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Using a Mixed-Methods Needs Analysis to Ensure the Sustainability and Success of English for Nursing Communication Courses

Improving Nurse-Patient Engagement Practices in Globalized Health Care

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Article

Using a Mixed-Methods Needs Analysis to Ensure the Sustainability and Success of English for Nursing Communication Courses: Improving Nurse-Patient Engagement Practices in Globalized Health Care

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Abstract: To better engage with patients, nurses need employ various communication skills, particularly “engagement strategies” that enable them to understand, elicit or empathize with patients’ concerns. Such engagement is essential to delivering good patient-centered care. This paper describes one part of a mixed-methods needs analysis: the aim was to find and analyze illustrative examples of actual nursing communication in English that showed engagement with between nurses and patients within an intercultural/international context in mainland China, where nurses are increasingly needing to interact with patients in English due to globalization. To confirm and concretely illustrate previously established engagement strategies found in the literature, direct observations were made of a nurse’s authentic interactions with a non-Chinese patient, which were then complemented by a post-observation interview. A detailed linguistic analysis of the data yielded a rich qualitative description of how engagement was practiced, along with quantitative data on the typical distribution and variety of communication strategies in everyday nurse-patient interactions. Drawing on Systemic Functional Linguistics (SFL), this paper details how various strategies for different speech functions were used within the different discourse moves of the interactions, and argues for a more central focus on the teaching of these useful engagement strategies and their patterns of use. The pedagogical benefits and clinical implications of this study will be apparent to practitioners of English for specific purposes (ESP) and nurse educators around the world who are involved in teaching nursing communication in English-medium or international contexts.



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Keywords: engagement practice; communication strategy; English for specific purposes; needs analysis; discourse analysis

1. Introduction

1.1. Background on Engagement in Nursing Communication

Sustainable higher education can be understood in different ways, but one aspect has to do with ensuring that courses are designed to properly meet the needs of graduates in an increasingly globalized world, where the transnational flow of peoples and resources means, among other things, that we can no longer be satisfied with graduates who are only monolingually and monoculturally competent. This paper reports on one part of a research project aimed at improving the syllabus of an English communication course for nursing students at a higher education institution to ensure that it better meets the workplace needs of its graduates. The paper reports, in particular, on how data for the improved, more sustainable course was developed through needs analysis coupled with direct observations of an experienced nurse involved in intercultural/international communication with a patient. The analysis of the data revealed that expert nurses typically deploy a complex

assortment of communication strategies at various stages of their interaction with patients in order to effectively engage with them and ensure patient satisfaction and good outcomes. Current communication courses for nurses, however, inadequately train nursing students for this complex task of communicative engagement, instead focusing on basic language proficiency. This may be a reflection of the fact that research on communication in health care settings has, to date, rather neglected the views and practices of nurses, privileging, instead, those of clinicians (doctors). In this section, we present background information on the important roles that nurses play and explain why their communication needs should be given more attention.

Nurses play an essential role in patient care since they are present in everyday health care settings [1] and perform many clinical tasks, ranging from routine work, such as dealing with medication, recording patients' conditions, administering patients' injections and collecting vital signs, to more complex and skilled activities, such as minor surgery and patient counselling [2]. Nurses thus have many opportunities to interact with patients and need to learn how to communicate with patients on many different health care-related topics to provide adequate care [3]. When communicating with patients, nurse practitioners typically use two distinct approaches, viz., the biomedical and the biopsychosocial [4]. Nurses who use the biomedical approach, which is known as the traditional approach, focus only on the signs and symptoms of the patient. They typically ask closed-ended questions which may merely elicit a "yes" or "no" response, and give patients directions to follow with little or no additional patient input [5]. In contrast, nurses who employ the biopsychosocial style of communication, known as the patient-centered communication approach, engage with patients by encouraging the sharing of the patients' thoughts, feelings, and social needs, and by asking open-ended questions to prompt patient participation [5]. Adopting patient-centered communication helps nurses to achieve patient-centered care, which is, *"respecting and responding to patients' wants, needs and preferences, so that they can make choices in their care that best fit their individual circumstances"* [6]. Patient-centered care has been identified as a key element of high-quality care in health care settings worldwide, and patient-centered communication is the primary means by which patient-centered care is accomplished [7]. In many places across the globe, such as in Australia, the United Kingdom, Hong Kong, and mainland China, patient-centered communication is officially regarded as essential to effective communication in clinical settings (Australia: [8]; UK: [9]; Hong Kong: [10]; USA: [11]; mainland China: [12]).

A number of large-scale international studies have linked patient-centered communication with positive patient care outcomes, including patient satisfaction [5,13,14], patient safety [15], patient adherence to recommended treatments [16], and improved clinical outcomes, such as the better management of hypertension [17], oncology [18], and cancer [19,20]. Despite these findings, it remains a challenge for health care providers to always provide patient-centered communication because of the general belief that it is time-consuming and difficult, and health care settings have time constraints and stressful working conditions [21]. Inadequate communication, however, can lead to serious consequences, including patient complaints [22] and malpractice claims [23]. Owing to the importance and challenges of patient-centered communication, the mastery of patient-centered communication skills is essential for health care providers, including nurses.

