feel." Yet, at times the need for collaboration with patients is missed by physiotherapists, as Micheal (physiotherapist) said "'I know' is thrown around way too much. Actually, I have no idea."

Some physiotherapists also collaborated with patients in a different way, describing their role as a potential advocate for the patient (within the multidisciplinary team). This was also seen in the observations also with comments including "I'll touch base with the rehab doctor about your foot" Amanda (physiotherapist).

Task focus impedes collaboration

Physiotherapists mentioned in their group discussions that there was frequently a task focus (tasks that physiotherapists set) to their work rather than collaborative or person-centered focus. Physiotherapists often related this to perceived time constraints, workload, or discharge pressures. For example, Michael (physiotherapist) explains:

"if you're in a particularly busy area with a lot of external stress, or if there is high patient throughput and flow, it's really easy to lose track of that patient experience, it becomes very task orientated rather than very patient orientated".

Organizational and time pressure on treatment and goals were also discussed by clinicians "centered on bed pressure [demand in the system and push to admit another patient] and discharge" which were identified as having some impact on collaboration in physiotherapy when the goal was focused on discharge and not able to be driven by the patient.

Pushing the "right" treatment

Although evidence-based practice should be influenced by patient preferences, clinicians experience, and scientific literature, group discussions suggested that clinician-led interactions were often narrowly focused on implementing only the one element, scientific research. As Tom (physiotherapist) said "the driver is they must get out of bed, we know what's best for you because this is what the evidence says." Clinicians also expressed challenges connected to the "right" treatment or view that "having independence is better" Simone (physiotherapist). When patients did not align or engage with physiotherapy plans, were not "completely compliant" or when there was disagreement, one clinician described being frustrated by some "challenging" patients when "doing everything in your power to improve their circumstances" and feeling negative as they were "trying to help, but you're not agreeing to come on board with me" Cath (physiotherapist). These and similar examples suggest a lack of collaboration at times when the physiotherapists believe their approach to treatment is "right."

Insight into power imbalance missing

Another factor which would likely inhibit the ability for the interaction to be collaborative was the power imbalance between physiotherapists and patients (with patients having less power). This was observed in some inpatient sessions, particularly evident in the lack of independence or physical function of patients, for example, in the amount of assistance needed by the patient to move and in setting up the environment so the patient could reach items. It was also seen in observations in outpatient settings when patients tried to negotiate further appointments or minimize inconvenience for the physiotherapist. "It seems so simple, sorry" again Antonia apologizes "how embarrassing" she continues. "I know I've been a nuisance, sorry." Most physiotherapists in group discussions expressed only having superficial understandings of power, limiting clinicians' ability to encourage patient's voice and participation and to ensure that collaboration is genuine.

Empowerment

Extending physical skills, function, and independence

Most physiotherapists discussed wanting to empower people to reach their goals and, for example, "get them to a level where they can leave hospital" Paul (physiotherapist). Independence was a focus for most clinicians as they described prioritizing functional independence. A couple of patients in their interviews linked independence with mobility to the physiotherapist doing a "good" job to get them "up and about when nobody else could."

Physiotherapists were observed to acknowledge patient strengths and build patient skills in some areas comprehensively, for example, related to physical function and strength with reassurance that the "leg will get stronger" or with instructions to "feel tall and strong."

Awareness of building non-physical skills

Physiotherapist providing education for patients was sometimes observed as empowering patients via building understanding and skills. For example, in the context of building knowledge and skills in behaviors beyond physical rehabilitation, in one consultation, Cath (physiotherapist) was observed educating a patient about the importance of sleep in managing pain "our body does a lot of healing and recovering overnight so sleeping is important" says Cath (physiotherapist). Physiotherapy participants linked their efforts to equip people with more knowledge with "more psychosocial exploration" or discussion with some patients to implicitly support other skillsets (for example, coping with symptoms, confidence and decision-making with activities).

