



## Understanding nursing-specific polysemous terms: An exploration with Hong Kong L2 nursing students

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### Abstract

*Extensive research has been conducted on the discipline-specific vocabulary required by students across different fields. In nursing, certain general English words are polysemous, such as the term 'line(s)' may acquire specialized meanings through figurative extensions to convey nursing knowledge. For L2 English learners (learning English as a second language), recognizing and understanding these ordinary yet polysemous nursing-specific terms can be challenging. Investigating how these terms convey nursing knowledge and identifying the difficulties faced by L2 nursing students contribute to improving the teaching and learning of nursing-specific vocabulary, thereby enhancing their expertise and the provision of healthcare.*

*To this end, a two-phase study was conducted. The first phase involved investigating the knowledge embedded in the general English polysemous term, 'line(s)', as found in the Oncology Corpus compiled for this study. The second phase consisted of a survey aimed at exploring the challenges Hong Kong L2 nursing students when interpreting the figurative meanings of the term 'line(s)' within the nursing context.*

*The first phase of the study reveals that the term 'line(s)', an ordinary English word, frequently has its multiple meanings extended through metaphor and metonymy. The findings indicate that 'line(s)' commonly appears in universal metaphors such as the pathway to convey nursing knowledge. Furthermore, the term occurs in many general English idiomatic expressions and functions as an important nursing-relevant linguistics resource in nursing workplace spoken communication. The survey with ninety nursing students indicates that their awareness of the figurative extensions of this polysemous term needs to be strengthened. Some participants underinterpreted or misinterpreted its nuanced meanings. The findings also reveal cultural variations and first language influence in participants' interpretation of the term when it is extended figuratively.*

*It is recommended that seemingly general but figurative polysemous terms, such as the term 'line(s)', be explicitly addressed in nursing curricula. Instruction should focus on detailed metaphorical mappings to support nuanced understanding of nursing knowledge. Teachers should also attend to cultural differences and first-language influences among L2 learners, which may shape their interpretation of these figurative extensions. In sum, these measures can promote greater precision in healthcare practice and enhance patient safety.*

**Keywords:** *Discipline-specific polysemous terms, nursing-relevant linguistic resources, idiomatic expressions, figurative expressions, health-care communication*

### 1. Introduction

Since the inception of English for Specific Purposes (ESP) as a distinct field, considerable research has been devoted to examining discipline-specific vocabulary [18][20][23]. This vocabulary encompasses important concepts and specialized knowledge unique to a particular field. Proficiency in this vocabulary is essential for students' academic success and their ability to perform appropriately and effectively in future professional settings. In the field of nursing, the acquisition of discipline-specific medical terminology serves as a key indicator of nursing students' understanding of their field's specialized knowledge. It is integral to their professional identity and also plays a crucial role in fostering workplace competence. Proficiency in this terminology enables nursing students to communicate accurately and appropriately with both healthcare professionals and patients, carrying out clinical responsibilities with precision, and ultimately contribute to ensuring patient safety [2][10].

[20] classifies vocabulary for English learners in academic contexts into four categories: high-frequency words, technical words, academic words, and low-frequency words. In the nursing field, the Unified Medical Language System (UMLS), a resource for health and biomedical informatics, includes 1,208 multiply-categorized vocabularies and terminologies, illustrating various types of polysemy in healthcare contexts [19]. Some of these polysemous terms are high-frequency general English words, adopting specialized meanings in the nursing field. Nevertheless, there is a general tendency for

students to overlook the important nursing knowledge embedded within these seemingly ordinary English terms, particularly given their polysemous nature.

As [24] point out, the various senses of a polysemy can be classified into two broad categories: core meanings, which encompass general and familiar interpretations, and non-core meanings, which include peripheral or extended interpretations. Non-core meanings are often new senses derived metaphorically or metonymically from the core meanings [7][22]. Generally, metaphor involves a comparison between two entities, while metonymy relies on contiguity relationships between a component and the object it represents. It has been well-documented that metaphor and metonymy are employed by different disciplines to frame the knowledge and social world of their fields [6][9], as well as building the identity and sharing the values of a discourse community [5]. For instance, the 'pathway' metaphor is frequently employed by the healthcare professionals taking care of end-of-life cancer patients to express their views about the lengthy nature of cancer treatments [21]. In cognitive linguistics, metaphor is understood as systematic comparisons between two conceptual domains, namely the source and the target domains, rather than a mere comparison between two discrete entities. As exemplified by the conceptual metaphor 'life as a journey', where elements of the source domain 'journey', such as 'distance', 'obstacles' and 'different paths' are systematically mapped onto aspects of the target domain 'life', such as 'longevity', 'difficulties', and 'different decision-making' [12][25].

