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Systematic scoping review on moral distress among physicians

Chrystie Wan Ning Quek,1,2 Ryan Rui Song Ong,1,2 Ruth Si Man Wong,1,2 Sarah Wye Kit Chan,1,2 Amanda Kay-Lyn Chok,1,2 Grace Shen Shen,1,2 Andrea York Tiang Teo,1,2 Aiswarya Panda,1,2 Neha Burla,1,2 Yu An Wong,1,2 Ryan Choon Hoe Chee,1,2 Caitlin Yuen Ling Loh,1,2 Kun Woo Lee,1,2 Gabrielle Hui Ning Tan,1,2 Ryan Emmanuel Jian Leong,1,2 Natalie Song Yi Koh,1,2 Yun Ting Ong,1,2 Annelissa Mien Chew Chin,3 Min Chiam,4 Crystal Lim,5 Xuelian Jamie Zhou,2,6 Simon Yew Kuang Ong,4,6 Eng Koon Ong,2,6 Lalit Kumar Radha Krishna 1,2,4,6,7,8,9

ABSTRACT

Background Concepts of moral distress (MD) among physicians have evolved and extend beyond the notion of psychological distress caused by being in a situation in which one is constrained from acting on what one knows to be right. With many accounts involving complex personal, professional, legal, ethical and moral issues, we propose a review of current understanding of MD among physicians.

Methods A systematic evidence-based approach guided systematic scoping review is proposed to map the current concepts of MD among physicians published in PubMed, Embase, PsycINFO, Web of Science, SCOPUS, ERIC and Google Scholar databases. Concurrent and independent thematic and direct content analysis (split approach) was conducted on included articles to enhance the reliability and transparency of the process. The themes and categories identified were combined using the jigsaw perspective to create domains that form the framework of the discussion that follows.

Results A total of 30 156 abstracts were identified, 2473 full-text articles were reviewed and 128 articles were included. The five domains identified were as follows: (1) current concepts, (2) risk factors, (3) impact, (4) tools and (5) interventions.

Conclusions Initial reviews suggest that MD involves conflicts within a physician’s personal beliefs, values and principles (personal constructs) caused by personal, ethical, moral, contextual, professional and sociocultural factors. How these experiences are processed and reflected on and then integrated into the physician’s personal constructs impacts their self-concepts of personhood and identity and can result in MD. The ring theory of personhood facilitates an appreciation of how new experiences create dissonance and resonance within personal constructs. These insights allow the forwarding of a new broader concept of MD and a personalised approach to assessing and treating MD. While further studies are required to test these findings, they offer a personalised means of supporting a physician’s MD and preventing burn-out.

INTRODUCTION

Care and resource limitations and concerns over compromised patient care amidst the COVID-19 pandemic have fanned reports of moral distress (MD) among healthcare professionals (HCPs) in medicine, pharmacy, allied health, psychology and social work.1–11 However, while this increase in reports of MD is unsurprising, the diverse nature of accounts of MD among HCPs suggests that concerns extend beyond Jameton’s original notion of psychological distress caused by being in a situation in which one is constrained from acting on what one knows to be right.6–11

With data suggesting that concepts of MD may also differ between HCPs by virtue of their practice and settings, we focus on the study of MD as conceived by physicians. Indeed, current accounts of MD among physician12–27 suggest MD is a product of conflicts between prevailing values, beliefs and principles (personal constructs) drawn from self-concepts of personhood and ethical, practical,28,29 clinical, moral30 and professional31 influences within a particular setting or clinical interaction (situational constructs). To better appreciate conflicts between personal and situational constructs that predispose to burnout and compromised patient care a
holistic appreciation of MD among physicians is required. It is hoped that better understanding of MD among physicians will help direct personalised, appropriate, timely and holistic support to physicians facing MD and thwart threats of burn-out and resignations among physicians.

**Rationale for this review**

A systematic scoping review (SSR) is proposed to map the diverse conceptions of MD among physicians. Indeed, the notion that MD may take a different shape among physicians than across other HCPs may not be surprising given that Jameton’s original concept was conceived within the nursing setting replete with its hierarchical and practice culture. A specialty-specific account of MD will guide timely, comprehensive, and personalised appraisal, and support for physicians in need.

