



“It really puts me in a bind”, professionalism dilemmas reported by Chinese residents

Xinzhi Song¹ · Nan Jiang¹ · Ning Ding¹ · Honghe Li¹ · Chunyu Xin¹ · Ruoyi Qu¹ · Deliang Wen¹

Received: 20 April 2022 / Accepted: 11 December 2022 / Published online: 3 January 2023
© The Author(s), under exclusive licence to Springer Nature B.V. 2023

Abstract

Residents play a pivotal role in the healthcare system. However, few tools have systematically revealed the dilemmas and challenges faced by residents. This study aimed to develop a checklist for professionalism dilemmas based on a behavior-based professionalism framework and to examine the range and proportion of professionalism dilemmas heard of, witnessed, or experienced by Chinese residents. Mixed methods were used, comprising qualitative (document analysis and focus group interviews) and quantitative (a small-scale questionnaire survey) data. Document analysis summarized professionalism dilemma items from previous publications. For focus group interviews, we used narrative inquiry to explore and make sense of residents' experiences and perceptions of professionalism dilemmas. A small-scale questionnaire survey was conducted during each focus group to investigate the proportion of professionalism dilemma items that residents reported to have heard of, witnessed, or experienced. Through document analysis and focus group interviews, we developed a checklist of professionalism dilemmas based on a behavior-based professionalism framework. The checklist included 58 items over four domains, with 10 sub-domains (compassion, respect, communication, collaboration, integrity, duty, pursuit of excellence, fair stewardship of health care resources, patient confidentiality, and informed consent). We also sought a preliminarily subjective impression by exploring the proportion of residents who have heard of, witnessed, and experienced each of the professionalism dilemma items and residents' perspectives when faced with professionalism dilemmas. Residents inevitably encounter or experience a diverse range of professionalism dilemmas. This checklist of professionalism dilemmas that was developed could prove to be a significant reference for targeted professionalism education, both for the resident as well as for faculty. It can also act as a helpful tool for improving hospital management guidelines and patient education.

Keywords Document analysis · Narrative inquiry · Professionalism · Professionalism dilemma · Resident

Xinzhi Song, Nan Jiang are equal contribution to this manuscript.

✉ Deliang Wen
dlwen@cmu.edu.cn

Extended author information available on the last page of the article

Introduction

Professionalism is a complex, multidimensional, and integrated construct that varies across time and culture (Hodges et al., 2011) and can be viewed as the behaviors and attributes expected of a doctor by society (Cruess et al., 2009). In the field of professionalism research, three dominant types of frameworks have evolved, namely virtue-based, behavior-based, and identity formation (Irby & Hamstra, 2016). Each framework has strengths and limitations that complement each other and contribute to the larger whole. The virtue-based framework emphasizes character and focuses on the inner habits of the heart, moral reasoning, and humanistic qualities of the physician. Professional identity formation involves both the person and the group, focusing on identity development and socialization into a community of practice. While both these types of frameworks help to motivate learners, it is difficult to assess character and moral reasoning for the virtue-based framework, and it is even more difficult to describe, interpret, and assess professional identity formation (Barnhoorn et al., 2019; Irby & Hamstra, 2016). Against the challenges of the above two frameworks, the behavior-based framework emphasizes measurement of observable behaviors, with the premise that behaviors may reflect inner mental models. Though it may separate different components of integrated tasks or activities into discrete behaviors, assessment of observable behaviors may be easiest to achieve uniformity and objectivity (Barnhoorn & van Mook, 2015). In fact, these behaviors often go beyond levels of the individual professional and the patient to include interactions with colleagues and with the health care system (Irby & Hamstra, 2016; Lesser et al., 2010). As proposed by Lesser et al., viewing professionalism through the lens of observable behaviors reinforces the notion that professionalism is multidimensional and points to the range of judgment and skills physicians need to exhibit in practice (Lesser et al., 2010).

Professionalism should be cultivated and assessed throughout the physician's career, and early education is critical for establishing professionalism principles in both undergraduate and postgraduate settings (O'Sullivan et al., 2012). Residency is a pivotal period for physicians to develop their professionalism behaviors with training and experience. Recognizing this, the Accreditation Council for Graduate Medical Education (ACGME) has preferentially listed "professionalism" as one of the six general competencies that residents must possess before graduating from residency (Accreditation Council for Graduate Medical Education, 2021). Different from medical students, residents-in-training are exposed to a significantly increased number of patients, have higher work complexity, and need to take supervised responsibility for patient care instead of mere observation (Levinson et al., 2014). As a result, residents encounter many challenges with regard to professionalism in their clinical training (Kinoshita et al., 2015; McArthur & Moore, 1997). For example, they may feel pressured to improve clinical knowledge and skills within a limited time, which makes them more concerned about productivity and efficiency than about professionalism issues (Brainard & Brislen, 2007; Chang et al., 2017). They may also witness or participate in clinical activities which they believe to be unethical or unprofessional (Christakis & Feudtner, 1993; Kinoshita et al., 2015). However, under the hidden curriculum of hospital hierarchy, it is difficult for residents to stand against senior physicians' decisions or orders, and so they might feel obligated to keep silent (Martinez et al., 2015), thus causing residents to fall into professionalism dilemmas (Monrouxe & Rees, 2012).

Indeed, residents often experience professionalism dilemmas, which refer to conflictual situations when one knows how to behave professionally or in accordance with the standards of professionalism but instead feels unable or difficult to act due to institutional,

hierarchical, or sociocultural constraints (Cuban, 2001; Wiggleton et al., 2010). When repeatedly failing to perform ethical or professional behaviors, some residents become distressed when experiencing these negative events over time, while others collectively and passively absorb and adopt normative behaviors and attitudes from their clinical role models, resulting in certain unprofessional behaviors becoming acceptable and reinforcing a "no change" culture (Caldicott & Faber-Langendoen, 2005; Kelly & Nisker, 2009). Evidence also showed that professionalism dilemmas negatively impact the development of professional attitudes, behaviors, and professional identity formation (Kushner & Thomasma, 2001). Today's residents will be the ones who train residents in the future. If professionalism dilemmas are not appropriately addressed in a timely manner, a number of serious consequences may emerge for both physicians (e.g., compassion fatigue and burnout) and the whole of healthcare (e.g., decreasing the quality of patient care, even threatening patient safety) (Monrouxe et al., 2015).

Health care and medical education in China

China bears the health burden of nearly one-fifth of the world's population (more than 1.4 billion) and is home to a complex health care and health insurance system. Hospitals in China are classified by function and tasks into three tiers, namely primary, secondary, and tertiary hospitals. On top of this classification, hospitals within each tier are then sub-graded into A, B, and C levels, with an additional special level—the 3AAA hospital—reserved for the most specialized hospitals. Therefore, the Chinese hospital classification system is referred to as the 3-tier 10-level system (Ministry of Health of the People's Republic of China, 1989). Within this system, primary hospitals are similar to medical clinics, community hospitals, and primary care institutions in the West. They usually contain less than one hundred beds and fulfill preventive care, rehabilitative care, and other basic medical care needs. Secondary hospitals, similar to Western regional or district hospitals, usually have between one hundred and five hundred beds, provide comprehensive health services, and conduct regional medical research and education. Tertiary hospitals are regarded as equivalents to referral hospitals in the West and are comprehensive large-scale hospitals at the municipal, provincial, or national level. Tertiary hospitals act as medical hubs for their surrounding areas and provide both specialist health services as well as consultations for primary and secondary hospitals. As such, tertiary hospitals have the highest bed capacities (over five hundred) and play a much larger role in medical education and scientific research.

As of 2020, more than 95% of the Chinese population had at least basic health insurance coverage (National Healthcare Security Administration of the People's Republic of China, 2021). China's basic medical insurance scheme includes three main types: the Urban Employee Basic Medical Insurance (UEBMI), the Urban Residents Basic Medical Insurance (URBMI), and the New Rural Co-operative Medical Scheme (NRCMS). Despite most of the country having basic medical coverage, public health insurance usually only covers about half of medical expenses, and this coverage may be even lower for chronic illnesses. Additionally, regardless of the type of insurance, all come with the fact that reimbursement rates decrease as hospital ranking increases (e.g., the reimbursement rate of NRCMS maintains 60 percent coverage in primary hospitals but only about 30 percent in tertiary hospitals). Patients can choose to undergo the long and tedious referral process up the chain of institutions, or patients can choose to jump the line and personally go directly to higher-level hospitals, as is often the case when patients lack trust in lower-level hospitals (Wang,

2019). According to the 2020 Health Statistics Report, bed utilization rates were 54.7% in primary hospitals and 81.6% in secondary hospitals, while the rate was 97.5% in tertiary hospitals (National Health Commission of the People's Republic of China 2021a). This marked higher occupancy in tertiary hospitals also brings about problems such as higher patient-physician ratios, increased tensions in physician-patient relationships, and overburdening of healthcare providers and medical staff at tertiary hospitals (Wen et al., 2016).