Another example illustrating how a general English polysemous word can acquire discipline-specific meanings through metaphor or metonymy in the nursing context is the term 'line(s)'. The general English word 'line', which ranks 274th among the 2801 high-frequency headwords in the New General Service List (NGSL) [4], literally refers to a physical line or a line-shaped entity. In the nursing context, the term 'line(s)' refers to the equipment catheter lines (also as 'tubes') used in intravenous therapy. For example, the term 'PICC lines' (Peripherally Inserted Central Catheter lines) is a device in administering intravenous therapy. Furthermore, its meaning can also be extended metaphorically to denote types or methods, as seen in expressions such as 'many lines of treatment'. Certain meanings of 'line' can also evolve into what is described as 'a metaphor from metonymy', as illustrated by the example of 'advice line', which is further discussed in Section 4. Notably, some of these extended senses tend to be associated with particular grammatical patterns [16], such as the singular form of 'mouse' instead of the plural form 'mice' is more likely to be extended as a computer device in Computer Science.

In sum, it is important for nursing students to recognize that certain seemingly ordinary English words may function as discipline-specific polysemous terms through figurative extensions. Developing competency in interpreting both the literal and figurative meanings of these discipline-specific polysemous terminologies, such as 'line(s)' within the nursing context, is crucial. This competency facilitates a deeper understanding of nursing knowledge, promotes effective and precise engagement in professional discourse, and thereby enhances their workplace performance and patient safety.

Nevertheless, L2 learners (learners of English as a second language) often rely on the core meaning - usually the literal sense - of a polysemous word to interpret a text or context. When general English words acquire new meanings through metaphorical or metonymical extensions, this can create comprehension challenges for L2 learners [8]. The problem becomes more complex when both the literal and figurative senses of a general English polysemous term are frequently used in discipline-specific writing since students are required to master not just the multiple meanings of a discipline-specific term, but also metaphoric competence to help them discern whether the literal or figurative sense of the term is applied in a specific text or context. One example is the difficulties faced by L2 nursing students in interpreting polysemous terms in nursing questions in their examination, as [1] explain. [13] also observed that Computer Science students in her study struggled to understand the term 'data field' because they were more familiar with the general literal meaning of the word 'field' in the agricultural sense. Furthermore, comprehension and interpretation problems may arise not only with single-word polysemy but also when they occur in multi-word units. [17] identifies the difficulties that a group of Bangladeshi ESP students experienced when they encountered the metonymic term '*can do* civil servants' which refers to a set of civil servants with a particularly positive attitude; the Bangladeshi students thought it simply meant 'capable' civil servants since they attempted to understand the meaning of '*can do*' separately and were not aware that an extended metaphorical meaning has been assigned to the two words when they appear as one multi-word unit.

## 2. Objectives and Research Questions

Considering these challenges, this paper aims to explore the potential difficulties faced by L2 nursing students in Hong Kong when interpreting general English polysemous words as nursing-specific terms. The focus of this study is placed on how the ordinary English polysemous term 'line(s)' is extended



through metaphor and metonymy in oncology nursing research articles. Oncology nursing research articles have been selected for this study due to the increasing significance of cancer as a global health threat and the important role of catheter lines, commonly referred to as 'line' in the administration of cancer treatments. Through exploring the potential challenges that L2 nursing students in Hong Kong encounter when interpreting this discipline-specific polysemous item, particularly within the context of oncology nursing, it is hoped that the findings can provide pedagogical insights into helping Hong Kong L2 nursing students in understanding nursing discipline-specific polysemous items more effectively.

The research questions guiding this study are:

1. What kinds of knowledge related to nursing, particularly oncology nursing, are encoded through the polysemous term 'line(s)' in oncology nursing research articles?
2. What potential challenges L2 nursing students in Hong Kong face in understanding the meanings of this general English polysemous is extended as discipline-specific polysemous term, especially when these meanings are motivated figuratively, by metaphor or metonymy?