**Theoretical lens**

Two considerations guided the selection of an appropriate theoretical lens for this review. One, MD is a sociocultural construct deserving of holistic study of the physician’s practice, cultural, social, professional, academic and research circumstances including their healthcare and education systems. Acknowledging MD as a sociocultural construct underlines the need to consider the individual physician’s moral, ethical and professional beliefs, values, and principles that underpin their thinking, attitudes, decision-making and actions. There must also be due consideration of their spiritual, emotional, relational and social considerations which similarly impact their sensitivity or awareness of occurrences and circumstances that could provoke MD in them. In addition, recognising MD’s complex sociocultural nature underscores the importance of appreciating the physician’s narratives, competencies, experiences, reflections, abilities and available coping and support mechanisms that provide MD with its personalised and evolving nature.

Two, with a physician’s personal, moral, ethical and professional beliefs, values, and principles informed by their self-concepts of identity and personhood or ‘what makes you, you’, the link between personalised concepts of MD and self-concepts of personhood become clearer. Ho et al., Kuek et al., Chan and Chia and Huang et al. provide clinical evidence of these ties between self-concepts of personhood and identity using the ring theory of personhood (RToP) to study the experiences of physicians, nurses and medical students caring for terminally ill patients and confronting the death of their patients. Similarly Ho et al.’s study of how senior palliative care and oncology nurses at a cancer centre cope with caring for dying patients and their distress in facing the death of their patients, suggest that psychological distress akin to recent accounts of MD may be better understood through the employ of the RToP framework.

These two considerations underpin the reason for the employ of the RToP as the theoretical lens for this review.

**The Ring Theory of Personhood**

The RToP suggests that personhood is made up of four domains. These domains include the (1) innate ring, (2) individual ring, (3) relational ring and the (4) societal ring as shown in figure 1. Each ring contains a set of beliefs, values, principles, thoughts, attitudes, familial customs, cultural norms, roles and responsibilities that gives rise to corresponding identities. Though each of these identities is unique, how they are manifest in different settings and circumstances is dependent on the individual underlining the need to appreciate better the context and setting and the physician’s particular circumstances (figure 1).

The innate ring builds on the notion that all human beings are deserving of personhood ‘irrespective of clinical status, culture, creed, gender, sexual orientation, religion, or appearance’ by their genetic propensity to being a human and or their divine connections. The innate ring gives rise to the Innate Identity that consists of one’s religious, cultural and societal-inspired values, principles and beliefs. These values dictate the individual’s perspective and expectations on care determinations, end-of-life care and withdrawing and withholding treatment.

The individual ring represents the features of conscious functions, including their thoughts, feelings, actions and abilities. The identity formed within the individual ring is informed by the values, beliefs and principles based on conscious function and the other three rings. Balancing these factors in the face of perceptual, experiential, psychoemotional and contextual considerations; prevailing ethical, moral, legal, professional and sociocultural factors; as well as personal choices, biases and decision-making styles reveals the influence of individual circumstances, choices, values, beliefs, principles, biases, norms, mores and preferences. It also demonstrates that self-concepts of personhood and identity are deeply intertwined and highly individualised.

The relational ring comprises the close personal relationships that individuals hold dear to themselves. This may include family, friends and colleagues who play a
vital role in their lives. The Relational Identity is shaped by the individual’s values, beliefs and principles derived from the nature, values, effects and ramifications of these relationships.

The societal ring is the outermost ring that contains the Societal Identity formed by how the individual views their societal position, roles and responsibilities and societal expectations, professional standards and the norms, laws, and obligations of the roles that the individual plays. Kuek et al. note that disharmony and dysynchrony arise when values, principles and beliefs introduced within a ring or between the different rings are in ‘tension’ with current concepts, values, principles and beliefs driven by prevailing concepts of personhood. If disharmony and dysynchrony are not addressed appropriately, timely and in a personalised manner distress can arise. It is posited that when the sources of disharmony and dysynchrony are understood, the means to resolve MD become clearer.