A system for national standardized residency training in China was established in 2014 (National Health & Family Planning Commission, 2014). Residency programs were set at three years in duration regardless of specialty, and all medical graduates looking for work in a clinical capacity must first complete standardized residency training. Despite having similar models of medical training to many other countries (e.g., Japan, Brazil, Netherlands, UK) (Wijnen-Meijer et al., 2013), the resident training system in China requires all residents to be trained in tertiary A-grade hospitals, which are usually the highest-level hospital institution and also the busiest (National Health Commission of the People's Republic of China 2021b). In this kind of training environment, Chinese residents suffer from an excessive workload, longer working hours, sleep deprivation, and consistently being on call outside of working hours (Bai et al., 2021). In addition, Chinese residents also face the challenges of the hidden curriculum, along with cultural influences and demands of China's collectivist society, where interpersonal relationships and social harmony are valued above personal interests. As such, the typical work-life separation in the West is much harder to achieve in the Chinese setting, where there is not necessarily a clear dichotomy between personal and professional relations (Bedford, 2022). However, to date, few studies have shed light on some of the professionalism dilemmas and challenges that Chinese residents may face.

A comprehensive list of professionalism dilemmas would provide many benefits for both hospital administration as well as medical educators. For example, hospitals can use this as a checklist to assess existing professionalism challenges and to create targeted remediation for their residents (Cullen et al., 2017); on the institutional side, hospital administrators can also use this comprehensive list to assess whether institutional changes can be implemented. Clinical faculty and residency program directors can design teaching cases based on single or multiple dilemmas from this checklist and can also use this checklist to screen residents who may be deeply troubled by these professionalism dilemmas and implement remediation, guided by the specific, observable behavior-related challenges presented in the checklist (Cullen et al., 2017; Hawkins et al., 2009). Therefore, our research aims to develop a checklist of professionalism dilemmas based on a behavior-based professionalism framework, to examine the range and proportion of professionalism dilemmas heard of, witnessed, or experienced by Chinese residents, and to gain understanding of residents' perspectives when faced with professionalism dilemmas.

Methods

Study design

Our study was a mixed methods study consisting of qualitative (document analysis and focus group interviews) and quantitative (a small-scale questionnaire survey) data. Document analysis summarized professionalism dilemma items from previously published papers, providing an overall outline and guide for subsequent focus group interviews. For

focus group interviews, we used narrative inquiry (Monrouxe & Rees, 2012; Wang & Ho, 2020) to explore and make sense of participants' experiences and perceptions of professionalism dilemma items. When reporting qualitative results, we followed the Standards for Reporting Qualitative Research (SRQR) (O'Brien et al., 2014). A small-scale questionnaire survey was conducted during each focus group to investigate the proportion of professionalism dilemma items that participants reported to have heard of, witnessed, or experienced.

Recruitment and sampling

Between March and April 2021, we conducted purposive sampling (Moser & Korstjens, 2018) of residents who have undergone at least 6 months of training through announcements made by the Postgraduate Training Department of a comprehensive tertiary A-grade hospital in Shenyang, Liaoning province. These residents were selected because they already have some clinical experience and can provide sufficient and useful information for our research. Also, residents of different sex, duration of training completed, and specialization were selected in the purposive sampling to expand the diversity of participant characteristics. We grouped the participants into different focus groups according to their specialization. Then, for each round of focus group interviews, we conducted interviews with each specialization group in consecutive order and stopped recruiting when we reached thematic saturation. Participation in the study was voluntary, and all participants signed written informed consent forms and did not receive any compensation.

Data collection

We first conducted a literature search on Web of Science for papers with retrieval themes focused on "professionalism dilemma", "professionalism challenge", and "professionalism lapse" and the retrieval population focused on "physician", "resident", and "medical student". Papers were eligible for inclusion if they described specific scenarios or listed specific behaviors. The detailed search strategy can be found in Supplementary information Appendix A. We extracted and summarized the dilemmas, challenges, or unprofessional behaviors described in all the enrolled papers with reference to the list of professionalism dilemma themes constructed by Monrouxe and Rees (2012) and generated an item pool of professionalism dilemmas. Using template analysis (King, 1998), all items were then mapped to an existing behavior-based professionalism framework for Chinese physicians by Li et al., comprising four domains (Li, 2017). This process was performed individually by two researchers (XZS and NJ), and disputes were settled by group discussion with three other authors (ND, HHL, and RYQ). The result was the first version of the checklist, to be used in the initial round of focus groups.

We then conducted iterative rounds of focus group interviews. All interviews were audio recorded with permission and anonymized. At the beginning of each interview session, the group facilitator (XZS) introduced participants to the concept of professionalism, including fundamental principles from the Physician Charter (ABIM Foundation, 2002), attributes of professionalism proposed by the ACGME (Accreditation Council for Graduate Medical Education, 2021), and Li et al.'s professionalism framework (Li, 2017). Participants were then given the first version checklist on professionalism dilemmas as a guide and were asked to read each item in the first sub-domain and select (by checking the box) whether they had heard of, witnessed, or experienced the given item. After everyone had completed

a sub-domain, the group facilitator invited participants to, in turn, verbally describe the specific scenarios they had heard of, witnessed, or experienced and share some of their personal attitudes and feelings. After discussing existing items in the first sub-domain, the group facilitator then asked participants to describe if they had experienced any other scenario not listed within the sub-domain. The same format continued for each subsequent sub-domain. Researchers analyzed data from each round of focus group interviews to compile an updated version of the checklist, which was then used in the subsequent round of focus groups that followed the same format as the first round. Data collection ended when no new items were reported.

Data analysis

The behavior-based professionalism framework by Li et al. provided a predefined template from which researchers could make adjustments during interpretation of data, including adding, modifying, or deleting codes (King, 2004). Using a strong, well-defined a priori template allowed for themes to be established in advance while also providing some flexibility for researchers (Brooks et al., 2015). After the first round of focus group interviews, all interview audio files were transcribed and de-identified. We coded the recorded interviews using NVivo 12 (QSR International Pty Ltd., Doncaster, VC, Australia). Two researchers (XZS and CYX) independently reviewed all the participants' transcripts to identify quotes related to each of the items. For any scenario where the two researchers had disputes on and for any newly proposed scenario at the end of each subdomain of the checklist, five researchers (XZS, NJ, HHL, ND, and CYX) met to discuss whether it can be classified as a professionalism dilemma and, if so, conferred on whether it belonged to an existing item in the checklist subdomain or to add this scenario as a new item. From participant narratives, we revised the wording of the original items in the first version of the checklist to make it applicable to Chinese residents.

Data analysis was performed after each round of focus group interviews, following which we compiled an updated version of the checklist and used it for the next round. Researchers agreed that thematic saturation had been met when no new codes emerged, following which no new rounds of focus group interviews were conducted. At this point, all the items were finalized into the final version of the checklist and all quotes related to each of the items were identified. Then, all researchers convened to select quotes that were most representative of each item using a qualitative editing analysis protocol (Miller & Crabtree, 1992). Representative quotes were then translated into English. Throughout the analysis, memos were created to serve as records of researchers' reflections as the coding progressed.

Based on checklist questionnaires filled out by all 50 participants during two rounds of focus group interviews, we calculated the proportion of professionalism dilemma items as reported by participants, stratified by whether they had heard of, witnessed, or experienced the item.

Reflexivity

Throughout the data collection and analysis, the research team understood that each member's prior experiences, roles, and motivations may influence the interpretation of the data. Therefore, we practiced reflexivity by regularly meeting to discuss our personal observations and perspectives and the extent to which they may be relevant to the data analysis and

to the application of our results. Memos were also created during data analysis to record researcher reflections during coding.

All members of the research team have some training or background in qualitative research and in medical professionalism research. Additionally, XZS and HHL have backgrounds in medical informatics. NJ is a native English speaker who holds an MBBS degree and has clinical training experience in China. XZS and CYX were PhD candidates in medical education at the time of data collection. ND, HHL, and RYQ are teaching faculty and course developers for undergraduate and graduate professionalism courses; XZS is the teaching assistant. DLW was a chief of pediatrics and is now a professor of medical education. Based on their own unique backgrounds and experiences, each member added richness and constructive feedback to the group discussions.