One essential component of patient-centered communication is nursing engagement with patients [24,25]: a nurse's active or proactive efforts to interact with a patient through two-way, patient-centered, communication in order to ensure that the nurse is understood by the patient, can assist the patient in revealing any concerns they may have, and provide empathy and rapport with the patient [26]. A nurse who is able to engage with a patient can understand and elicit that patient's specific health needs and desired health outcomes, thus leading to patient-centered care [20]. Our previous work [26] has suggested that when given proper communication training, nurses are able to engage effectively and efficiently with patients regardless of time constraints and stressful conditions. Engagement with patients does not necessarily take any more time than usual, and nurses can make full

use of effective communication strategies even under stressful conditions when they are well-trained and habituated into communicating that way [26].

1.2. Perceptions/Practices of Engagement in Nursing Communication

Due to the significant role that engagement plays in nurses' communication with patients, some studies have been conducted in this area [24,27,28]. Our review of the literature, however, reveals that many previous studies on perceptions and/or practices of engagement have not focused on spoken interactions and related communication skills, which are the primary ways through which nurses interact with patients in high-risk and urgent clinical contexts [29], as most of the established research has only been conducted from the perspectives of patients or clinicians rather than nurses. The research findings so far suggest that, although patients value nurses' engagement with them [24,25], the nurses' behaviors that patients (and the studies' authors) regard as engagement, such as nurse availability when required by the patient, and nurse friendliness and warmth [30], do not all relate to communication skills or language skills. Regarding clinicians, our search of the literature turned up only two studies, Bright et al. [24] and Roe et al. [25], that explored clinicians' perceptions of engagement. All the involved clinicians attached great significance to engagement in their clinical work, and language was identified as an important factor in clinician-patient engagement. However, the actual language use or communication strategies were not specifically identified in these studies.

With regard to actual practices, Bright et al. [24] observed conversations between rehabilitation practitioners (including speech-language therapists, occupational therapists, physiotherapists, doctors, and nurses, and rehabilitation or health care assistants), and patients during stroke rehabilitation to explore the processes of engaging with people with communication disabilities. Their findings highlighted that relational dialogue and supportive/encouraging conversation were important in practitioner-patient interactions. However, the authors made only very brief comments in their analyses of the conversations, such as the fact that the clinicians used simple questions to support the patient. No elaboration on specific communication strategies was given by the authors.

In summary, previous studies on engagement have fundamentally neglected the perspectives of nurses, focusing only on concepts indirectly related to engagement. For example, Yam and Rossiter [28] and Freihat and Al-Makhzoomi [31] addressed nurses' interpersonal communication, which is a broader concept than engagement (for example, assertiveness, which refers to how an individual gets his/her point across without offending the other party, was part of Freihat and Al-Makhzoomi's [31] exploration of interpersonal communication practices, and is not directly related to patient engagement). Another related study is Dong et al. [27], which investigated emotional and expressive practices, which are a part of engagement. Drawing on survey and interview data, it was found that nurses in China and other countries are aware of the importance of interpersonal and emotional/expressive practices to the achievement of good clinical outcomes and high-quality nursing care [27,28,32,33]. However, many nurses, especially those in mainland China, admitted that in practice, they often paid more attention to providing physical comfort or to doing physical tasks (e.g., taking vital signs) than offering emotional support (e.g., showing empathy; [27,32]). It is therefore important for nurses to learn necessary communication skills and strategies to better engage with patients, and this starts with the training of nursing students during their higher education studies.

One basic problem with existing nursing communication skills courses is that, from the perspectives of nursing teachers, clinical supervisors, and nursing students, a theory-practice gap exists: there is a discrepancy between what nursing students are taught in the classroom and what they actually needed during clinical practice. As Corlett [34] reported, supervisors and teachers expressed that although nursing students were told about the need for effective nurse-patient communication, when they graduated and started working, they found it difficult to actually interact and engage with patients. This is in part due to the fact that sample nursing conversations in the teaching materials are too simplistic

and not geared towards the teaching of how to use language to engage with patients, whereas real-life nursing practice is more complex, and requires the accomplishment of multiple clinical and communicative goals simultaneously. Thus, there is an urgent need for experience-informed communication courses.

1.3. Teaching Engagement in ESP Nursing Communication

In this era of globalization, nurses find themselves needing to communicate with ever-increasing numbers of patients in English rather than the local language. ESP courses aim to address the language skills that learners need in order to be effective in their professions, and ESP courses for trainee nurses in non-English-speaking countries such as China present the best opportunities for nurses to learn the relevant language and communication skills that will enable them to carry out their job professionally. However, a majority of the current ESP nursing courses focus almost exclusively on basic elements of language proficiency rather than communication skills. For example, they teach vocabulary [35–38] or pronunciation [39,40]. They do not teach communication strategies, and do not have engagement as a specific communicative goal.