**METHODOLOGY**

Krishna’s systematic evidence-based approach (SEBA) is adopted to guide this SSR (SSR in SEBA) is used to map what is known about MD on physicians. This SSR aims to identify existing information, key characteristics and knowledge gaps in the concept of MD in current literature. This SSR in SEBA’s constructivist ontological perspective and relativist lens recognises MD as a socio-cultural construct. It also facilitates the systematic extraction, synthesis and summary of application and actionable data across a variety of study formats and overcomes the absence of a common understanding of MD.

To provide a balanced review, this SSR in SEBA is overseen by an expert team comprised of medical librarians from the Yong Loo Lin School of Medicine (YLLSoM) and the National Cancer Centre Singapore (NCCS), and local education experts and clinicians at NCCS, the Palliative Care Institute Liverpool, YLLSoM and Duke-NUS Medical School. The expert team guide, oversee and support the 6 stages of SEBA to enhance the reproducibility and accountability of the process.

The SEBA process comprises of six stages, namely—

1. **Stage 1 of SEBA: systematic approach**
   **Determining the title and background of the review**

   Guided by the expert team, the research team curated the primary research question to be ‘How do physicians conceptualise MD?’. The secondary research questions were ‘What are the characteristics of MD?’, ‘What are the sources and consequences of MD on physicians?’ and ‘What are the tools and interventions used to assess and manage MD on physicians?’. These questions were designed based on the population, inclusion criteria and exclusion criteria (PICo), and were guided by the Preferred Reporting Items for Systematic review and Meta-Analysis Protocols (PRISMA-P) checklist.

   **Inclusion criteria**

   The PICo format (table 1) was employed to guide the research process.

   **Searching**

   Twelve members of the research team carried out independent searches that were conducted on seven bibliographic databases (PubMed, Embase, PsycINFO, Web of Science, SCOPUS, ERIC and Google Scholar) between 17 December 2021 and 17 January 2022. The search process was guided by three experienced senior researchers who are well-versed in the use of the SEBA methodology and SSRs. Each senior researcher met with a team of four medical students to guide them on the search of the seven databases. This method was adopted to facilitate the training of amateur researchers and ensure that at least two independent teams were reviewing each database. Each team met regularly to discuss their findings. The senior researcher and medical students met online to compare their findings of the first 100 articles on their assigned database. Following this, teams met at specific time points after reviewing a predetermined number of included articles. Concerns and opinions were exchanged while simultaneously advancing the team’s knowledge of the area of study and the research process. Interrater reliability was not evaluated.

   In keeping with Pham and Raji’s recommendations, searches were restricted to articles published from 1 January 1990 to 31 December 2020 to sustain the research process and adapt to existing time and manpower limitations. Quantitative, qualitative and mixed research methodologies that met the inclusion criteria were included. The full search strategy can be found in online supplemental material A.
Table 1  PICO, inclusion criteria and exclusion criteria applied to database search ring theory of personhood

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
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<tbody>
<tr>
<td>Population</td>
<td>Healthcare professionals such as nurses, allied health workers and non-medical workers (eg, veterinary, dentistry, clinical and translational science, alternative and traditional medicine)</td>
</tr>
<tr>
<td>Interest</td>
<td>Focus on phenomenon other than MD (eg, demoralisation)</td>
</tr>
<tr>
<td>Context</td>
<td>N/A</td>
</tr>
<tr>
<td>Study design</td>
<td>Articles in English or translated to English</td>
</tr>
<tr>
<td></td>
<td>Time of publication between 1 January 1990 and 31 December 2020</td>
</tr>
<tr>
<td></td>
<td>Mixed-methods research, meta-analyses, systematic reviews, randomised controlled trials, cohort studies, case–control studies, cross-sectional studies, descriptive papers, opinions, letters, commentaries and editorials</td>
</tr>
<tr>
<td>Study design</td>
<td>Books, book chapters and or theses</td>
</tr>
</tbody>
</table>

Extracting and charting

Each team reviewed the titles and abstracts and discussed their findings at regularly scheduled meetings. The teams employed Sandelowski and Barroso’s ‘negotiated consensual validation’ to achieve consensus on the final list of titles to be reviewed.66 67 The teams repeated this process independently. They studied all the full-text articles on the final list of titles and curated their list of articles to be included. The findings were then discussed via online meetings and consensus was achieved on the final list of articles to be analysed.