Results

Following our search strategy, a total of 613 publications were retrieved in the initial search. Based on eligibility criteria, 55 publications were enrolled in the final study. We then compiled, analyzed, and summarized 53 items on professionalism dilemmas from these enrolled publications and mapped them to the 10 sub-domains of the professionalism framework by Li et al. All enrolled publications, corresponding specific scenarios on dilemmas or challenges and unprofessional behaviors, and the first version checklist from document analysis are shown in Supplementary information Appendix B.

In total, we conducted two rounds of focus group interviews—three groups in round one, and two groups in round two—involving 50 residents. Table 1 summarizes the demographic characteristics of the participants. Five new items were generated in the first round of focus group interviews, and no new items emerged in the second round. After document analysis and two rounds of focus group interviews, a final 58-item checklist of professionalism dilemmas was generated—53 items from document analysis and five items from focus group interviews (see Table 2). These 58 items were distributed in four domains and 10 sub-domains, whose names and the number of contained items were: compassion (2), respect (6), communication (6), collaboration (7), integrity (9), duty (5), pursuit of excellence (8), fair stewardship of health care resources (4), patient confidentiality (4), and informed consent (7). Excerpts corresponding to each professionalism dilemma item are shown in Supplementary information Appendix C.

Professionalism dilemma themes

Compassion dilemmas

This theme contained two dilemma items, reflecting challenges that residents encountered relating to compassion and empathy for patients. The more frequently reported dilemma item was *Showing compassion but feeling powerless to help patients*, with 38% of residents having experienced it, and the most frequently mentioned scenario within this item was *Patients were forced to give up treatment because of high medical expenses*. One participant described this dilemma as follows:

Due to family financial reasons, there are a lot of patients who give up treatment, which is very unfortunate. To be honest, some patients may have the possibility to

Table 1 Demographic characteristics of participants

Participant demographics	Focus group interviews		Total, <i>N</i> (%)
	First round	Second round	
<i>Group*</i>			
Group A	10	–	10 (20)
Group B	9	–	9 (18)
Group C	10	–	10 (20)
Group D	–	10	10 (20)
Group E	–	11	11 (22)
<i>Sex</i>			
Male	11	8	19 (38)
Female	18	13	31 (62)
<i>Specialization</i>			
Internal medicine	9	6	15 (30)
Surgery	10	5	15 (30)
Obstetrics and gynecology	5	5	10 (20)
Pediatrics	5	5	10 (20)
<i>Duration of training completed</i>			
6 months	16	10	26 (52)
18 months	8	4	12 (24)
30 months	5	7	12 (24)

*Two rounds of focus group interviews were conducted, grouped by resident specializations. Group A was residents in pediatrics, obstetrics and gynecology; Group B in internal medicine; Group C in surgery; Group D in pediatrics, obstetrics and gynecology; and Group E in internal medicine and surgery

prolong their lives if they are treated as early as possible, but they give up because of family conditions and have to go home to wait for the natural progression of the disease. It's a pity that I am unable to help them. (A6, Obstetrics and Gynaecology)

Another common reported scenario within this item was *Existing medical techniques cannot offer effective treatment or alleviate patient suffering*, as described by one of the participants:

I once met a patient in the surgery wards. He was up in age and his bowel cancer had recurred. Because he was contraindicated for surgery and the current technology was not able to resolve his pain, he gave up treatment and chose to spend the rest of his days at home. When I encounter this kind of patient, I feel like I don't know what to do and can't do anything to help. (E8, Surgery)

Respect dilemmas

This theme consisted of six dilemma items, reflecting residents' challenges on mutual respect with patients, senior physicians, peers, and other health care professionals. The most common reported dilemma was *Direct or indirect verbal or physical humiliation from patients*, with 44% of residents having experienced it. Residents described they could not

Table 2 Checklist of professionalism dilemmas heard of, witnessed or experienced by Chinese residents and reported prevalence

Domains	Sub-domains	Professionalism dilemmas ^a	Heard of (%)	Witnessed (%)	Experienced (%)
Compassion, respect, communication and collaboration	Compassion	1. Showing compassion but feeling powerless to help patients (e.g., patients are forced to give up treatment due to high medical expenses, existing medical techniques cannot offer effective treatment or alleviate patient suffering)	70	46	38
		2. Lack of compassion and understanding for patients (e.g., informing patients of a serious illness without regard for their feelings)	16	4	2
	Respect	3. Direct or indirect verbal or physical humiliation from patients	74	50	44
		4. Inappropriate criticisms, humiliation, or punishments from senior physicians (e.g., senior physicians criticizing residents in front of patients)	44	28	16
		5. Lack of civilized etiquette or attention to personal dress and hygiene (e.g., residents with unkempt hair or wearing accessories)	28	24	12
		6. Having treatment or other suggestions be ignored by senior physicians	26	10	10
		7. Making disrespectful remarks (e.g., using derogatory terms when referring to patients or ignoring the patient's religion)	26	10	8
		8. Refusing or compromising treatment for patients due to factors such as family background or socioeconomic status (e.g., patients from rural areas, patients with disabilities, patients suffering from infectious diseases)	22	10	4

Table 2 (continued)

Domains	Sub-domains	Professionalism dilemmas ^a	Heard of (%)	Witnessed (%)	Experienced (%)
	Communication	9. Patients being persistent for personal contact information so that they can communicate with you at any time	98	94	90
		10. Patients or their families refusing to cooperate with treatment due to questioning resident's explanations or other reasons (e.g., patients search their own medical conditions online and question resident's treatment decisions)	84	72	52
		11. Communication and language barriers between patients and residents (e.g., patients can only speak a local dialect, or patients cannot be heard clearly)	80	68	52
		12. Lack of practice opportunities in residency because patients or their families dismiss them as young or inexperienced	74	64	56
		13. Refusal by patient for examination due to gender differences (e.g., female patient refused electrocardiogram to be done by male resident)	60	42	22
		14. Difficult feelings when being required to accompany senior physicians to inform a patient's family of death and explain the cause of death	36	28	10
	Collaboration	15. Lack of understanding of the responsibilities of nurses, pathologists, or radiologists, and thereby having difficulty in cooperating with them	74	64	52
		16. Pushing responsibilities and work tasks off to others (e.g., delaying non-urgent treatment to the next shift)	74	46	24
		17. Being caught between hospital interdepartmental conflicts (e.g., physician-physician or nurse-physician conflicts of interest)	52	32	28
		18. Multi-disciplinary joint consultations making it difficult to agree on clinical decisions, ^b	52	24	19
		19. Dealing with peers or superiors who take sole credit for team performances and ignore the contributions of others	42	20	4
		20. Being refused help by peers or senior physicians	28	18	6
		21. Refusal to accept help or consider the opinions of others when working in a team setting	10	6	0

Table 2 (continued)

Domains	Sub-domains	Professionalism dilemmas ^a	Heard of (%)	Witnessed (%)	Experienced (%)
Integrity and duty	Integrity	22. Accepting red envelopes, cash, or gifts from patients (e.g., fruits, flowers, gift cards, shopping vouchers)	80	72	60
		23. Showing nepotism when scheduling or providing medical services for family and friends (e.g., plastic surgeons arranging minor procedures for acquaintances free of charge)	66	52	36
		24. Forging signatures or asking peers to sign on one's behalf when late or absent	64	40	32
		25. Preferential treatment by superiors or senior physicians (e.g., female physicians give more care to male residents)	52	26	12
		26. Frequent contact and exchange of benefits between physicians and medical/pharmaceutical representatives	44	32	12
		27. Being required to collate research data or write papers for senior physicians without credit	44	22	10
		28. Inappropriate personal relationships with senior physician, patient, or nurse (e.g., senior physician taking advantage of their higher professional status to pursue a romantic relationship with resident)	30	14	2
		29. Academic misconducts (e.g., plagiarism, collusion, falsification)	22	8	2
		30. Patients offering to use their personal connections or social status to provide benefits for residents in exchange for priority health care. ^b	19	14	14

Table 2 (continued)

Domains	Sub-domains	Professionalism dilemmas ^a	Heard of (%)	Witnessed (%)	Experienced (%)
	Duty		90	84	70
		31. Lack of work-life balance due to excessive workload (e.g., promised to accompany family on scheduled days off but unable to leave due to shortage of staff)			
		32. Salary and benefits do not match existing workload but must continue to be responsible to patients and provide patient-centered care. ^b	90	76	67
		33. Being asked by a senior physician to continue working even if after a scheduled shift time had ended (e.g., asking a tired off-duty resident to assist in surgery)	76	48	40
		34. Working under serious physical or psychological impairment	28	8	4
		35. Working under the influence of alcohol	16	6	4

Table 2 (continued)