Such an approach betrays a rather old-fashioned view of language and language mastery. In a classic paper, Canale and Swain [41] expanded on earlier descriptions of communicative competence [42] and argued that successfully learning a language involves learning not only the vocabulary and grammar of a language (“grammatical competence”), but, crucially, also the sociolinguistic competence to use language appropriately according to audience and context, and the discourse and strategic competence to use longer stretches of language and communication strategies to achieve discourse goals. In order for English-medium higher education courses for nursing students to be sustainable and successful in achieving their goal of turning out communicatively competent nurses able to actively engage with international patients in English, ESP courses need to be revamped, to more explicitly teach communication strategies for patient engagement instead of narrowly focusing on grammatical competence. In fact, such a course has the potential to benefit currently practising nurses as well, as part of continuing professional development (CPD) programs, if nursing managers feel the need for such training to plug a perceived gap in communicative skills.

For the current study, a list of communication strategies that lead to engagement was collated, sorted, and categorized from the literature in the field (mainly [43–45]). These are engagement strategies that have been discovered and validated by researchers (many through observations of nurse-patient interactions) and provide an operational framework for identifying and classifying engagement strategies. The current study involved direct observation of the clinical interactions of a hospital nurse to see how these strategies actually work in practice, to both verify and exemplify the established set of strategies, using the data as the basis for an evidence-based, globally sustainable, fit-for-purpose ESP course that can better meet the needs of nursing students.

2. Materials and Methods

The current study on ESP nursing course development focuses on engagement, the needs analysis consisted of two phases. The first phase concerned the hospital nurses’ and nursing students’ perceptions of engagement, and the results of this have been reported elsewhere (Huang and Pun [26]). Here, we report the second phase: the collection of examples of actual nursing engagement in clinical practice, and detailed analyses of those encounters, using a mixed-methods approach combining the qualitative and the quantitative methods [46]. The aim in this second phase was to answer the following research questions (RQs):

RQ1. How is engagement actually practiced by hospital nurses in nursing communication?

RQ2. What specific communication strategy does the nurse adopt at each stage of an encounter and for what specific effect or engagement function?

2.1. Needs Analysis

Needs analyses are typically conducted to inform the design of ESP curricula (as suggested in Hafner and Miller [47] and Woodrow [48]). Many existing ESP courses had needs analyses conducted before their creation to elicit the target learners' specific professional language needs. For ESP nursing, various stakeholders such as nursing students, ESP teachers and medical specialists [31,40,49,50] have been consulted to inform researchers about the language skills nurses need to acquire and the most challenging language features for nursing clinical practice [31]. For example, Staples [40] elicited views from nurses about pronunciation issues (e.g., the correct pronunciation of work-related terms) and then developed an ESP course that taught the necessary skills. Similarly, Gass [49] reviewed what specific language expressions were related to clinical tasks and developed an ESP course that taught nursing students language expressions that are commonly used in carrying out nursing tasks. Other ESP studies also gathered specific perceptions from nurses about their jobs and then developed specific ESP courses to train nurses in particular nursing communication skills [31,50].

2.2. Participants

The needs analysis reported in the current study involved interviewing and observing frontline hospital nurses who have extensive working experience and professional knowledge of clinical tasks, so that their views (Phase 1) and practices (Phase 2) of engagement could generate valuable insights for developing an improved, engagement-focused ESP course. The insights from Phase 1, combined with findings from previous related studies, yielded a comprehensive framework of communication strategies for achieving engagement with patients. In Phase 2, the aim was to gather authentic nurse-patient dialogues that could be linguistically analyzed and used for ESP materials development and pedagogy. Due to practical constraints, it was possible to directly shadow and observe only one nurse at Central Hospital of Huizhou from 28 February to 4 March, 2019. Nurse Nana (a pseudonym) was chosen to be observed during her interactions with a non-Chinese patient, as she had a rich clinical working experience as a frontline nurse (19 years) at the observed hospital. Her nurse supervisor commented that she always worked hard and did well in engagement with her patients. Thus, Nana's interactions with her patients were analyzed in this project to inform the development of pedagogical materials on engagement strategies, and at the same time served as authentic dialogic data for the purpose of illustrating engagement strategies in the teaching materials. During the given observation period, Nana cared for a non-Chinese patient in the intensive care unit (ICU) of this hospital. Basic information about the patient is given in Table 1.

Table 1. Background information on the involved patient.

Name	Tony (a Pseudonym)
Age	45
Gender	Male
Nationality	Korean
Medical conditions	1. pneumonia 2. alcoholism 3. hyperthyroidism 4. hypokalemia.
Department	After being treated in the intensive care unit (ICU) for five days, the patient was admitted to the Department of Respiratory Medicine.