Stage 2 of SEBA: split approach

To enhance the reliability of the data analysis, the ‘split approach’ was used.65–71 Three groups of researchers analysed the included articles independently.

The first team summarised and tabulated the included full-text articles in keeping with recommendations set out by Wong et al’s RAMESES publication standards and Popay et al’s ‘Guidance on the conduct of narrative synthesis in systematic reviews’.72 73 The tabulated summaries functioned to ensure that important elements of the articles were not lost (online supplemental material B).

Simultaneously, the second team analysed the included articles using Braun and Clarke’s approach to thematic analysis.74 In phase 1, the team conducted independent reviews and ‘actively’ read the included articles to find meaning and patterns in the data. In phase 2, ‘codes’ were constructed from the ‘surface’ meaning and collated into a codebook to code and analyse the rest of the articles using an iterative step-by-step process.75 As new codes emerged, these were associated with previous codes and concepts. In phase 3, an inductive approach allowed themes to be ‘defined from the raw data without any predetermined classification’.76 In phase 4, the themes were refined to best represent the entire data set and discussed. In phase 5, the research team discussed their independent findings and employed ‘negotiated consensual validation’ to determine the final list of themes (online supplemental material C).67

The third team employed Hsieh and Shannon’s approach to directed content analysis to analyse the included articles.77 This involved ‘identifying and operationalising a priori coding categories’.77–82 In the first stage, the team drew categories from ‘Understanding the fluid nature of personhood—the RToP’ to guide the coding of the articles in the next stage.36 Any data not captured by these codes were assigned a new code (online supplemental material C).81

Stage 3 of SEBA: jigsaw perspective

The expert and research teams reviewed the categories and themes as part of SEBA’s reiterative process. The themes and categories were viewed as pieces of a jigsaw puzzle that saw overlapping/complementary pieces combined to create a bigger piece of the puzzle referred to as themes/categories.

The jigsaw perspective employed phases 4–6 of France, Uny’s adaptation of Noblit, Hare’s seven phases of meta-ethnography to create themes/categories.83 84 In keeping with phase 4 of France, Uny’s approach, the themes and categories identified during the split approach were grouped together according to their focus. These groupings of themes and categories were then contextualised through the review of articles from which they were drawn from. As per France, Uny’s approach, reciprocal translation was used to determine if the themes and categories could be used interchangeably.

Stage 4 of SEBA: funnelling

As per phases 3–5 of France’s approach, the funnelling process begins with juxtaposing the themes/categories identified in the jigsaw approach and the key messages identified in the tabulated summaries to create domains.83 The funnelled domains created from this process forms
the basis of the discussion’s ‘line of argument’ in stage 6 of SEBA.

**Patient and public involvement**

Patients or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this study.

**RESULTS**

A total of 30,156 abstracts were identified from 7 databases, 2,473 articles were reviewed and 128 articles were included as shown in figure 3.

The jigsaw process saw the themes identified which were characterisation, causes, influences, impacts, tools and interventions of MD combined with the categories identified which were the innate ring, the individual ring, the relational ring, the societal ring, disharmony and dyssynchrony. The five funnelled domains identified were as follows: (1) current concepts, (2) risk factors, (3) impact, (4) tools and (5) interventions.

The five funnelled domains provide a clinical depiction of current reports of the physician’s experience of MD and addresses the paucity of knowledge of MD through the lens of the RToP.