Lack of clarity beyond "getting the physical stuff done"

Most clinicians discussed having a limited understanding of how to acknowledge and to build psychological strengths (such as decision-making, coping skills or self-efficacy) as outlined by Elizabeth (physiotherapist): "Typically we probably don't [recognize strengths] but seek info on motivators for health [e.g. wanting to be physical active with grandchildren]." Physiotherapists also described how they see their role as motivating and encouraging rather than supporting people's mental health, emotional, or psychological strengths. Clinicians discussed that their job was "getting the physical stuff done" which may limit empowerment in physiotherapy interactions beyond a basic functional level. Some confusion over the exact role of physiotherapists in supporting and building psychological or emotional health was echoed in this patient interview: I don't know if they [physiotherapists] can help. But I suppose someone listening always helps" Antonia (patient).

Some key practice considerations have been summarized in Table 5.

Discussion

As far as we are aware, this was the first study in a general physiotherapy practice setting to explore trauma-informed principles. Our analysis suggests that physiotherapists working in a general hospital-setting, who had not received specific training in trauma-informed care, implemented aspects of trauma-informed principles in their practice. In particular, our research indicates that physiotherapists were often approachable, attentive to discomfort, helped people feel at ease, listening "with intent," validating symptoms and stories, keeping patient goals and the "whole person" as a key focus, and incorporating small choices and some collaboration in sessions. However, important gaps and constraints in practice and training in relation to trauma-informed physiotherapy were identified. The most significant gap in understanding was with the overarching principle of safety, and the narrow focus on physical safety. As a key principle of trauma-informed practice, the concept of safety has an impact on all the other principles and needs to be further developed for physiotherapists beyond the physical elements. These results provide a starting point for the profession to determine how training and clinical approaches can be safe for those who have unresolved trauma or are overwhelmed, recognizing that the application of trauma-informed principles will vary depending on the individual and the context.

Physiotherapists in this study demonstrated many ways of thinking and practicing that reflect trauma-informed principles. They were considered to be welcoming to most patients with a friendly and approachable manner. Further, they appeared to be aware and monitoring (physical and sometimes psychological) discomfort, attentive listeners, often validated patient stories and symptoms, facilitated opportunities for questions, and incorporated elements of choice, collaboration, and skill-building. Our analysis supports physiotherapists appearing to already exhibit one of the key skills in trauma-informed, whole person care, in listening intently and appraising a person's life story (Lynch, 2021). Our analysis identified time, workload, and organizational pressure constraints alongside perceived job role of "getting the physical stuff done" and delivering the "right" treatment need further exploration within delivering trauma-informed physiotherapy. The skills physiotherapists in this study demonstrated could be

further developed using approaches outlined in other health and exercise settings, including broad awareness and calm sense making (Lynch, 2021), insights in trauma-informed physical activity (Darroch et al., 2020), and practical approaches for clinicians in emergency departments (Ashworth et al., 2023).

Gaps in physiotherapy practice were noted in our analysis in all five trauma-informed care domains, particularly a limited understanding of safety. As safety is a necessary pre-condition for the other principles of trauma-informed practice (Kezelman and Stavropoulos, 2019), defining it in a clear and relevant way for physiotherapy is critical. Physiotherapists in the mental health subdiscipline have explored and defined safety to include providing choice of the gender of the clinician, being culturally sensitive about confidentiality, ensuring informed consent, pacing of treatment with regular discussion about the physiotherapist's role, and offering choices in the plan when possible (De Ruiter et al., 2018). Trauma-informed approaches define additional categories for safety including control of body, thoughts and emotions, relationships and interactions, environment, systems, and institutions and being in touch with a person's level of stress (Kezelman and Dombrowski, 2021). Having a "sense of safety" has been further explored for healthcare practitioners as giving comfort and courage, built within relationships, incorporating a physiological reality and has a whole person experience (Lynch, 2021). Physiotherapy training is needed to build safety by drawing on these definitions and considerations to enhance clinicians' ability to provide a safe healthcare experience for their patients. In addition, as the physiotherapists in this study identified as an area of interest, learning about the safety for clinicians (e.g., assistance when needed, adequate privacy, comfortable raising concerns, vulnerabilities, and emotional responses to the team – see Fallot and Harris, 2001),

Table 5. Key practice considerations.