It should be pointed out that although only one nurse and one patient were directly observed for this phase of the study, the actual set of engagement-related communication strategies used in this study and implemented in the resulting teaching materials were collated and adapted from previous related studies, as mentioned earlier, which were

also based on clinical practice. In addition, experienced nurses were interviewed for this study and were asked to examine and validate the strategies and the analyses of the observational data. The data from the direct observations were thus meant only to be illustrative—for purpose of developing an engagement-focused ESP course containing authentic nurse-patient interactions.

2.3. Data Collection

Nana's communication with this patient was observed, and during the analysis particular focus was placed on her engagement behaviors. An established observation schedule on nurse-patient interactions [51] was adapted for this study (see Appendix A.1 for the current observation guide). Four common and recurrent clinical scenarios were observed: measuring vital signs, administering injections, patient hygiene, and patient education. From these communicative events, empirical data were collected which were likely to be useful in accurately identifying the authentic linguistic and pragmatic requirements of the target situation [48]. These data were eventually used to inform the ESP course development.

During the period of observation, field notes, including what both Nana and Tony said in their conversations, were recorded for further analysis according to the observation guide. Since direct audio-/video-recording of nurse-patient interactions was not allowed at the observed hospital, it was only possible to use written notes to record as much as possible about the interactions, along with contemporaneous voice memos by the researcher (i.e., the first author recorded herself summarizing key observations and reflections on the communication patterns). Based on the notes and memos, the first author subsequently made transcriptions of what was said during the observed interactions, which were all in English, and the transcriptions were later checked by Nana for accuracy. As the researcher and observer, the first author adopted the approach of "*observer as participant*", and thus interacted with the participating patient only when it was necessary to clarify a particular situation or interaction, or to make the participant feel more at ease with the observation process [52]. The Hawthorne effect, where individuals modify their behaviors in response to their awareness of being observed [53,54], was not judged to be a major issue in this situation, as patient care was the priority for the observed nurse in this high-stakes clinical context, and the patient was focused on the nurse who was attending to his needs.

After the observations, Nana was invited to express her thoughts and feelings about her engagement with the patient in a post-observation interview where open-ended questions were used (see Appendix A.2). The post-observation interview took place one day after the week of observations to facilitate Nana remembering the observed interactions, and lasted about an hour. It was conducted in a quiet office where only Nana and the first author were present, and was audio-recorded for further analysis. This interview was conducted in Mandarin because Nana, who was a Mandarin speaker, could express her ideas more clearly and fluently in her mother tongue. This interview complemented the observations, giving us a better picture of the nurse's engagement practices.

2.4. Data Analysis

The analysis of engagement practices had qualitative and quantitative components. For the qualitative part, discourse analysis was conducted to investigate the communication strategies used by the nurse to engage with the patient. For the purposes of this study, "*discourse*" refers to all forms of spoken interaction that construct social reality [55]. A Systemic Functional Linguistics (SFL) approach was adopted as an analytic framework for the discourse analysis in the present study. The key SFL component for the current study is speech function analysis, a powerful tool in the analysis of interaction, as it demonstrates how an interaction progresses [56–59]. The analytical procedures drew on Halliday and Matthiessen's [60], Martin's [58] and Eggins and Slade's [56] research. The texts were coded into '*Initiation, Response, Follow-up/Feedback (IRF)*' sequences first [61], each set of sequences constituting a typical exchange move structure in clinical spoken interactions.

Each move in the 'IRF' sequence was then coded for the type of speech function it realized. This framework was developed and tested in an analysis of health care communication in Australia and has been refined for use in Hong Kong [62–64]. The reconstructed transcripts of what nurse Nana and the patient said during their interactions were manually coded for three layers: moves (using the IRF framework), speech functions (e.g., Offer, Command, Statement, Question), and communication strategies (e.g., 'Offering spoken reassurance'). This combination of analyses was aimed at capturing nurse's communicative acts of engagement and contextualizing them as serving purposive speech acts (speech functions) during the flow of different sequences (moves) of the interaction.

The speech function categories adopted for the current study are shown below, and are based on Halliday and Matthiessen [60], Martin [58] and Eggins and Slade [56]: five initiating speech functions (i.e., *offer*, *command*, *statement*, *question* and *greeting*) and their expected responses (see Table 2) or discretionary responses (see Table 3).

Table 2. Speech function diagram I.

Initiation	Expected Response (Synoptic: Finishes the Exchange)	
	Response	Follow-Up
Statement	Acknowledgement	Follow-up Feedback
	Contradiction	
Offer	Acceptance	
	Rejection	
	Acknowledgement	
Question (open)/(yes/no)	Answer	
	Disclaimer	
Command	Compliance	
	Refusal	
Greeting	Response to Greeting	

Table 3. Speech function diagram II.