**Domain 1: current concepts**

Some included articles adopt Jameton’s definition, which assumes the physician has knowledge of the right course of action but is unable to follow through with that course of action. ^2^85^88^89^98_99^112^116^119^121^126^129^161^169^170^115^116_159^160^167

Still other included articles afforded alternate definitions. ^89^99^106_113^ Abbasi et al’s^89_ definition of MD focused on personal powerlessness to ‘preserve all interests and values at stake’. Green et al^106_ suggest that MD was akin to ‘an attack on one’s integrity’ and is not just about ‘feeling badly’. Varcoe et al^33_ acknowledge the influence of the community and institution on MD. Other reasons for a new definition for MD include acknowledging resource limitations and allocations, concerns over the quality of care, ethical dilemmas such as prognostication and end-of-life matters, and confrontations with family, patients and other HCPs. ^2^3^33^98^116^118^119^124^129^161^167

Additionally, analysis of accounts of MD through the lens of the RToP^15_ highlights current failures to recognise conflict between the rings of personhood (dyssynchrony) or within a ring (disharmony) as a source of MD. ^3^8

**Dyssynchrony**

Perhaps the most common source of MD is dyssynchrony. The most common form of dyssynchrony is a conflict between personal and societal expectations, values, behaviours and practices. This may be a conflict between innate and/or individual rings and societal ring. Another example is when the healthcare team limits or withdraws care or facilitates abortions when it runs against the physician’s religious beliefs. ^105^139^166^171

Similarly, Daniel’s^172_ experiences rationing oxygen to the ‘most medically salvageable’ patient in the ICU after the 2010 Haiti earthquake saw her question whether her decision was ‘a medical judgement based on a comorbidity or a value judgement based on (her) own latent biases’.^172_

These accounts underline the influence of individual experiences, upbringing, religious beliefs and sociocultural background on the occurrence and or perception of MD among physicians.
Disharmony
Accounts of disharmony often revolve around conflicts between professional obligations. de Boer et al’s study of MD found disharmony arose physicians and nurses questioned the extent of care afforded patients at a neonatal ICU and if they were an example of overtreatment by the team. Brown-Saltzman’s qualitative study on MD reported disharmony within the innate rings where there was a conflict between ‘sanctity of life and the sanctity of choice’ in a patient’s care.

Domain 2: risk factors
Risk factors for MD were also identified across the rings of personhood.

Innate ring
Women are more likely to report MD and also suffer greater emotional exhaustion and ethical issues. The propensity for younger physicians to report MD may relate their limited role in care determinations and treatment decisions within the medical hierarchy.

Individual ring
Personality traits and values such as a deep sense of service and caregiving, a lack of assertiveness, poor self-esteem and lack of flexibility predispose to MD.

Relational ring
Marital conflict, family disruption and feelings of isolation from family and friends lead to a poorly supported physician at risk of MD.

Societal ring
Contextual factors such as the employ of perceived futile care, resource constraints leading to prioritisation of care between patients, institutional rules, policies and organisational pressures that prevent physicians from providing appropriate patient care, and the disconnect between perceived ethical practice and delivered clinical practice predispose to MD.

Domain 3: impact
MD often manifests as anger, frustration, sadness, depression or guilt. A sense of powerlessness and the erosion of individual and moral integrity may culminate in the intention or act of leaving one’s job.

Stage 5 of SEBA: analysis of evidence-based and non-data-driven literature
The majority of included articles were data driven (83 out of 128). However, concerns that evidence taken from non-data-driven articles (position, perspective, conference, reflective and opinion papers, editorials, commentaries, letters, posters, oral presentations, forum discussions, interviews, blogs, governmental reports, policy statements and surveys) which are often neither evidenced-based nor quality assessed, could bias the discussion saw the team thematically analyse the data from data driven and non-data driven articles separately. The themes from both groups were similar emphasising that the non-data-based articles did not bias the analysis untowardly.