Domains	Sub-domains	Professionalism dilemmas ^a	Heard of (%)	Witnessed (%)	Experienced (%)
Excellence	Pursuit of excellence	36. Difficulty balancing pressures from scientific research, examinations, and clinical work (e.g., heavy clinical workload but still needs to prepare for licensing exam)	92	84	58
		37. Lack of competency in certain clinical skills (potentially feeling helpless when witnessing patients suffering from pain or feeling guilty of causing the patient pain while performing certain clinical procedures)	64	48	42
		38. Normalizing failures to adhere to clinical practice standards (e.g., not paying attention to aseptic technique, examinations without gloves)	50	46	18
		39. Insufficient training to improve medical knowledge and skills (e.g., senior physicians do not have time to provide systematic training)	50	36	22
		40. Failure to show composure and make decisions when under pressure or in emergency situations (e.g., during a mass resuscitation after a traffic accident)	44	28	12
		41. Reporting violations of clinical practice standards (e.g., failure to report actions such as falsifying results or incorrectly taking vital signs)	36	20	10
		42. Inability to keep up with newest medical standards/guidelines (e.g., disorientation for lifelong learning, outdated concepts, lack of continuing medical education)	30	14	6
		43. Being asked to independently complete medical tasks beyond one's ability, or being asked to discuss with a patient medical information beyond one's level of knowledge	28	18	10

Table 2 (continued)

Domains	Sub-domains	Professionalism dilemmas ^a	Heard of (%)	Witnessed (%)	Experienced (%)
Responsibility	Fair stewardship of health care resources	44. Patients persisting to ask for unnecessary medical services or prescriptions (e.g., patient requesting an “extra” prescription or refill)	76	76	66
		45. Overtreatment by senior physicians (e.g., prescribing unnecessary drugs or medical tests), including performing unnecessary procedures for the purpose of resident training	50	40	18
		46. Patient’s family persisting on all-out treatment for a patient on palliative care (e.g., a terminally ill or critically injured patient, a patient in a long-term minimally conscious state). ^b	48	29	33
		47. Allocation of health care resources based on personal prejudice rather than patient needs (including allocation of ward space or operating rooms and prioritization of operations or medical tests)	22	12	6
		48. Discussing a patient’s personal matters in a public or open space	52	34	24
	Patient confidentiality	49. Accessing a patient’s medical records for non-medical purposes (e.g., interest in a celebrity’s medical history)	40	18	22
		50. Posting information related to a patient’s privacy or identification on social media	36	24	8
		51. Informing others of a patient’s condition without patient’s consent (e.g., informing unmarried partners of a patient’s sexually transmitted infection)	16	10	6

Table 2 (continued)

Domains	Sub-domains	Professionalism dilemmas ^a	Heard of (%)	Witnessed (%)	Experienced (%)
Informed consent		52. Patients or their families recording or taking photos/videos during consultations, communications, or procedures without the informed consent of the resident/physician. ^b	100	81	76
		53. Concealing the truth from patients at the request of the patient's family or for other reasons	80	70	64
		54. Having to treat patients against their will (e.g., a patient chooses to go on a hunger strike to commit suicide)	50	30	20
		55. Inability to obtain informed consent (e.g., refusal to sign, lack of sufficient contact information)	44	22	12
		56. Using patient information for clinical trials or scientific research without informed consent of patients or using coercive language to convince patients or healthy volunteers to participate (e.g., pathological tissue removal for scientific research without consent of patient). ^b	43	19	10
		57. Assisting in clinical procedures without the informed consent of the patient	38	26	20
		58. Secretly recording the patient's consultation or medical communications without their informed consent	8	4	2

^aIn descending order of proportion of residents who have heard of this item in each sub-domain

^bAdditional professionalism dilemma items from focus group interviews

do much about being humiliated by their patients and tried to just endure and bear with it as much as possible.

Humiliation from patients is common. For example, a patient with advanced stage tumor combined with rheumatic disease displayed very poor mental health. He would take a lot of pain medication, which, along with the rheumatism medication, led to some verbal aggression, saying words like “I’m going to kill you”. I don’t know what drove the behavior of the patient, but he was verbally threatening our lives. (B7, Internal medicine)

Another common reported dilemma was *Inappropriate criticisms, humiliation, or punishments from senior physicians*. When criticized or even humiliated by senior physicians, residents said they could understand senior physicians’ behaviors, but hoped that senior physicians would consider their feelings and try not to speak harshly of them in front of patients.

I remembered when I rotated to my first department, which was the neonatal ward. The senior physician was so strict. When I first got there, she often pointed out what I did wrong in front of a lot of people, and she would say something that sounds harsh, which made me feel really uncomfortable. (D6, Pediatrics)

Communication dilemmas

This theme included six dilemma items, reflecting the challenges that residents encountered in the process of communicating with patients. For four of the six dilemma items, at least 50% of residents reported experiences related to the item. The most common reported dilemma was *Patients being persistent for personal contact information*, with 90% of residents having experienced it. WeChat is the major standalone app used for instant messaging, social media, and mobile payment in China. Many residents expressed that they would no longer share their WeChat or personal contact information with patients after they had experienced repeated interruptions by these patients in both their personal and work lives.

Generally, when the patient asks for my WeChat, I will give him so that I can send him test sheets. But if the patient asks me something I don’t know how to answer or I am too busy to respond in time, he will blame me. Sometimes I struggle with whether or not I should give out my personal contact information. (B6, Internal medicine)

I may find that my patient’s family members are nice people, so I think to myself that I’d do as much as I can to help them out. But then sometimes I found out that good intentions don’t actually have good results, and the family members will become more pressing. They would ask all kinds of questions and ask about every little thing. I don’t give out my personal WeChat info to patient family members now. It’s too difficult to handle. The nicest family members of patients may still become this troublesome some ways down the road. (D10, Pediatrics)

Patients or their families refusing to cooperate with treatment, Communication and language barriers, and Patients dismissing them as young or inexperienced were also dilemmas commonly reported by residents. Residents said when experiencing communication dilemmas, they would generally actively communicate with patients. If it remained ineffective, some of them would report the problem and turn to their superiors for help.

Collaboration dilemmas

This theme included seven dilemma items, reflecting the challenges that residents encountered in the process of cooperating with peers, senior physicians, and other healthcare professionals. The most common reported dilemma was *Difficulty in cooperating with other healthcare professionals*, with 52% of residents having experienced it. One resident also expressed some displeasure in interprofessional collaboration.

Although it's said that physicians and nurses are equal nowadays, I feel that nurses actually have a higher status than us residents. After we put in a medical order, nurses would be responsible for executing it, but sometimes the order would require an urgent response, so I would ask the nurse to rush it. But the nurse wouldn't do it until I have asked three or four times, which I found out was because it was going to be her lunch break soon. I have witnessed nurses scolding my peer like this before and sending her crying. (D1, Obstetrics and Gynaecology)

Another common reported dilemma was *Pushing responsibilities and work tasks off to others*. One participant recounted his experience with grievance. However, even in his situation, possibly out of consideration for not wanting to offend or cause conflict or inconveniences, he did not reach out to ask his peer to continue the work she was supposed to do.

The resident before me left a lot of work to me. I have met such kinds of people. A child had been hospitalized for more than 30 days. There needed to be a phased summary and case discussion. My peer, who was responsible for this patient, didn't write anything. Finally, I spent nearly five hours one night and filled in all the information by myself. I didn't call her either. (D10, Pediatrics)

Integrity dilemmas

This theme included nine dilemma items, reflecting the challenges that residents encountered that may violate their perceptions of justice or honesty, including financial gains and relationships between physicians and patients or medical representatives. The most common reported dilemma was *Accepting gifts from patients*, with 60% of residents having experienced it. Residents thought that fruits and flowers were acceptable gifts, but red envelopes (cash gifts) and gift cards should be returned, including crediting the patient's hospital account when the money could not be returned in person. Residents also viewed the meaning of gifts differently depending on whether patients were just admitted to hospital or after they had been discharged. Residents perceived that patients who are about to be discharged from hospital give gifts due to their appreciation of the residents' work and from a place of real gratitude, rather than because they are forced to please the doctors for fear of poor patient care.

I think gift-giving is actually quite common. When a patient can give something instead of money, it shows that he is grateful to the physician from his heart, and it is also a way to promote harmony between doctors and patients. I see that patients not only give fruits but also local specialties. (C7, Surgery)

Another common reported dilemma was *Showing nepotism for family and friends*, with 36% residents having experienced it. Residents believed this kind of behavior to be

understandable, mainly out of adherence to social relationship dynamics. One participant reported that he would even jump the queue to seek help from a familiar physician if it was his own medical appointment.