### 3. Methods

To answer the two research questions, research articles containing the words 'cancer', 'care', 'healthcare', 'nurse(s)', 'oncology' and 'patient(s)' extracted from the *European Journal of Oncology Nursing* and *Cancer Nursing Practice* between 2010 and 2016 were downloaded, which were compiled into a corpus called the Oncology Corpus (ONCO Corpus). The total number of words in this corpus is approximately 1.05 million. With the assistance of the corpus tool named *AntConc*, the instances containing the term 'line(s)' were displayed in key words in context format (KWIC)[3].

There are in total 284 instances of 'line(s)' in the Corpus. In general, it has been observed that the multiple meanings of this term within the nursing context can be categorized into three major types: i. a specialized term within the nursing context, ii. an academic term in academic writing and, iii. other less frequent applications (please refer to Figure 1 below). The focus of Section 4.1 is on the first category, that is, the specialized knowledge related to nursing, particularly oncology nursing, as encoded through the polysemous term 'line(s)' in oncology nursing research articles compiled for the Oncology Corpus (addressing Research Question 1). Subsequently, Sections 4.2 and 4.3 examine the procedures and findings of a survey conducted among ninety university nursing students in Hong Kong. This survey aims to explore the challenges faced by these L2 nursing students in Hong Kong when interpreting the meaning of this discipline-specific polysemous term, particularly when these meanings are figuratively motivated by metaphor or metonymy (addressing Research Question 2).

### 4. Results

#### 4.1. Nursing Knowledge Particularly Oncology, Encoded through the Polysemous Term 'Line(S)'

Examples	Meanings of 'line(s)' (frequencies in brackets)	Literal/Figurative
<b>I. As a specialized term within the nursing context (158)</b>		
<b>a. Related to professional role of nurses</b>		
e.g.,1 '...effective psychological support can be partially provided by <b>front line</b> cancer nurses.'	-nurses in direct patient/primary care role	Metaphor
e.g.,2 'who do not work consistent <b>line</b> '	-irregular work patterns/shifts /teams	Metaphor
<b>b. Related to intravenous therapy</b>		
e.g.,3 'receiving <b>many lines</b> of treatments...'	-methods/ types	Metaphor
e.g.,4 'Dacarbazine is the drug of choice for <b>first-line treatment</b> ...'	-Priority/sequence of the treatments provided	Metaphor from metonymy
e.g.,5 '...symptoms arose for these three patients at cycle one, but <b>the PICC line</b> was not inserted until cycle three.'	-Referring to the medical devices(catheter) for intravenous therapy	Literal
e.g.,6 '...retrograde back up of stagnate blood clot into <b>lines</b> ...'		
e.g.,7 'Two centers give locks with gentamicin in case of positive <b>line cultures</b> .'		
<b>c. Related to workplace nursing spoken communication</b>		



e.g.,8 'Keeping <b>lines</b> of communication open and being honest enhances trust between healer...'	-maintaining communication channels	Metaphor
e.g.,9 '...stay on the <b>line</b> '	-via telephone: non-face-to-face communication	Metaphor from metonymy
e.g.,10 'Because I had almost a terror to say: I came to <b>the finishing line</b> .'	-Idiom / Euphemism: 'came to the endpoint of life'	Metaphor
e.g.,11 'when the <b>line</b> would be drawn...'	-Idiom / Euphemism: When it is the time to establish a boundary or make a decision (stop treatment)	Metaphor
<b>II. As a word/ phrase in academic writing (118)</b>		
e.g.,12 'This is <b>in line with</b> previous research showing that fear of ...'	-Consistent with what has been previously found	Metaphor
e.g.,13 'The data were then examined <b>line-by-line</b> , and statements and phrases ...'	-Referring to careful manners when investigating data	Metaphor Literal
e.g.,14 'Note how Sarah uses the future progressive tense in <b>line</b> four in ...'	-Referring concretely to each physical or textual line of a text / in a graph	Metaphor from metonymy
e.g.,15 'This numerical rating scale comprises a <b>5-point horizontal line</b> , ranging from 0 (no information needed) to 4 ...'		
e.g.,16 'as a larger cohort study in which all the women had answered a <b>base-line</b> questionnaire...'		
<b>III. Other less frequent usage of the term 'line' (10)</b>		
e.g.17 'The peritoneum is a filmy membrane, which <b>lines</b> the abdomen...'	-Referring to something covering the abdomen	Literal
e.g.,18 '...their disadvantaged profile with 100% judged below the <b>poverty line</b> ...'	-Socioeconomic threshold for poverty	Metaphor