Stage 6 of SEBA: synthesis of SSR in SEBA
The synthesis of the discussion was guided by the Structured approach to the Reporting In healthcare education of Evidence Synthesis statement and the Best Evidence Medical Education Collaboration guide.
In answering its primary and secondary research questions, this SSR in SEBA suggests that physicians’ concepts of MD extends beyond Jameton’s notion of ‘(A) the psychological distress of; (B) being in a situation in which one is constrained from acting and (C) on what one knows to be right’. Indeed this SSR in SEBA reveals that physicians also include contextual, practice, environmental, cultural, community and institutional factors, resource limitations and allocations, quality of care and ethical dilemmas and personal factors including feelings of powerlessness and ‘attacks’ on their integrity, professional codes and existential beliefs as situational constructs that shape their personal constructs within their rings of personhood. Personal factors including gender, specialty, personality traits, principles, values, beliefs, experiences, circumstances and the availability of support mechanisms psychoemotional states, familial issues, and sociocultural factors also influences the perceptions and responses to MD. This combination of personal and situational constructs may explain the individual variations in the nature, intensity, duration and onset of anger, frustration, sadness, depression and or guilt and the presence of ‘distress’ even when the ‘right’ action is taken and of MD. Insights into the effects of personal and situational construct on the physician’s RToP and the resultant dysynchrony and or disharmony also help early identification of risk factors for MD, guide personalised support, provide the selection of appropriate interventions to attenuate these issues and monitor the physician’s progress over time.

These insights allow the forwarding of a clinically relevant evidenced based definition that characterises MD among physicians as ‘cognitive, existential and or emotional distress that arises with recognition that patient care may or has been compromised. Sources of MD extend beyond organisational limitations and include dissonance between a physician’s values, beliefs and or principles and clinical, research, administrative practices that threaten the physician’s personal, professional, spiritual, moral, ethical, relational and societal identity and self-concepts of personhood. MD is also informed by individual narratives, personal characteristics, coping, abilities, reflections, emotional states, and relational, psychosocial, financial, societal and contextual considerations and circumstances’. We believe that this definition of MD for physicians and data from this SSR in SEBA allows the forwarding of a holistic and clinically relevant framework that could guide the design of a tool to better assess MD in the absence of a longitudinal assessment tool that considers environmental, contextual, experiential, personal and psychoemotional factors.

### The RToP-MD reflective tool

The data from this SSR in SEBA lays the foundation for a new approach to assessing MD. The RToP-MD reflective tool (table 2) acts as a stimulus for reflection on dysynchrony and disharmony and personalised study of MD with a trusted and trained senior clinician. This will provide personalised and timely support to the physician as they reframe, reflect and integrate new insights into their practice (figure 4).

<table>
<thead>
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<th>Demographics</th>
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<td>Age</td>
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<tr>
<td>Years of clinical experience</td>
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<tr>
<td>Gender</td>
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<tr>
<td>Position</td>
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<td>Department</td>
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**Brief summary of event that precipitated MD**

Patient is an elderly male who was revealed to have metastatic lung disease after initial presentation for shortness of breath. He actively seeks to know the diagnosis, but the family is not keen for the patient to know for fear of ‘losing the will to fight’. The team is currently withholding the diagnosis from the patient.

**Key factors in event that were at odds with personal values, beliefs or practices**

<table>
<thead>
<tr>
<th>Factors</th>
<th>At odds with (in order of importance)</th>
</tr>
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<tbody>
<tr>
<td>1. Withholding of diagnosis from the patient</td>
<td>1. Respect for patient’s autonomy</td>
</tr>
<tr>
<td>2. Professional code of conduct by the hospital which directs us to disclose the diagnosis to the patient</td>
<td>2. Professional code of conduct by the hospital which directs us to disclose the diagnosis to the patient</td>
</tr>
<tr>
<td>3. Personal experiences with a serious illness in the past, when I had valued knowing the diagnosis to be more mentally prepared for the future</td>
<td>3. Personal experiences with a serious illness in the past, when I had valued knowing the diagnosis to be more mentally prepared for the future</td>
</tr>
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</table>

**RToP-MD, Ring Theory of Personhood-Moral Distress.**
Elements within the macroenvironment also influence the mesoenvironment which is the middle ring. The mesoenvironment concerns the influence of the various stakeholders, and the organisation where MD occurred. This ring also concerns itself with the individual and the contextual factors.