Unexpected/Discretionary Response (Dynamic: Opens out the Exchange)		
	Response	Follow-Up
Tracking	Checking	Response to Tracking
	Confirming	
	Clarifying	
Challenging	Disengaging	Response to Challenging
	Challenging	Feedback
	Countering	
No response		

The speech function analysis was used only for analyzing the difference in speech roles played by the two parties. The third layer of discourse analysis involved the classification of the spoken communication strategies of engagement used by the nurse. The engagement strategies were manually coded according to a typology of strategies previously identified in the literature, and further confirmed and validated for this study through interviews with hospital nurses, who reflected on their own experiences of engagement. (see [26] for details). All the transcriptions and coding of the nurse-patient communication were checked carefully by three parties: the first author who is an ESP educator, a researcher in discourse analysis, and the third author, who is a professor of nursing and a nurse

supervisor. To ensure the reliability of the coding process, Cohen's kappa coefficient (k) was calculated three times for different data. The second coder was asked to independently identify the different moves of the 'IRF' sequence in the data, and established an inter-rater reliability of ($k > 0.8$) with the first author. The second coder also identified the speech functions for each move, and established an inter-rater reliability of ($k > 0.8$) with the first author. The third author independently coded the engagement strategies, and established an inter-rater reliability of ($k > 0.8$) with the first author. Discrepancies were resolved through discussions until agreement was reached.

Table 4 below is presented as an example to show how the three-layered analytical framework was used to illuminate the nursing engagement practices. The interaction below represents a few minutes of a typical nursing scenario of a nurse administering an injection. This detailed analysis shows how the layers of analysis dovetailed with each other.

Table 4. Selected nurse-patient conversations in administering injections.

Engagement Strategies	Moves	Speech Functions	Speaker	Talk
		Statement		Tony, things are ready.
(1) negotiating shared decision-making during procedures (2) showing respect or expressing praise for a patient (3) paying attention and responding to patient's spoken or non-spoken cues	Initiation	Question (yes/no)	Nurse	Can I start the injection now?
	Response	Answer	Patient	OK.
		Command		Tony, please put your right hand flat.
negotiating shared decision-making during procedures	Initiation	Question (yes/no)	Nurse	Should I tie a tourniquet first to select a blood vessel? = =This blood vessel is fine, and I will do the injection here later, OK?
	Response	Answer	Patient	= =Ye-ye-ye-yes.
(1) making "I" statements in which feelings and concerns are stated using "I" (2) spontaneously offering information (3) paying attention and responding to patient's spoken or non-spoken cues (4) offering spoken reassurance through which a sense of hope is created		Offer		Now I will disinfect you.
		Statement		The disinfectant is a little cool.
		Command		Please bear with me.
(1) spontaneously offering information (2) offering information that is easily comprehended (3) avoiding jargon or spontaneously explaining it well	Initiation	Offer	Nurse	I'm putting a tourniquet on you.
		Statement		It may be a little tight, but it will make the blood vessel more obvious.
offering spoken reassurance through which a sense of hope is created		Question (yes/no)		Would you please hold on for a while?
	Response	Answer	Patient	OK [Nodding].

For the quantitative arm of this study, statistical analysis was used to investigate the frequency and variety of engagement strategies used by the nurse in the data.

2.5. Ethical Consideration

Ethics approval for this project was obtained from the ethics committee of the authors' institutions before the study began. The research project was explained to Nana beforehand, detailing the project objectives, research plan, and methods of data collection. Ethical requirements for this kind of observation were also explained in detail, including how participants' confidentiality would be ensured and how participants could access the raw collected interactional data. Nana then explained the study to the involved patient, Tony, introducing the role of the observer and providing details about the aims of research and how his data would be used. Their written consent to participate in the research project and to have their conversations observed and studied was obtained before the observations began.

3. Results

3.1. Analysis of Engagement Strategies

The analysis of the data revealed that Nana adopted a wide variety of engagement strategies with the patient. These strategies were in line with what was established in the literature and can be classified as having three main purposes: improving patients' understanding (e.g., through spontaneously offering information), eliciting patients' concerns (e.g., by asking open-ended questions), and establishing empathy and rapport with patients (e.g., by stating an intention to help and support). Among these three types, Nana used the strategies for establishing empathy and rapport with the patient 99 times during the observations, making it the most frequent type of engagement (see Figure 1).