I would jump the queue for my own medical treatment, then the senior physician may provide me with a free examination if convenient. I have seen that, for example, if a peer's family members needed to be hospitalized, the senior physician would in fact be willing to provide help and would generally not refuse, such as arranging an outpatient clinic or inpatient ward for them. (B2, Internal medicine)

Forging signatures or asking peers to sign on one's behalf when late or absent was also a common reported dilemma. Residents reported finding it difficult to balance clinical work with medical lecture attendance. One participant reported he would help others sign in for medical lectures and did not know how to refuse.

I signed in for others and was found and warned by the administrative staff. If a peer asked me to sign in for him, I don't think I could say something like "I will go to the lecture, but I cannot sign in for you". (C10, Surgery)

Duty dilemmas

This theme included five dilemma items, reflecting the challenges that residents faced in fulfilling their professional duties. The most common reported dilemma was *Lack of work-life balance due to excessive workload*, with 70% of residents having experienced it. Residents believed it to be common to work overtime due to heavy workloads, even during holidays. In particular, surgery residents and obstetrics and gynecology residents said that they often worked late at night because of the complexity or volume of operations.

I think the heavy workload in surgery is extremely common. It is inevitable that it is difficult to balance work and life. It's not something that we can deal with. The patient needs an operation or the operation is very complex. What can anyone do in this situation? (C1, Surgery)

Another common reported dilemma was *Salary and benefits do not match existing workload*, with 67% of residents having experienced it. Residents should hold the same patient-centered attitude as physicians, but plagued by low salary and the inability to resolve certain problems that arise, they called for performance-based fair distribution of wages.

It's obvious that we are very busy, and we do almost everything. There is a very popular saying between us, which is, "you are a doctor when you work, and you are a student when they count money". Everyone knows this well. (E7, Surgery)

In addition to the challenges of heavy workload and low pay, 40% of residents experienced *Being asked by a senior physician to continue working even after a scheduled shift time had ended*, even when they were very tired. Residents thought that performing surgery on patients when they were physically and mentally fatigued would threaten patient safety, but due to the hierarchical structure, they were not brave enough to say no.

I think it's too much work. I was on a night shift in obstetrics, and I had been up all night, which was basically a day and a night without a break. However, when I was leaving the night shift, I was pulled in by the senior physician for a surgery. I was already very sleepy at that time, just mechanically cooperating with the senior phy-

sician in the OR. It was very excruciating for me, and I don't think we were being responsible to the patient if something goes wrong. (D3, Obstetrics and Gynaecology)

Excellence dilemmas

This theme included eight dilemma items, reflecting the difficulties and challenges that residents encountered in the process of pursuing excellence or self-improvement, such as improving clinical skills or acquiring scientific knowledge. The most common reported dilemma was *Difficulty balancing pressures from scientific research, examinations, and clinical work*, with 58% of residents having experienced it. Residents mentioned that there was very limited time for scientific research during the day, except after work, despite research achievements being a requirement for promotion. Even in the face of exams, senior physicians were reluctant to let them off work.

For example, there would be an exam coming up, but the superior would think that I am here for training, so I have to work for him. He wouldn't give me leave to prepare for my exams, and he would be very reluctant to approve any leave when I ask. (E3, Internal medicine)

Residents sometimes reported *Normalizing failures to adhere to clinical practice standards*. One participant mentioned substandard medical practices by the senior physician, and under his influence, the resident began to do the same.

My senior physician has excellent clinical competence. However, he always changes dressings without gloves and also doesn't use gloves when examining patients. But he is a very capable doctor, with everyone commenting that he is even more skilled than our department director. Then I got used to it as well, so I often don't wear gloves either. (C5, Surgery)

Another dilemma was *Being asked to independently complete medical tasks beyond one's ability*. Although only 10% of residents reported they experienced this, the consequences of this behavior can be serious and may potentially threaten patient safety. One participant reported a precarious experience he had, though the outcome was positive.

Once my senior physician went home after his shift, and I was supposed to go home after work, but a patient's drainage tube fell off. At this point, I did not know what to do, so I called my senior physician and sent photos of the situation to ask what to do. He told me to take care of it alone. I hesitated but did as he asked. Halfway through the procedure, the patient started to scream in pain, so I thought the tube might have touched his peritoneum. I withdrew the drain to sterilize and performed the procedure again, which worked out smoothly the second time. I looked calm the whole time, but I was very nervous inside! (C1, Surgery)

Dilemmas on the fair stewardship of health care resources

This theme included four dilemma items, reflecting the challenges that residents encountered when dealing with unfair stewardship of health care resources. The most common reported dilemma was *Patients persisting to ask for unnecessary medical services or prescriptions*, with 66% of residents having experienced it. Residents mentioned that some

patients admitted to the hospital asked for additional medical tests not related to their disease because their medical insurance would only reimburse them for inpatient tests. Some patients also asked physicians to prescribe higher-grade antibiotics or more expensive drugs to accelerate their recovery, even if these drugs would not be as effective as they expect.

The patient had some minor problems and came to the hospital for hemorrhoids. Then he treated it as a full checkup and wanted to check everything. I explained that it was simple hemorrhoids to him, but he thought I was lying to him and even accused me of being lazy. I don't know what to say to patients like this. (C3, Surgery)

Residents reported that they witnessed *Overtreatment by senior physicians*. However, some residents also expressed that their medical knowledge was limited, so they could not judge whether the senior physicians were indeed overtreating.

I did hear about and witness excessive medical treatment. Once, my attending physician used drugs and dosages in combinations that exceeded the indications and guidelines. He had his reasons; he just wanted to make it safer and smoother. So, I asked him about it, he answered me, and I thought it was ok, but it still didn't meet the existing clinical guidelines. (C10, Surgery)

Dilemmas on patient confidentiality

This theme included four dilemma items, reflecting the difficulties and challenges that residents encountered in keeping patient confidentiality. One participant shared that her peers were involved in *Posting information related to a patient's privacy or identification on social media*. Though she thought the behavior was unprofessional, she did not take any action on it.

I have seen others take photos or videos of really cute kids and then post them on WeChat or Weibo without mosaics. I don't think they had any ill intentions, but it's still not a very good thing to do. (D8, Pediatrics)

Dilemmas on informed consent

This theme included seven dilemma items, reflecting the challenges that residents encountered in violations of informed consent, for both patients and physicians. The most common reported dilemma was *Concealing the truth from patients at the request of the patient's family or for other reasons*. Even though residents believed that patients had the right to know about their illness, due to cultural traditions and fear of adverse consequences, they still made it a priority to inform the family member first about the patient's condition.

I had a patient who had a malignant tumor that she didn't know about, and her son kept it from her. I thought if I was that patient, I should have the right to know my illness. Even if I don't have much time left, I would want to know what I should do next and have no regrets. But maybe it's good for him to keep it from her, lest she break down mentally and have less time to live. But I still think the patient should be told. (A1, Obstetrics and Gynaecology)

For some patients with malignant tumors, their families will say to the doctor, "Please don't tell the patient yet." In the eyes of Chinese people, if you tell the patient, he may not be able to bear the news. (B1, Internal medicine)

Residents expressed frustration and helplessness when it came to *Inability to obtain informed consent*. Due to laws and policies, without signing informed consent, patients cannot be provided certain medical services, such as surgeries or prescriptions.

We don't do major surgical procedures in our internal medicine department, but we do perform some minimally invasive procedures like stenting. I had a patient who was in a critical condition and had a blocked artery and needed stenting. But his family members disagreed. They seemed to have certain religious beliefs and refused to sign the consent form. Well, then we could only make a note of what happened in the patient's medical record, because we couldn't force them to sign anything for the procedure to go ahead. (E6, Internal medicine)

During the first round of interviews, a new dilemma item emerged: *Patients or their families making audio recordings or taking photos/videos*. Residents perceived such a behavior as a violation of informed consent for the physician but reacted differently toward it, either stopping it or letting it go.

Discussion

Through document analysis and focus group interviews, we developed a checklist of professionalism dilemmas from a behavior-based perspective. The checklist included 58 items over four domains, with 10 sub-domains. Since document analysis drew from a plethora of existing publications, most of the professionalism dilemmas in our checklist would be applicable to the international community (see Supplementary information Appendix B), such as those reported by previous studies on residents observing or being directly involved in professionalism lapses and challenges (e.g., discriminatory and disrespectful treatment of patients, objectification of patients and substandard practice, being asked to perform beyond their capability, being openly humiliated by patients). We also collated some professionalism dilemmas that are unique to the Chinese culture, especially intercultural professionalism dilemmas reported by Ho et al. (Ho et al., 2017), who also pointed out these dilemmas' respective rationales, referencing principles, implications, affects, and cultural norms (Ho et al., 2012).