**Fig. 1.** The multiple meanings of 'line(s)' in ONCO Corpus

As illustrated in Figure 1, the multiple meanings of 'line(s)' are often extended figuratively. When 'line(s)' is utilized as a specialized term within the nursing context (Category I in Figure 1 below), it mainly conveys three kinds of information. Firstly, it provides general information about the professional roles of nurses (Examples 1 and 2). Secondly, the term delineates two major duties of nurses in clinical practice, that is, administering intravenous therapy (Example 3) through catheter lines (Examples 4-7), and providing guidance and advice through verbal communication (Examples 8-11).

It is worth noting that Examples 8-11 reveal the importance of specific multi-word units, commonly known as idiomatic expressions, as valuable nursing-specific linguistic resources that support appropriate and effective verbal communication within the nursing context. This skill is essential for providing information, offering advice, and building rapport with both medical professionals and patients. For instance, the phrase 'stay on the *line*' (Example 9), a common general English phrase, illustrates a 'metaphor from metonymy'[14], where the word 'line' metonymically refers to the telephone line which is then metaphorically extended to represent nurse-patient spoken communication. This reveals that the telephone line is conceptualized as a prototype and metaphorically adapted to describe the provision of non-face-to-face guidance and counselling services by nurses. Other examples demonstrating the importance of general English phrases or idiomatic expressions as valuable linguistic resources within the nursing context are 'came to the finishing *line*' (Example 10) and 'when *the line* would be drawn' (Example 11). These general English phrases become effective vague language or euphemism to indirectly signal that a cancer patient is nearing the end of life, and that the cessation of treatment is imminent. Overall, the transformation of these 'line'-related general English phrases or idiomatic expressions as nursing-specific linguistic resources, help facilitate effective verbal communication that is both truthful and compassionate, making it more acceptable to patients and their families.

Additionally, the term also functions as part of an academic term employed in discussions pertaining to nursing research (Category II). Examples include 'line-by-line' (Example 13) and 'a base-line questionnaire' (Example 16), which are frequently observed in the oncology research articles analyzed for this study. It can also be seen that the term 'line(s)' is occasionally employed to describe special situations within the nursing context (Category III, Examples 17 & 18).

To summarize, the multiple meanings of the polysemous term 'line' demonstrate how certain general English words are adapted into polysemous nursing-specific terminology via figurative extensions. These multiple meanings can be interpreted both literally and metaphorically to conceptualize various aspects of nursing practice. Furthermore, they underscore the significant role of specific general English



phrases or idiomatic expressions in evolving into useful nursing-specific linguistic resources, thereby facilitating effective as well as compassionate verbal communication in the field.

#### 4.2 The Survey

In the summer term of 2020, a survey was conducted with ninety L2 nursing students at a university in Hong Kong, with Cantonese as their native language. The survey was administered while the students were completing the final term of their first year of study. They were given eight extracts selected from the ONCO Corpus (See Appendix A for the extracts). All these extracts contain the polysemous item 'line(s)' as an individual word or as part of a phrase introduced in Figure 1. Figure 2 below shows the eight phrases with their meanings and their figurative mappings (if any) in the extracts. As shown in Figure 2 below, the meaning of 'line(s)' is figuratively extended in all cases except Extract 7. Overall, these eight 'line' phrases were selected from Category I in Figure 1 above, delineating the professional roles of nurses and two of their major responsibilities introduced in Section 4.1. Participants were invited to explain, in either English or Cantonese, the meanings of the term.

The survey, which focused on their interpretation of the polysemous term 'line(s)' in nursing contexts, sought to explore the potential challenges faced by L2 nursing students in Hong Kong when interpreting meanings of polysemous terms, which are predominantly influenced by metaphor and metonymy within the discipline-specific context of nursing.