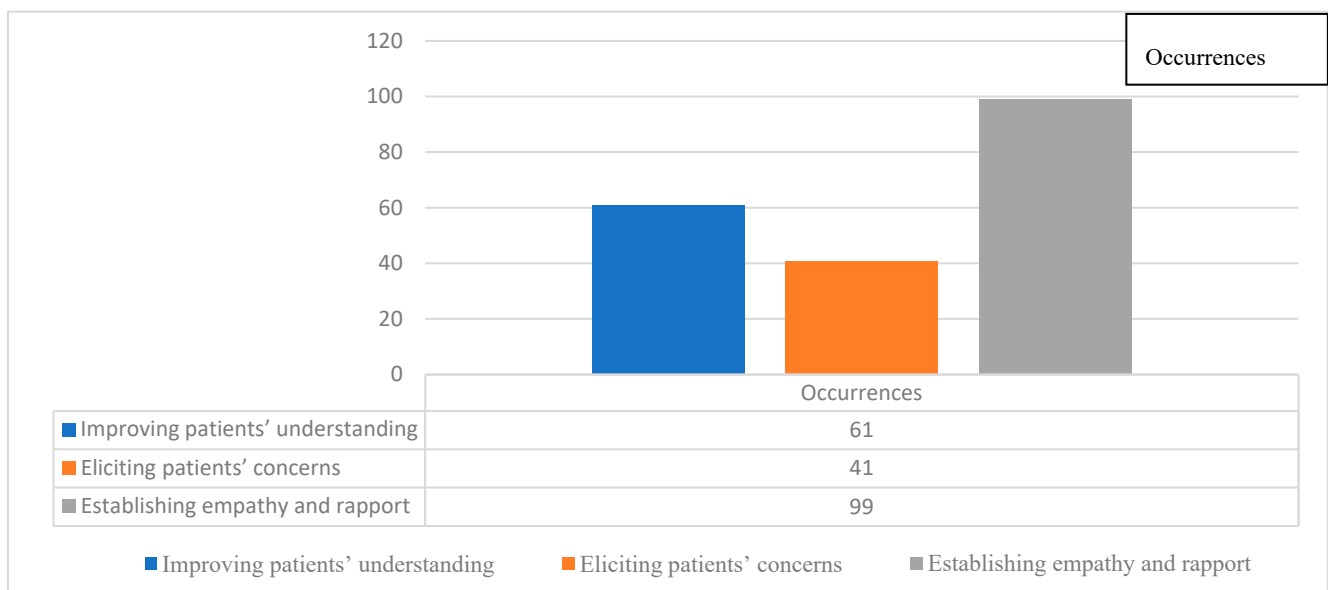
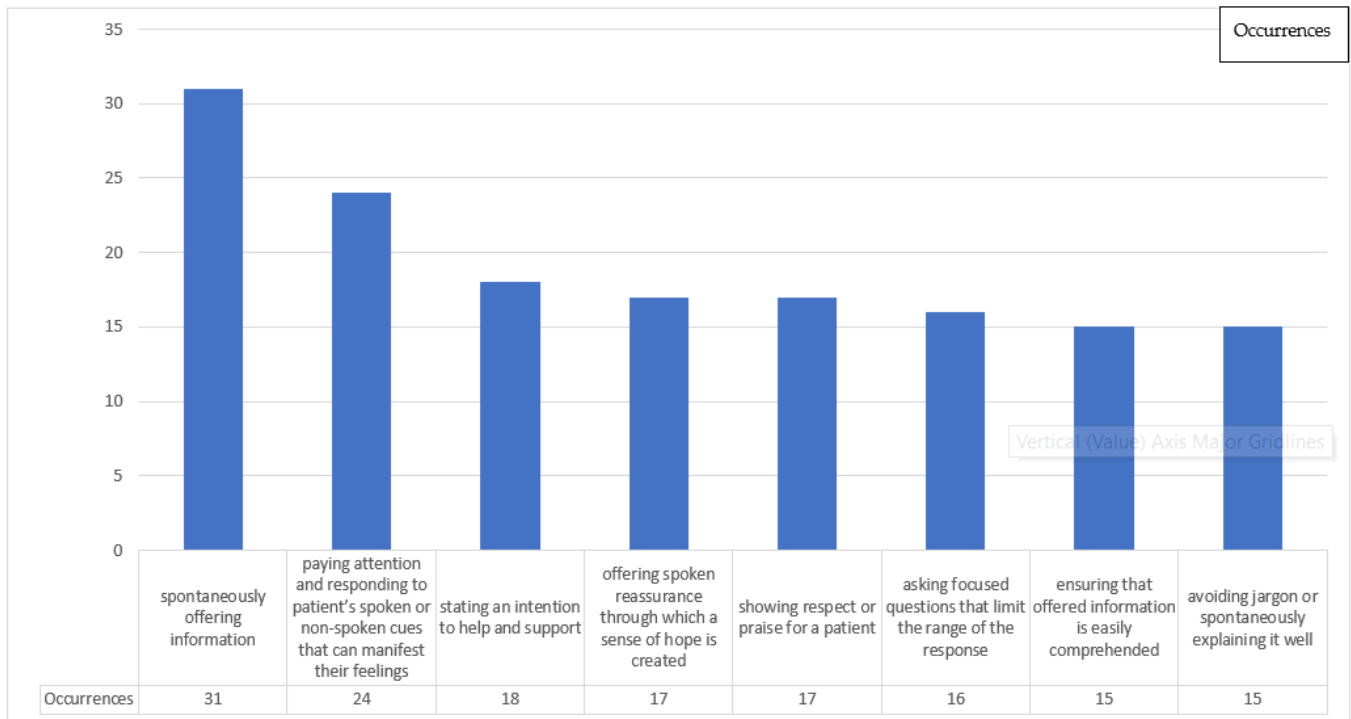