An important source of professionalism dilemmas in our study could be attributed to "difficulty saying no". A comparative study of Chinese and American refusal strategies found that Americans use direct refusal far more frequently than the Chinese (Cai, 2009), with *mianzi* (face) being an inherent obstacle to personal boundaries for Chinese. The psychosocial construct of *mianzi* is deeply rooted in Chinese culture in that people take great offense at any loss of face, and efforts are always made to avoid face-risking situations. It is already difficult for residents to say no to their superiors owing to hospital hierarchy and the hidden curriculum of the health care system, which is a common occurrence throughout the world (Chang et al., 2017; Komaromy et al., 1993). This may sometimes even place patient safety at risk, such as when residents are required to perform medical tasks beyond their ability (Excellence-43) or when they are required to work overtime despite excessive physical and mental fatigue (Duty-33). Every effort should be made to encourage a more professional work culture, especially at a systemic

level, so that residents can have the freedom to speak up when they are faced with tasks that may compromise their level of care.

While it is difficult for residents to say no to their acquaintances, such as friends or peers, this seems to especially be the case for Chinese residents. Although residents understand that certain behaviors, such as when friends request priority medical bookings (Integrity-23) or when they are asked to sign-in for peers (Integrity-24), are nepotistic and violate basic principles of moral integrity, most will still choose to say yes to these requests. In Chinese culture, this kind of behavior can be attributed to an exchange of *renqing* (Chen, 2005; Wang & Pak, 2015), which is crucial to the harmonious balance of society. Helping acquaintances resolve these troubles would add much face for the residents, but if they refuse to help, it would not only violate the relational expectations of the acquaintance, it would also violate a wider social norm grounded in Confucian ethics, often resulting in both parties losing face (Bedford, 2022). The reduction in trust may imply that you have offset the paramount social value of harmony within this network of acquaintances.

Chinese residents also reported difficulty saying no to the requests of some difficult patients. Even if requests seem unreasonable, the resident may compromise at the patient's insistence, such as when patients request a higher-level physician for a procedure the resident can well take care of simply because the resident appears young in age (Communication-10 & 12) or when patients request unnecessary or over-the-top medical services (Fair stewardship of health care resources-44). A phenomenon is that some residents who are just entering the workplace would agree to give patients their personal contact information at the patient's request (Communication-9). Residents have frequently, and sometimes indirectly, referenced the strong influence of altruism taught during their undergraduate medical education, with statements such as, "helping as much as I can". Altruism may be a key factor here, emphasized with the ultimate goal to build a harmonious physician-patient relationship (Luo et al., 2017). However, to achieve this desired outcome, good altruistic intentions would need to be paired with appropriate professionalism training and institutional support. In China, WeChat has grown to become the primary communications app, and some Chinese physicians establish their own patient groups on WeChat to provide continuation of care (Zhang, 2017). However, residents have reported being constantly pressed or even harassed by patients who have their WeChat contact, which leaves residents struggling with whether to give patients their personal contact information. Given the pervasiveness of these situations, residents should be informed the consequences of communicating with patients through private channels prior to the start of their clinical rotations. These may include but are not limited to lack of a distinct dichotomy between work and rest and potential misdiagnoses and risks arising from informal consultations (Hu, 2020). All of this suggest that medical education in China should include privacy and information management training, which is currently still under development. As for why some Chinese medical staff continue to communicate with patients through private channels, it comes down to poorly utilized public communication channels in hospitals (Liu, 2017) and the lack of unified social media guidelines on professionalism, such as those already in effect in countries such as the US, UK, and Australia (DeJong, 2018), and Chinese medical institutions have only provided general recommendations (e.g., diagnoses or treatment should not be done via private channels) but have not established clear restrictions on unofficial communication channels. While professionalism education is paramount in the wake of this type of dilemma for residents, we also recommend that social media guidelines be set at a national level, hospitals strengthen their public and internal communication systems, and patient education on these topics be provided at the community level.

One resident mentioned witnessing colleagues post photos of child patients without mosaic (digital pixelation of photos to protect privacy) on WeChat moments (Patient confidentiality-50). This may not be an isolated singular scenario, since at times, physicians or residents may intentionally or unintentionally disclose patient information on social media apps such as WeChat. WeChat is now an indispensable all-in-one app in China, functioning as a messaging app, hosting official accounts, supporting an interactive social feeds platform (WeChat Moments), providing digital payment services (WeChat Pay), and featuring mini programs or video channels (CMI Media Group, 2020). Health professionals also use WeChat to access medical applets within the app and to share work and life updates in WeChat Moments (Faculty of Humanities of University of Oslo, 2020). For this resident, even though she believed sharing photos of patients to social media was unprofessional, she did not confront her colleagues about this or report it to her superiors, possibly for fear of the hidden curriculum or violating social constructs. Nevertheless, Chinese law explicitly prohibits physicians from disclosing patients' privacy, and punishments ranging from warnings, fines, suspension or even revocation of physicians' licenses can be imposed depending on the adverse consequences caused (The State Council of the People's Republic of China, 2021). However, in actuality, it may be difficult for medical institutions to monitor all information shared by its employees on social media, so consequences against physicians and residents are more likely to crop up on a per-case basis from patients' individual complaints to hospital management. In view of protecting both patient privacy and physician professionalism, it is equally important to implement programs and guidelines to clearly inform health professionals of behaviors that are indicative of a breach of patient privacy.

Family members of patients play an important role in clinical decision-making (Weng et al., 2011), which explains why there are dilemmas such as *Concealing the truth from patients at the request of the patient's family* (Informed consent-53) and *Inability to obtain informed consent owing to the family's refusal to sign* (Informed consent-55). In China, cultural, social, and legal factors play a fundamental role in not fully revealing disease status to patients. For example, when a patient is diagnosed with cancer, the physician would often first inform the patient's family members, who would then determine how much the patient should know about the condition (Tang et al., 2006). It is supported by Chinese law that physicians may choose to give information about cancer diagnoses to family members first (The State Council of the People's Republic of China, 2021). For many Chinese, discussions of death are taboo (Ho et al., 2017), so family members tend to conceal or take more gradual approaches to disclose the truth to the patient because they fear it would be too much for the patient to bear and would lead to an emotional breakdown that would accelerate the patient's death (Weng et al., 2011). Additionally, under the Chinese collectivist culture, the patient is not considered to be a separate individual but rather a component of the family (Ho et al., 2012). Therefore, naturally, both clinical decisions and emotional burdens are shared by the patient's entire family. Su et al. suggest that although it may cause anxiety and distress in patients immediately after being informed of their diagnosis, the complete disclosure of cancer diagnoses benefits patients in the long term (Su et al., 2020). We believe that in collectivist cultures, the role of the family should be embodied in helping patients bear the emotional burden after informing patients rather than concealing critical illnesses from patients.

Our results seem to suggest that collectivism and relationalism have great explanatory power in the analyses of professionalism dilemmas encountered by Chinese residents. Collectivism represents an interdependent social orientation, which is associated with a view of the self as interconnected, encompassing important relationships (Grossmann & Na,

2014). Collectivist societies tend to focus on harmony, relatedness, and social connection (Oyserman & Lee, 2008). Also, indigenous psychologists highlight the influence of Confucian culture and propose to understand the individual in Confucian societies not in isolation but in terms of social relationships, and *renqing*, *guanxi*, and *mianzi* are important concepts in understanding social relationships and personal behaviors (Wang & Pak, 2015). From this perspective, it is not surprising that Chinese residents rationalised less frequently about implications for self but extensively considered the rippling effects of their behaviors on their relationships with all possible team members and with patients and their families (Ho et al., 2012). It is a phenomenon to which we should pay special attention when we encounter physicians with cultural roots in Confucius-influenced societies, such as those of Korea, Japan, and Singapore. Although relationalism is more pronounced in Confucian societies, attention to relationships is not absent in societies in which individualism is more evident, such as in unavowed principles of obedience and allegiance (Lingard et al., 2001). Perhaps, for residents all over the world, medical educators should move beyond the current emphasis on principles that apply at the individual level and explicitly help them to balance relationships in clinical settings.

Collectivism and relationalism advocate kindness to others, selflessness, solidarity, and mutual help, trust, support, and improvement (Wang, 2006) and bring about deeply interdependent relationships, social harmony and stability, and a balance to society (Oyserman et al., 2002). However, despite these positive effects, cultural symptoms of a strongly collectivist society also pose its own challenges, such as a lack of distinct personal boundaries, as demonstrated in the results of this study and in the previous discussion. As such, the checklist of professionalism dilemmas we have compiled may serve as an initial tool to begin tackling these professionalism challenges. The items and themes presented in the checklist would pave the way for future case studies and evaluation rubrics that could inform a variety of interventions or remedial approaches. Based on these, professionalism training would equip residents to conduct themselves professionally and also hone the necessary coping skills to deal with professionalism dilemmas and challenges in clinical practice and aid in improving health system and hospital management principles and guidelines. An added benefit of the results of this study would be its role in patient education, where areas that require improvement, such as popularizing medical knowledge, respect for healthcare providers, and navigating the health care system, can be addressed based on points raised within the checklist.