Extract	Line-related phrases	Metaphor/literal	Mapping
1	'came to <b>the finishing line</b> '	Race metaphor	The finish line in a running race is mapped onto the concept of the end of life.
2	' <b>front line</b> health professional'	Military/battle metaphor	The foremost position in a battle is mapped onto direct-contact healthcare roles
3	'open the <b>lines</b> of communication'	Conduit metaphor	Messages are metaphorically mapped as flowing through channels or pipes.
4	'when <b>the line</b> would be drawn'	Boundary metaphor	The act of drawing a physical boundary line to separate spaces is mapped onto the process of making a decision, i.e., determining the time to stop treatment.
5	'who do not work <b>consistent lines</b> '	Organization as a 'line' metaphor	Team alignment or structural arrangement is metaphorically mapped onto a physical line.
6	'receiving <b>many lines</b> of treatments'	Pathway metaphor	Multiple routes/ courses of treatments are mapped onto different pathways.
7	'the retrograde back up of stagnate blood clot into <b>lines</b> '	Literally referring to catheter (the tubes)	Literally referring to the catheter lines for treatment.
8	'stay on <b>the line</b> '	Metaphor from metonymy (part-for-whole)	Staying on a telephone line stands for the whole verbal communication system,

Fig. 2. The eight phrases of 'line(s)' and their meanings in Extracts 1-8

#### 4.3. Participants' Performance in Interpreting the Meanings of 'Line(S)'

Overall, their performance was categorized into seven major groups based on a classification framework adapted from [15] (see Figure 3 below). The participants' interpretations of the eight 'line-related' phrases were independently evaluated by two researchers using this framework. Any discrepancies in their assessments were resolved through discussion. Major interpretative challenges observed from these participants of the polysemous item 'line(s)' are discussed in subsections i to v.

Categorization	Description
Type Y	Correct interpretation of the figurative mapping of the term 'line(s)'
Type A error	No attempt at all
Type B error	Difficult to evaluate the provided interpretation, for example, the interpretation is off topic, not related to the meaning of 'line(s)', or incomplete.
Type C error	Difficult to evaluate as only direct Chinese translation of 'line(s)' is provided
Type D error	Provided overall correct meaning of the extract but ignored the meaning of 'line(s)' in their interpretation
Type E error	Wrong interpretation: provide a wrong or unclear literal meaning
Type F error	Wrong interpretation: provide a wrong or unclear metaphorical meaning

Fig. 3. Classification of participants' interpretation of line(s)



*i. Insufficient readiness in interpreting 'line' as a general yet figurative nursing-specific term*

Figure 4 below illustrates the overall performance of these students in interpreting the term 'line(s)' across the eight extracts provided. As illustrated in Figure 4, Row 1, the majority of participants successfully interpreted the meanings of the 'line'-related phrases in Extracts 1 and 6, achieving accuracy rates exceeding 65%. The accuracy rates for Extracts 2-3 were also relatively satisfactory, at around 50%. However, participants encountered greater difficulties in interpreting the 'line'-related phrases in Extracts 4, 5, 7 and 8, with accuracy rates ranging from 12% to 24%. Notably, in three of these four extracts (excluding Extract 7), the polysemous term 'line(s)' is embedded within various multi-word idiomatic expressions. The low accuracy rates for these extracts suggest that these multi-word idiomatic expressions may not be in common use among Hong Kong Cantonese speakers, despite their frequent use in the English language. Another possible reason for their low accuracy rates is that participants may assume subject-specific knowledge is typically conveyed through complex vocabulary. As a result, encountering colloquial, everyday general English expressions in nursing texts may have conflicted with their expectations.

In the case of the literal interpretation of the term 'line' in Extract 7, approximately one-fifth of the participants (23%) correctly identified its literal meaning as referring to the physical instrument, 'catheter'. However, a significant proportion of participants misinterpreted the literal meaning of 'lines' in this Extract, associating it with 'blood vessel' or 'blood capillaries'. Additionally, one participant mistook its meaning as metaphorical, associating it with 'lines of members' (Appendix H, Responses 79). This confusion highlights a challenge that L2 students may face in understanding nursing-specific polysemous terms, whose meanings can shift between literal and metaphorical contexts. Overall, findings in Row 1 suggest that general English words, such as 'line(s)', may not be as readily understood by L2 learners as anticipated when these words take on discipline-specific meanings, particularly when they appear as part of everyday general English idiomatic expressions. Learners may disregard seemingly simple general English words in a text, thereby hindering their ability to grasp nuanced nursing knowledge embedded within them.