Trauma-informed principle	Key practice consideration
Safety	Emotional and psychological safety is a priority, for the patient and the physiotherapist, not a secondary consideration to physical aspects of physiotherapy
	Be an active listener, and treat everyone as a unique individual
	Validate symptoms, perceptions, or story
	Maintain an approachable and caring manner
	Be aware of (verbal and non-verbal) signs of discomfort and check in regularly to see how the patient is feeling or managing (not just related to physical symptoms)
	Consider times when being motivating and positive is most appropriate and allow all emotions to be present without judgement Ensure a welcoming physical space. ideally with the option of privacy
Trustworthiness	Be clear when and how touch will be used
	Be transparent with activities, processes, and plans, prioritizing informed consent
Choice	Create meaningful choices to increase control for patients in physiotherapy including the pace of the session or the option to take a break
Collaboration	Use doing "with" or doing it "together" language
	Find ways to reinforce and utilize the patient as the expert in their own experience
	Review workload, processes, timing, or flexibility with physiotherapy services
	Try not to "push."
	Reframe the "challenging" patient and "compliance," to instead welcome engagement from the patient, whatever that looks like for them, at that point in time
	Consider that most patients may feel vulnerable in a healthcare setting and find ways to increase the power or control for them
Empowerment	Co-create goals and discuss independence and physical function
	Recognise and build non-physical skillsets like planning, decision making, coping, self-efficacy, and confidence

Note: Practice considerations will vary related to the context, setting, and individuals involved.
An overarching consideration also includes a critical reflection on how and when practice has a physical focus instead of a whole person approach.

described as a necessary precondition in trauma-informed training (Carello and Butler, 2015), needs to be considered. Further focus on improving clinicians' self-regulatory processes and skills and resources connected to resilience to support safety and mediate workplace trauma and stress being "almost too much to hold yourself", has merit for physiotherapists to address burnout, as has been explored in other healthcare professionals (Foster et al., 2018).

Trauma-informed principles have been criticized for lacking specificity (Mersky, Topitzes, and Britz, 2019), with complexities in how to assess effectiveness also raised as an issue (New South Wales Health, 2022). This study may respond to the first concern by providing some specific details of how trauma-informed physiotherapy might be enacted. Our work builds on existing resources developed in some countries and sub-disciplines of physiotherapy with greater experience in mental health and mind-body practices (Heywood et al., 2022) which can also be sources of experience, skill, and structure to further trauma-informed practice. Taken together, this suggests that, in order to provide trauma-informed care, it could be helpful to develop some broad trauma-informed principles tailored for the physiotherapy profession which can be adapted to sub-disciplines, sociocultural environment, or local context.