Our study has several limitations. The purposive sampling of interviewees in this study could have led to a biased representation (Tongco, 2007). Focus groups were conducted at a single hospital and may not reflect the experiences and observations of residents at other institutions, so generalization of research findings to the larger population is limited. In addition, longer residency training was more likely to increase the proportion of residents who have heard of, witnessed, and experienced each of the professionalism dilemmas. In this study, although we included residents with different training years, 52% of the recruited participants were residents who had only been in training for 6 months, which may lower the overall reporting rates of professionalism dilemmas. Future quantitative studies of a wide representation of residents through large-scale sampling should compare the range of professionalism dilemmas reported by residents across specialties, experience levels, and sociodemographic backgrounds in order to minimize concern for potential bias. It is worth noting that this version of the professionalism dilemma checklist is not inexhaustible and would benefit from future efforts to broaden input across clinical disciplines, institutions, and regions. Although the main aim of this study was to construct a checklist of professionalism dilemmas, if this checklist is to be implemented, further testing of its

psychometric properties would shed light on how these professionalism dilemmas relate to resident wellbeing and quality of health care provided.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s10459-022-10198-4>.

Acknowledgements The authors wish to thank China Medical University for authorizing the use of the survey data. Special thanks to all the residents who have participated in this study.

Authors' contributions X. Song: Conceptualization, Methodology, Investigation, Data curation, Formal analysis, Writing-original draft; N. Jiang: Conceptualization, Data curation, Formal analysis, Writing-original draft, Writing-review and editing; N. Ding: Methodology, Software, Formal analysis; H. Li: Formal analysis, Writing-review and editing; C. Xin: Investigation, Data curation, Formal analysis; R. Qu: Formal analysis; D. Wen: Conceptualization, Resources, Supervision, Project administration, Funding acquisition.

Funding This study was supported by the Liaoning Social Science Planning Fund Project (grant number L20AED006). The funders had no role in the study design, data collection and analysis, writing of the report, and decision to submit the paper for publication.

Availability of data and materials The datasets supporting the conclusions of this article are included within the article (and its additional files). The underlying datasets are available from the corresponding author on reasonable request.

Declarations

Conflict of interest The authors declare no potential conflicts of interest.

Ethical approval and consent to participate All residents who participated in the survey signed the informed consent form. The study protocol was approved by the Academic Committee of China Medical University (ref no: 2019079).

References

- ABIM Foundation, ACP-ASIM Foundation, European Federation of Internal Medicine. (2002). Medical professionalism in the new millennium: A physician charter. *Annals of Internal Medicine*, 136(3), 243–246.
- Accreditation Council for Graduate Medical Education. (2021). Common program requirements (residency). Retrieved October 10, from <https://www.acgme.org/what-we-do/accreditation/common-program-requirements/>
- Bai, S., Chang, Q., Yao, D., Zhang, Y., Wu, B., & Zhao, Y. (2021). Anxiety in residents in China: Prevalence and risk factors in a multicenter study. *Academic Medicine*, 96(5), 718–727.
- Barnhoorn, P. C., Houtlosser, M., Ottenhoff-de Jonge, M. W., Essers, G. T. J. M., Numans, M. E., & Kramer, A. W. M. (2019). A practical framework for remediating unprofessional behavior and for developing professionalism competencies and a professional identity. *Medical Teacher*, 41(3), 303–308.
- Barnhoorn, P. C., & van Mook, W. N. (2015). Professionalism or professional behaviour: No reason to choose between the two. *Medical Education*, 49, 740.
- Bedford, O. (2022). The relation between Guanxi and interpersonal trust in the workplace. *Integrative Psychological & Behavioral Science*, 56(2), 385–404.
- Brainard, A. H., & Brislen, H. C. (2007). Viewpoint: Learning professionalism: A view from the trenches. *Academic Medicine*, 82(11), 1010–1014.
- Brooks, J., McCluskey, S., Turley, E., & King, N. (2015). The utility of template analysis in qualitative psychology research. *Qualitative Research in Psychology*, 12(2), 202–222.
- Cai, S. H. (2009). *A comparative study of Chinese and American refusal strategies* (Ph.D dissertation, Shanghai Jiao Tong University).
- Caldicott, C. V., & Faber-Langendoen, K. (2005). Deception, discrimination, and fear of reprisal: Lessons in ethics from third-year medical students. *Academic Medicine*, 80(9), 866–873.

- Chang, H. J., Lee, Y. M., Lee, Y. H., & Kwon, H. J. (2017). Causes of resident lapses in professional conduct during the training: A qualitative study on the perspectives of residents. *Medical Teacher*, 39(3), 278–284.
- Chen, R. J. (2005). On the “Humanization of Role Relationship”—An Description and Judgement of Chinese Interpersonal Communication. *Journal of East China University of Science and Technology (social Science Edition)*, 20(3), 23–26.
- Christakis, D. A., & Feudtner, C. (1993). Ethics in a short white coat: The ethical dilemmas that medical students confront. *Academic Medicine*, 68(4), 249–254.
- CMI Media Group. (2020). WeChat: Social-based healthcare in the Chinese market. Retrieved October 10, from <https://cmimediagroup.com/resources/wechat-social-based-healthcare-in-the-chinese-market/>
- Cruess, R. L., Cruess, S. R., & Steinert, Y. (2009). *Teaching medical professionalism*. Cambridge University Press.
- Cuban, L. (2001). *How can I fix it?: Finding solutions and managing dilemmas: An educator's road map*. Teachers College Press, Columbia University.
- Cullen, M. J., Konia, M. R., Borman-Shoap, E. C., Braman, J. P., Tiryaki, E., Marcus-Blank, B., & Andrews, J. S. (2017). Not all unprofessional behaviors are equal: The creation of a checklist of bad behaviors. *Medical Teacher*, 39(1), 85–91.
- DeJong, S. M. (2018). Professionalism and technology: Competencies across the tele-behavioral health and e-behavioral health spectrum. *Academic Psychiatry*, 42(6), 800–807.
- Duu-chiang, W., & Chui-man, P. (2015). Renqing (personal relationship) and resource allocation: Behaviour analysis of low income qualification assessment by village secretaries. *China Journal of Social Work*, 8(2), 107–121.
- Faculty of Humanities of University of Oslo. (2020). The indispensable WeChat app facilitates better health care in China. Retrieved October 10, from <https://www.hf.uio.no/ikos/english/research/news-and-events/news/2020/the-indispensable-wechat-app>
- Grossmann, I., & Na, J. (2014). Research in culture and psychology: Past lessons and future challenges. *Wiley Interdisciplinary Reviews: Cognitive Science*, 5(1), 1–14.
- Hawkins, R. E., Katsufarakis, P. J., Holtman, M. C., & Clauser, B. E. (2009). Assessment of medical professionalism: Who, what, when, where, how, and ... why? *Medical Teacher*, 31(4), 348–361.
- Ho, M. J., Gosselin, K., Chandratilake, M., Monrouxe, L. V., & Rees, C. E. (2017). Taiwanese medical students' narratives of intercultural professionalism dilemmas: Exploring tensions between Western medicine and Taiwanese culture. *Advances in Health Sciences Education: Theory and Practice*, 22(2), 429–445.
- Ho, M. J., Lin, C. W., Chiu, Y. T., Lingard, L., & Ginsburg, S. (2012). A cross-cultural study of students' approaches to professional dilemmas: Sticks or ripples. *Medical Education*, 46(3), 245–256.
- Hodges, B. D., Ginsburg, S., Cruess, R., Cruess, S., Delpont, R., Hafferty, F., & Wade, W. (2011). Assessment of professionalism: Recommendations from the Ottawa 2010 Conference. *Medical Teacher*, 33(5), 354–363.
- Hu, Q. S. (2020). After giving patients my personal contact information, I received 40 calls a day. Retrieved October 10, from <https://mp.weixin.qq.com/s/siRD3VOcpNfYHf7IuohO5g>
- Irby, D. M., & Hamstra, S. J. (2016). Parting the clouds: Three professionalism frameworks in medical education. *Academic Medicine*, 91(12), 1606–1611.
- Kelly, E., & Nisker, J. (2009). Increasing bioethics education in preclinical medical curricula: What ethical dilemmas do clinical clerks experience? *Academic Medicine*, 84(4), 498–504.
- King, N. (1998). Template analysis. In G. Symon & C. Cassell (Eds.), *Qualitative methods and analysis in organizational research: A practical guide*. SAGE.
- King, N. (2004). Using templates in the thematic analysis of text. In C. Cassell & G. Symon (Eds.), *Essential guide to qualitative methods in organizational research*. SAGE.
- Kinoshita, K., Tsugawa, Y., Barnett, P. B., & Tokuda, Y. (2015). Challenging cases of professionalism in Japan: Improvement in understanding of professional behaviors among Japanese residents between 2005 and 2013. *BMC Medical Education*, 15, 42.
- Komaromy, M., Haber, R. J., & Sande, M. A. (1993). Sexual harassment in medical training. *New England Journal of Medicine*, 328, 322–326.
- Kushner, T. K., & Thomasma, D. C. (Eds.). (2001). *Ward ethics: Dilemmas for medical students and doctors in training*. Cambridge University Press.
- Lesser, C. S., Lucey, C. R., Egner, B., Braddock, C. H., 3rd., Linas, S. L., & Levinson, W. (2010). A behavioral and systems view of professionalism. *JAMA*, 304(24), 2732–2737.
- Levinson, W., Ginsburg, S., Hafferty, F. W., & Lucey, C. R. (2014). *Understanding medical professionalism*. McGraw-Hill Education.