	Type	Extract 1 Appendix B	Extract 2 Appendix C	Extract 3 Appendix D	Extract 4 Appendix E	Extract 5 Appendix F	Extract 6 Appendix G	Extract 7 Appendix H	Extract 8 Appendix I
1	Y	66%	43%	49%	20%	24%	75%	23%	12%
2	D	2%	12%	8%	4%	1%	0%	5%	31%
3	A	15%	15%	14%	16%	17%	17%	18%	19%
4	B	9%	10%	26%	22%	29%	7%	28%	13%
5	C	3%	15%	0%	2%	1%	0%	2%	0%
6	E	3%	1%	2%	28%	12%	1%	23%	18%
7	F	2%	4%	1%	8%	16%	0%	1%	7%

**Fig. 4.** Overall performance of the students' interpretation of the term 'line(s)'

*ii. Underinterpretation of nuanced knowledge in the figurative mappings of certain universal metaphors*

In the first place, the comparatively higher accuracy rates in interpreting the extended figurative meanings of 'line(s)' in Extracts 1, 2, 3 and 6, that is, 'I came to the fishing line', 'front line professionals', 'open lines of communication', and 'receiving many lines of treatment' (Figure 4, Row 1) suggest that universal metaphors - such as race, battle, conduit, and pathway observed in these Extracts - are more accessible to individuals from diverse cultural backgrounds, including the L2 Hong Kong nursing students who participated in this study. Nevertheless, the insufficient elaboration provided by them in interpreting 'many lines' in the phrase 'receiving many lines of treatments' (Extract 6) indicates the importance of understanding the detailed metaphorical mappings between source and target domains when universal metaphors are utilized to convey nursing knowledge, to ensure nuanced comprehension.

In this metaphor, the term 'lines' is conceptualized as distinct courses to medical care. Most students correctly interpreted the general meaning of 'many lines of treatments' to mean that the patients described in the extract received various kinds or courses of treatments. However, only a few succeeded in further elaborating on its more nuanced meaning. While it is accurate to interpret 'many lines' (source domain) in the phrase 'many lines of treatments' as generally referring to 'various types or courses (target domain) of treatments', the pathway metaphor more precisely suggests that just as distinct routes or pathways lead to different processes and outcomes (a detailed mapping within the target domain, the pathway metaphor), different courses are carefully tailored to the unique trajectories of different patients' recovery or illnesses. Developing an awareness of such nuanced metaphorical mappings is essential for nursing students to deliver nuanced, precise, and context-sensitive nursing care.

*iii. Cultural variations in interpreting figurative meanings*

Interestingly, many participants employed the bridge metaphor to explain their understanding of 'open the lines of communication' (Extract C). For instance, a participant explained 'open the lines of communication' as 'the connect, the *bridge* of communication from person to person' (Appendix D, Response 19) while another participant interpreted the phrase as 'the nurses are *bridges* between the patient and their family or relatives' (Appendix D, Response 57).

Firstly, this demonstrates that metaphor is an essential tool that human beings employed to express their ideas or conceptualize their thoughts on different domains. That is to say, metaphor is also the language that nurses live by for workplace communication [12]. Secondly, their use of the bridge metaphor in explaining the metaphorical meaning of 'open lines of communication' also draws our attention to cross-cultural variation in metaphorical conceptualization of nursing knowledge. The bridge metaphor utilised by the L2 Hong Kong Chinese students in this study while interpreting the phrase 'open lines of communication', is a 'spatial metaphor', suggesting their emphasis on 'connection and relationship'. However, this phrase in English is a channel (or conduit) metaphor, focusing on 'flow and transmission of information', which may reflect a more functional and mechanistic view of communication in English-speaking cultures [11].