The innermost ring or the microenvironment is influenced and influences the two outer rings. The microenvironment considers the physician’s narratives including their previous experiences, demographics, training, skills, personality, attitudes, resilience, current coping, and the values, beliefs, and principles within each of the 4 rings of the RToP. This ring also considers conflicts between and within the rings of the physician’s RToP. Here, the interview process will also seek to determine the relative weight afforded to each of the competing principles by the physician.

We believe that the findings of the RToP-MD tool will help direct a holistic, appropriate, accessible, person-centred, longitudinal and timely support to physicians from members of a multidisciplinary mentoring, supervision and or coaching team which would also include a psychologist and or counsellor.

The proposed framework for a RToP-MD tool also serves to highlight the shortfalls of the current management of MD (online supplemental materials D and E) that tends to be singular, short term and impersonal when what is required is a holistic, appropriate, accessible, personalised, longitudinal and timely approach to overcome MD.

LIMITATIONS
We acknowledge several limitations to this study. Despite vetting and evaluation of the search process by the expert team, the inclusion of only English language articles and the exclusion of grey literature precipitates a risk of failing to capture important articles. Concurrently focusing on publications in English focuses our attention on Western practice where distinct sociocultural, practice, education and healthcare considerations may limit the applicability of these findings in settings beyond the North American and European setting.

The purposeful selection of search terms and the employment of a wide range of databases broadened our approach to obtaining essential publications. However, the inclusion of articles that explicitly mention the term ‘MD’ and exclusion of non-healthcare settings, such as war, may limit our analysis of the conceptualisation of the phenomenon.

Although the thematic analysis was conducted by independent members of the team to improve the credibility and reliability of the data, inherent bias cannot be eliminated entirely. In addition, meetings were conducted at various time points of the coding and analysis process to enhance the consistency and validity of the data. However, articles that conflate the findings of MD in physicians and nurses still potentiates the risk of error in data extraction despite attempts to isolate the information.

CONCLUSION
In forwarding an evidence-based concept of MD among physicians and an accompanying framework, and RToP-MD tool, this SSR in SEBA reveals that this richer more complex concept of MD that extends beyond Jameton’s idea that suggests that other HCPs may have their distinct concepts of MD that ought to be studied separately. Even as these findings demand more attention to the timely, context-specific, culturally appropriate
and personalised identification, assessment and support of MD among physicians, similar attention is owed other HCPs. In addition, with evidence acknowledging MD as a sociocultural construct future studies ought to be appropriately situated, longitudinal and holistic.

As we look forward to continuing our discourse on MD, we hope to share our findings into the further study, assessment and validation of this new definition, framework and tool with our research, education and clinical colleagues.

Author affiliations
1 Yong Loo Lin School of Medicine, National University of Singapore, Singapore
2 Division of Supportive and Palliative Care, National Cancer Centre Singapore, Singapore
3 National University of Singapore Medical Library, Singapore
4 Division of Cancer Education, National Cancer Centre Singapore, Singapore
5 Medical Social Services, Singapore General Hospital, Singapore
6 Duke-NUS Medical School, Singapore
7 Palliative Care Institute Liverpool, University of Liverpool, Liverpool, UK
8Centre of Biomedical Ethics, National University of Singapore
9The Palliative Care Centre for Excellence in Research and Education, Singapore

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Contributors CWN, RRSS, RSWM, SWKC, AK-LC, GSS, AYT, AP, NB, YAW, RIC, CYLL, KWL, GHNT, REJL, NSKY, YTO, AMCC, MC, CL, XJZ, SYKO, EKO and LFRK were involved in data curation, formal analysis, investigation, preparing the original draft of the manuscript as well as reviewing and editing the manuscript. All authors read and approved the manuscript. LFRK accepts full responsibility for the work and/or the conduct of the study, had access to the data, and controlled the decision to publish.

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Patient consent for publication Not applicable.

Ethics approval This study does not involve human participants as it is a systematic scoping review. It analyses data from articles gathered from scholarly databases; no human participants were recruited in this study. Animals’ involvement: This study does not involve animals as it is a systematic scoping review. It analyses data from articles gathered from scholarly databases; no animal subjects were involved in this study.

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ORCID iD
Lalit Kumar Radha Krishna http://orcid.org/0000-0002-7350-8644

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