Based on our results, there are a number of considerations for any next steps for developing trauma-informed physiotherapy. There is the potential to maximize physiotherapy strengths as identified in this study (in being attentive listeners, who are aware of discomfort, and who validate patients' story and symptoms). Physiotherapists' focus on goal setting and independence, alongside the professions recognized knowledge and skills in movement, exercise, rehabilitation, physiology, sensorimotor and neural systems, and education, are crucial for facilitating trauma-informed principles of engagement, resilience, and recovery. Specific enablers within the physiotherapy profession for change include ongoing consideration of the complexities of the therapeutic relationship (Søndenå, Dalusio-King, and Hebron, 2020), reciprocity and power dynamics (Mescouto, Tan, and Setchell, 2023), human aspects of care (Dillon et al., 2023), the use of touch (Bjorbækmo and Mengshoel, 2016; Tuttle and Hillier, 2023), psychosocial education (Østerås and Bunzli, 2023), managing distress (McGrath, Parnell, Verdon, and Pope, 2023), a deeper understanding of the biopsychosocial approach (Driver, Lovell, and Oprescu, 2019), a revised approach to movement (Nicholls and Vieira, 2022) and more options for learning about trauma-informed care becoming available within universities or online. Alongside moving toward a trauma-informed whole-person approach (Lynch and Kirkengen, 2019), the concept of "flourishing", growing human capabilities and striving for meaning, purpose, and well-being (Buetow, Kapur, and Wolbring, 2020) could align the physical and the psychological more closely for physiotherapists in a trauma-informed service instead of a focus on maximizing physical independence. Just as important may be the challenge in trying to resist treating the body as a machine (Nicholls and Gibson, 2010) or a continued focus on the biomedical aspect of care (Mescouto, Olson, Hodges, and Setchell, 2022). The upbeat and motivating approach in physiotherapy may be appropriate and valuable in some circumstances but needs further consideration as the similar concepts of cheering and cheerfulness in healthcare have been found to exclude "negative" emotions, grief, uncertainty, and "failure" (Setchell, Abrams, McAdam, and Gibson, 2019). There is an increasing amount of critical physiotherapy research outlining and challenging contemporary power asymmetries (Nicholls et al., 2023). However, our study shows that there continues to be issues related to negotiating power within physiotherapy encounters, including those related to expert status and clinicians' control of information and processes (Harrison and Williams, 2000). Aligning clinical reasoning and decision-making and determining the feasibility of training in trauma-informed principles may identify the elements of greatest value to inform training that improves the capacity of physiotherapists to implement these approaches.

There are a number of methodological considerations that have impacted the findings of this study. Generating data from three sources, including observations of physiotherapy sessions, patient interviews and clinician group discussions, was a strength of the study as it incorporated multiple perspectives. The study was completed over the COVID-19 pandemic with workforce pressures in the organization leading to an extended period for completion as well as changes in clinician participants across this time (some physiotherapists started in the study and were not working at the same organization toward the end of the study) which may have influenced the findings. Our use of the principles of trauma informed services (Fallot and Harris, 2001) will also have influenced the findings as there are also other ways to understand trauma and its relationship to healthcare. We have shared information about these domains so readers might understand the constraints and possibilities of this foundational and influential approach. Further, as the research team was comprised primarily of physiotherapists, we may have been overly positive about (or critical of) our profession. We tried to mitigate this by intentionally examining our assumptions and any power issues and by including

a researcher with lived experience (mental health consumer project worker). The transferability of the findings of this study may be most relevant in public hospital settings with similar healthcare systems to Australia, but there were also outpatient consultations observed and the research team included physiotherapists with fee-for-service workplace experience which may have broadened the interpretation of the data. In addition, this study had a primarily interpersonal focus, leading to limited consideration of structural or systemic elements that influence trauma-informed services. This study only included English-speaking participants and did not consider the important topic of culturally responsive physiotherapy (Brady, Veljanova, and Chipchase, 2016) within the safety principle, which would be valuable to be explored in future research, particularly in Australia and other countries with culturally diverse populations (Brady, Veljanova, and Chipchase, 2016). This is of further importance to consider due to the trauma experienced by Indigenous people and the significant gap in health outcomes (Calma, 2008) as well as issues negotiating health services for those from culturally and linguistically diverse backgrounds (Levy-Fenner, Colucci, and McDonough, 2022).

Conclusion

Trauma-informed principles are being adopted in many areas of healthcare due to the high prevalence and significant impact of trauma for many people and should be a priority to further explore in physiotherapy to facilitate safety and engagement. Clinical practice in physiotherapy attends to important aspects of trauma-informed care, but there are many opportunities for strengthening the approach to care, particularly in relation safety beyond the physical aspects. The next steps in developing and evaluating trauma-informed physiotherapy practice approaches are both challenging and exciting and could involve further training and incorporation into existing clinical decision-making and approaches. Ideally, the profession moves to facilitate positive healthcare experiences for all patients, maximizes engagement in physiotherapy, and ensures patient psychological safety, including reducing possibilities of unintended harm.

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