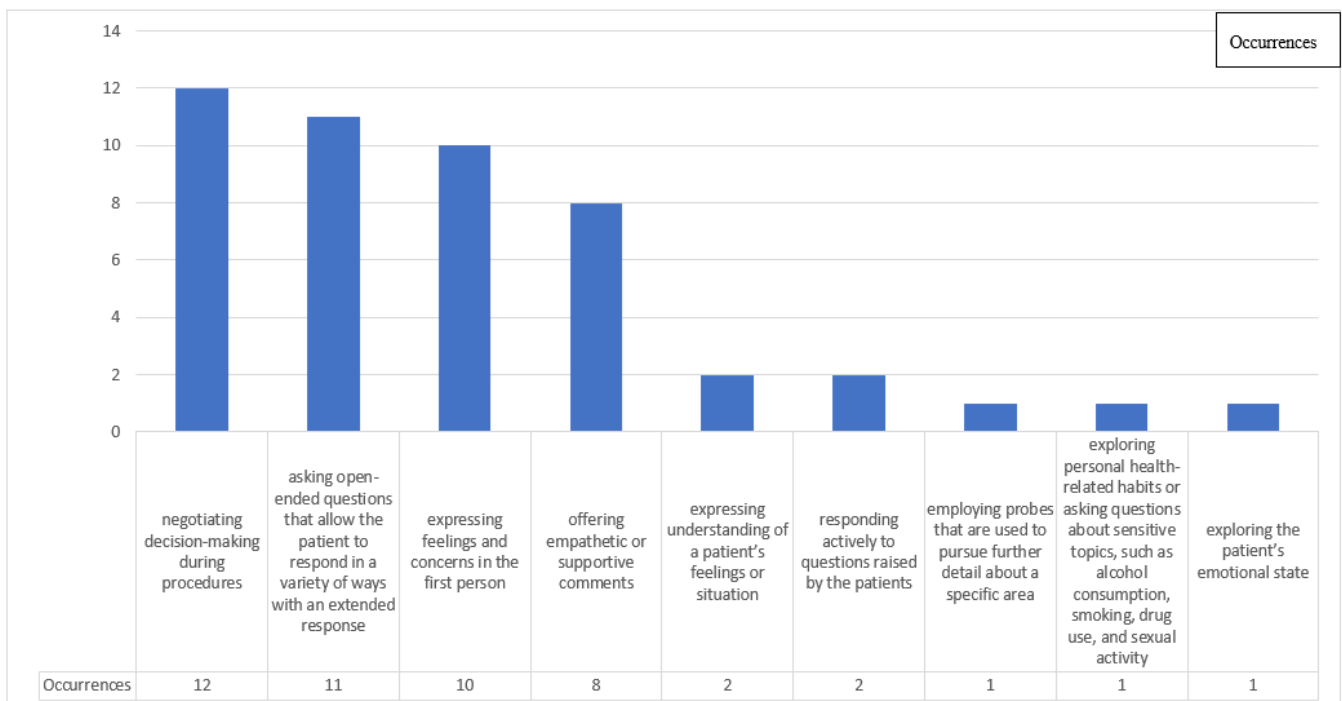
Figure 1. Frequencies of communication strategies for different types of engagement.

Figure 2a,b and Table 5 show the communication strategies used, from the most to the least frequent. Overall, a total of seventeen different engagement strategies were adopted by Nana to engage with the patient. Table 5 classifies each of the identified strategies into one of the three main types or purposes of engagement and also includes an authentic example taken from the data. The utterances highlighted in bold are the ones that enact the engagement functions. For example, before taking his temperature, Nana said to the patient, "I will measure your axillary temperature, so first, I need to wipe off the sweat under your armpit." In saying the highlighted utterance, she used the strategy of expressing care

or/and concerns in the first person which falls under the engagement purpose category of “establishing empathy and rapport with the patient”.



(a)



(b)

Figure 2. (a,b) Frequencies of each engagement strategy.

Table 5. Engagement strategies used to engage with the patient.