#### *iv. Misinterpretation of general yet essential nursing-relevant figurative idiomatic expressions*

The low accuracy rates observed in interpreting Extracts 4 and 8 (Figure 4, Row 1, 20% and 12% respectively) highlight participants' limited awareness and understanding of general English figurative idiomatic expressions as essential linguistic resources in nurses' workplace communication. For instance, when interpreting the general English phrase 'stay on line' (Extract 8), where 'line' typically refers to telephone line or the internet, some participants misinterpreted 'line' as 'job position' and the entire phrase to mean 'staying in their job position' (Appendix I, Response 3). While this interpretation does not hinder nurses' understanding of their responsibility to provide guidance and information to patients and family, it suggests a lack of knowledge about the common idiomatic expressions they can use to facilitate workplace communication, particularly building rapport and showing care with patients. Another example revealing participants' insufficient awareness and understanding of general English idiomatic expressions is evident in their interpretation of 'line' in 'I came to the finishing line' (Extract 1). While 'the finishing line' is a widely recognized metaphor referring to the endpoint of a race – and life is often metaphorized as a race – some participants misinterpreted it as the end point of a personal goal in life, rather than the conclusion of life's challenges. For instance, a participant misinterpreted 'the finishing line' as 'the goal that I wanna achieve in life and I have tried my best' (Appendix B, Response 11) while two others misinterpreted it as 'their work or target' (Appendix B, Responses 86 and 87). These examples emphasize the need for developing greater familiarity with figurative English idiomatic expressions to enhance nurses' communication skills in nursing professional contexts.

#### *v. Potential ambiguity arising from L1 interpretation*

Finally, it is observed that some participants merely provided Chinese translation equivalents to the English 'line'-related phrases they were required to explain. For example, some participants provided the Chinese translation equivalent, '前線' (*qián xiàn*) while interpreting the meaning of 'front line health professional' (Extract 2). While '前線' (*qián xiàn*) is a typical Chinese translation employed to explain the meaning of 'front line', it is uncertain whether the participants were aware of the nuanced mapping embedded in this battle metaphor that 'nurses are the workers who take the lead in treating patients and whose work is dangerous', as accurately elaborated by a participant (Appendix C, Response 59). Another example illustrating this uncertainty is in the participants' interpretations for Extract 4, 'when the line would be drawn'. While some of them accurately explained the phrase as 'deciding on when it is the exact time that treatments can be stopped' (see examples in Appendix E, Responses 74, 78 and 88), some students explained the phrase as '劃界' (*huà jiè*), which is the Chinese translation equivalent of the phrase 'the line would be drawn' (Appendix, E, Responses 63 and 76). In sum, the above Chinese translation equivalents provided by the participants leave us a gap as to whether they understand the precise and elaborative meaning of the phrase in the context of these two extracts.

## **5. Discussion and Conclusion: Pedagogical Implications**

In this paper, through examining the multiple meanings of the term 'line(s)', the ways in which an ordinary English word can evolve into a nursing-specific polysemous term via metaphorical and / or metonymical extension have been explained. Based on the challenges discussed in Section 4.3, it is recommended that teachers can explicitly direct their students' attention to the literal and figurative meanings of these ordinary yet polysemous nursing-specific terms. It may also be helpful to first introduce universal metaphors, such as the pathway and conduit metaphors, which are commonly employed to conceptualize nursing knowledge and are more accessible across different cultures. It is



essential to emphasize their nuanced source-target mappings to foster a more precise understanding of the complex and nuanced nursing knowledge embedded within them. Additionally, teachers should be aware of cultural variations embedded in metaphorical conceptualization, as explained in the use of the bridge metaphor by the participants to explain the meaning of 'open lines of communication'. Awareness of cultural variation helps teachers understand the focus of the nursing knowledge delivered through different metaphors and assess how students direct their attention when using different metaphors to interpret and understand the figurative extensions of English nursing polysemous terms. Finally, the findings also highlight students' use of their L1 in articulating their understanding of nursing knowledge. Teachers should be cautious of the false assumption that the L1 translation equivalents y their students provided when explaining nursing terms necessarily indicate an accurate and nuanced understanding of the nursing knowledge conveyed in English nursing texts. Likewise, teachers should be mindful of the potential risk of overlooking the teaching of nuanced nursing knowledge when relying on L1 translation to explain nursing knowledge.

In sum, the strategies aim to improve the teaching and learning of figurative nursing-specific polysemous terms, thereby enhancing professional expertise, health-care provision, and patient safety.

## APPENDICES

The survey (Appendix A) and the survey results (Appendices B-I) can be found from the Mendeley data repository (DOI: 10.17632/hbjm3wpxts.1).

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