- Li, H. H. (2017). *Construction and applications of an evaluation framework and instrument for assessing medical professionalism in Chinese physicians* (Ph.D dissertation, China Medical University).
- Lingard, L., Garwood, K., Szauter, K., & Stern, D. (2001). The rhetoric of rationalization: How students grapple with professional dilemmas. *Academic Medicine*, 76(10 Suppl), S45-47.
- Liu, X. (2017). *Study on the doctor-patient communication management mechanism of ZY hospital* (Master dissertation, Guangdong University of Technology).
- Luo, J., C. Z., & Shi, J. L. (2017). WeChat observation on the effects of improving the doctor-patient relationship. *Chinese Journal of the Medical Forum*, 21(7), 773-774.
- Martinez, W., Etchegaray, J. M., Thomas, E. J., Hickson, G. B., Lehmann, L. S., Schleyer, A. M., & Bell, S. K. (2015). 'Speaking up' about patient safety concerns and unprofessional behaviour among residents: Validation of two scales. *BMJ Quality and Safety*, 24(11), 671-680.
- McArthur, J. H., & Moore, F. D. (1997). The two cultures and the health care revolution. Commerce and professionalism in medical care. *JAMA*, 277(12), 985-989.
- Miller, W. L., & Crabtree, B. F. (1992). Primary care research: a multimethod typology and qualitative road map. In B. F. Crabtree & W. L. Miller (Eds.), *Doing qualitative research*. Newbury Park: Sage Publications.
- Ministry of Health of the People's Republic of China. (1989). Hierarchical management standards for general hospitals. Retrieved October 10, from, <http://www.nhc.gov.cn/wjw/jiany/202102/db2654d311234fdfb117d50c98fd4790.shtml>
- Monrouxe, L. V., & Rees, C. E. (2012). "It's just a clash of cultures": Emotional talk within medical students' narratives of professionalism dilemmas. *Advances in Health Sciences Education: Theory and Practice*, 17(5), 671-701.
- Monrouxe, L. V., Rees, C. E., Dennis, I., & Wells, S. E. (2015). Professionalism dilemmas, moral distress and the healthcare student: Insights from two online UK-wide questionnaire studies. *British Medical Journal Open*, 5(5), e007518.
- Moser, A., & Korstjens, I. (2018). Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and analysis. *European Journal of General Practice*, 24(1), 9-18.
- National Health and Family Planning Commission. (2014). Contents and standards of standardized residency training (Trial). Retrieved October 10, 2022, from, <http://www.nhc.gov.cn/cms-search/xxgk/getManuscriptXxgk.htm?id=946b17f463fa4e5dbcfb47c68834c41>
- National Health Commission of the People's Republic of China. (2021a). 2020 China Health Statistics Yearbook. Retrieved October 10, from, <http://www.nhc.gov.cn/mohwsbwstjxxzx/tjtjnj/2021a12/dcd39654d66c4e6abf4d7b1389becd01.shtml>
- National Health Commission of the People's Republic of China. (2021b). Evaluation criteria for tertiary hospitals (2020 version). Retrieved October 10, from, <http://www.nhc.gov.cn/zyyjs/g7657/2021b10/b9fceda937184f259ecae7ece8522d24.shtml>
- National Healthcare Security Administration of the People's Republic of China. (2021). 2020 Health care Development Statistics Bulletin. Retrieved October 10, from, http://www.nhsa.gov.cn/art/2021/3/8/art_7_4590.html
- O'Brien, B. C., Harris, I. B., Beckman, T. J., Reed, D. A., & Cook, D. A. (2014). Standards for reporting qualitative research: A synthesis of recommendations. *Academic Medicine*, 89(9), 1245-1251.
- O'Sullivan, H., van Mook, W., Fewtrell, R., & Wass, V. (2012). Integrating professionalism into the curriculum: AMEE Guide No. 61. *Medical Teacher*, 34(2), e64-77.
- Oyserman, D., Coon, H. M., & Kimmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin*, 128(1), 3-72.
- Oyserman, D., & Lee, S. W. (2008). Does culture influence what and how we think? Effects of priming individualism and collectivism. *Psychological Bulletin*, 134(2), 311-342.
- Su, T., He, C., Li, X., Xiao, L., He, J., Bai, Y., & Tang, Y. (2020). Association between early informed diagnosis and survival time in patients with lung cancer. *Psycho-Oncology*, 29(5), 878-885.
- Tang, S. T., Liu, T. W., Lai, M. S., Liu, L. N., Chen, C. H., & Koong, S. L. (2006). Congruence of knowledge, experiences, and preferences for disclosure of diagnosis and prognosis between terminally-ill cancer patients and their family caregivers in Taiwan. *Cancer Investigation*, 24(4), 360-366.
- The State Council of the People's Republic of China. (2021). The Physician Law of the People's Republic of China. Retrieved October 10, 2022, from, http://www.gov.cn/xinwen/2021-08/20/content_5632496.htm
- Tongco, M. D. C. (2007). Purposive sampling as a tool for informant selection. *Ethnobotany Research & Applications*, 5, 147-158.
- Wang, X. W. (2019). *Research on the willingness and behaviors of patients in tertiary A-grade hospitals based on hierarchical diagnosis and treatment system* (Master dissertation, Dalian Medical University).

- Wang, X., & Ho, M. J. (2020). Professionalism dilemmas experienced by health professions students: A cross-sectional study. *Journal of Interprofessional Care*, 34(3), 259–268.
- Wang, Y. (2006). Good individual relationship is the core spirit of collectivism. *Journal of China Youth University for Political Sciences.*, 25(5), 20–24.
- Wen, J., Cheng, Y., Hu, X., Yuan, P., Hao, T., & Shi, Y. (2016). Workload, burnout, and medical mistakes among physicians in China: A cross-sectional study. *Bioscience Trends*, 10(1), 27–33.
- Weng, L., Joynt, G. M., Lee, A., Du, B., Leung, P., Peng, J., & Yap, H. Y. (2011). Attitudes towards ethical problems in critical care medicine: The Chinese perspective. *Intensive Care Medicine*, 37(4), 655–664.
- Wiggleton, C., Petrusa, E., Loomis, K., Tarpley, J., Tarpley, M., O’Gorman, M. L., & Miller, B. (2010). Medical students’ experiences of moral distress: Development of a web-based survey. *Academic Medicine*, 85(1), 111–117.
- Wijnen-Meijer, M., Burdick, W., Alofs, L., Burgers, C., & ten Cate, O. (2013). Stages and transitions in medical education around the world: Clarifying structures and terminology. *Medical Teacher*, 35(4), 301–307.
- Zhang, Y. N. (2017). *Comparison of Metabolism Indexes after systematic standardized Management of Diabetes Mellitus* (Master dissertation, China Medical University).

Publisher’s Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.

Authors and Affiliations

Xinzhi Song¹ · Nan Jiang¹ · Ning Ding¹ · Honghe Li¹ · Chunyu Xin¹ · Ruoyi Qu¹ · Deliang Wen¹

Xinzhi Song
xzsong@cmu.edu.cn

Nan Jiang
nanjiang@cmu.edu.cn

Ning Ding
nding@cmu.edu.cn

Honghe Li
hhli@cmu.edu.cn

Chunyu Xin
cyxin@cmu.edu.cn

Ruoyi Qu
ryqu@cmu.edu.cn

¹ Institute for International Health Professions Education and Research, China Medical University, No. 77 Puhe Road, Shenyang 110122, People’s Republic of China