Ranking	Occurrences (n)	Engagement Strategies	Types of Engagement	Examples from Observations
1	31	spontaneously offering information	Improving patients' understanding	Nurse: Your body temperature is 36.7 °C, pulse is 72 beats/min, breathing is 20 times/min, and blood pressure is 150/84 mmHg. [<i>measuring vital signs</i>]
2	24	paying attention and responding to patient's spoken or non-spoken cues that can manifest their feelings	Establishing empathy and rapport	Nurse: Is the water temperature OK? [<i>patient hygiene</i>]
3	18	stating an intention to help and support	Establishing empathy and rapport	Nurse: If you feel uncomfortable or need help, please ring the bell. [<i>taking injections</i>]
4	17	offering spoken reassurance through which a sense of hope is created	Establishing empathy and rapport	Nurse: Don't worry! They are all very kind and very professional in providing medical care. You will be well cared for in their department, and your family will be with you every day. [<i>patient education</i>]
	17	showing respect or expressing praise for a patient	Establishing empathy and rapport	Nurse: Very good; very good physical activity. [<i>patient hygiene</i>]
6	16	asking focused questions that limit the range of the response	Eliciting patients' concerns	Nurse: Tony, is it comfortable for you to lie like this? [<i>taking injections</i>]
7	15	offering information that is easily comprehended	Improving patients' understanding	Nurse: Mucosolvan can dissolve the phlegm and clear it from your lungs, which will make it easier for you to cough out the phlegm and help the inflammation in your lungs to get better faster. [<i>taking injections</i>]
	15	avoiding jargon or spontaneously explaining it well	Improving patients' understanding	Nurse: Mucosolvan can dissolve the phlegm and clear it from your lungs, which will make it easier for you to cough out the phlegm and help the inflammation in your lungs to get better faster. [<i>taking injections</i>]

Table 5. Cont.

Ranking	Occurrences (n)	Engagement Strategies	Types of Engagement	Examples from Observations
9	12	negotiating decision-making during procedures	Eliciting patients' concerns	Nurse: Which hand do you prefer? [taking injections]
10	11	asking open-ended questions that allow the patient to respond in a variety of ways with an extended response	Eliciting patients' concerns	Nurse: How do you feel today? [taking injections]
11	10	expressing care or/and concerns in the first person	Establishing empathy and rapport	Nurse: I will measure your axillary temperature, so first, I need to wipe off the sweat under your armpit. [measuring vital signs]
12	8	offering empathetic or supportive comments	Establishing empathy and rapport	Nurse: You're recovering well, and I think you will be transferred out of the ICU soon! [patient hygiene]
13	2	expressing understanding of a patient's feelings or situation	Establishing empathy and rapport	Patient: The lights at night are too bright. Nurse: Sorry! We forgot to check. Tonight, I will ask the nurse on duty to turn down the lights, OK? [taking injections]
	2	responding actively to questions raised by the patients	Establishing empathy and rapport	Patient: Why wipe off the sweat? I don't do that at home. Nurse: Because sweat can make the temperature measurement inaccurate. [measuring vital signs]
15	1	employing probes that are used to pursue further detail about a specific area	Eliciting patients' concerns	Patient: My body is getting better, but I didn't sleep very well last night. Nurse: Why is that? [taking injections]
16	1	exploring personal health-related habits or asking questions about sensitive topics, such as alcohol consumption, smoking, drug use, and sexual activity	Eliciting patients' concerns	Nurse: Are you allergic to any medicine? [taking injections]
	1	exploring the patient's emotional state	Establishing empathy and rapport	Patient: Uh...I am a little nervous. Nurse: What's the matter? [patient education]

As Table 5 shows, the strategy of spontaneously offering information, which has the engagement function of improving patients' understanding, was used most frequently among all seventeen strategies. Based on Nana's post-observation interview, this high frequency is probably because of the fact that most patients come to the hospital in order to find out what is wrong with their bodies and thus are always anxious and eager to have as much information about their condition as they can, but they may not know how to ask questions due to the lack of medical knowledge. Thus, spontaneously offering all kinds of information is one of the nurse's main roles [65]. Since this strategy aims mainly to provide information to patients, such as informing the patient of their body temperature, it does not belong to the most frequently used type of engagement practice: establishing empathy and rapport with patients (see Figure 1). Further, only four of the ten most frequently used strategies are for the most frequently used type of engagement practice, as shown in Table 5. That is, the most frequently used strategies do not necessarily concern the most frequently performed function of engagement, which is to establish empathy and rapport. This is possibly because there is a wider variety of communication strategies used to establish empathy and rapport, which altogether add up to make "establish empathy and rapport" the most common type of engagement.

With regard to the variety of communication strategies used by Nana, there were, respectively, 3, 5 and 9 different strategies used to improve patients' understanding, elicit patients' concerns and establish empathy and rapport (see Figure 3). She used the richest variety of communication strategies for establishing empathy and rapport with her patient. This category, mentioned earlier, is also Nana's most frequently used type of engagement practice. Meanwhile, among these three functions of engagement, eliciting patients' concerns happened least frequently (see Figure 1), although this engagement type included the second richest variety of communication strategies in the data (see Figure 3).

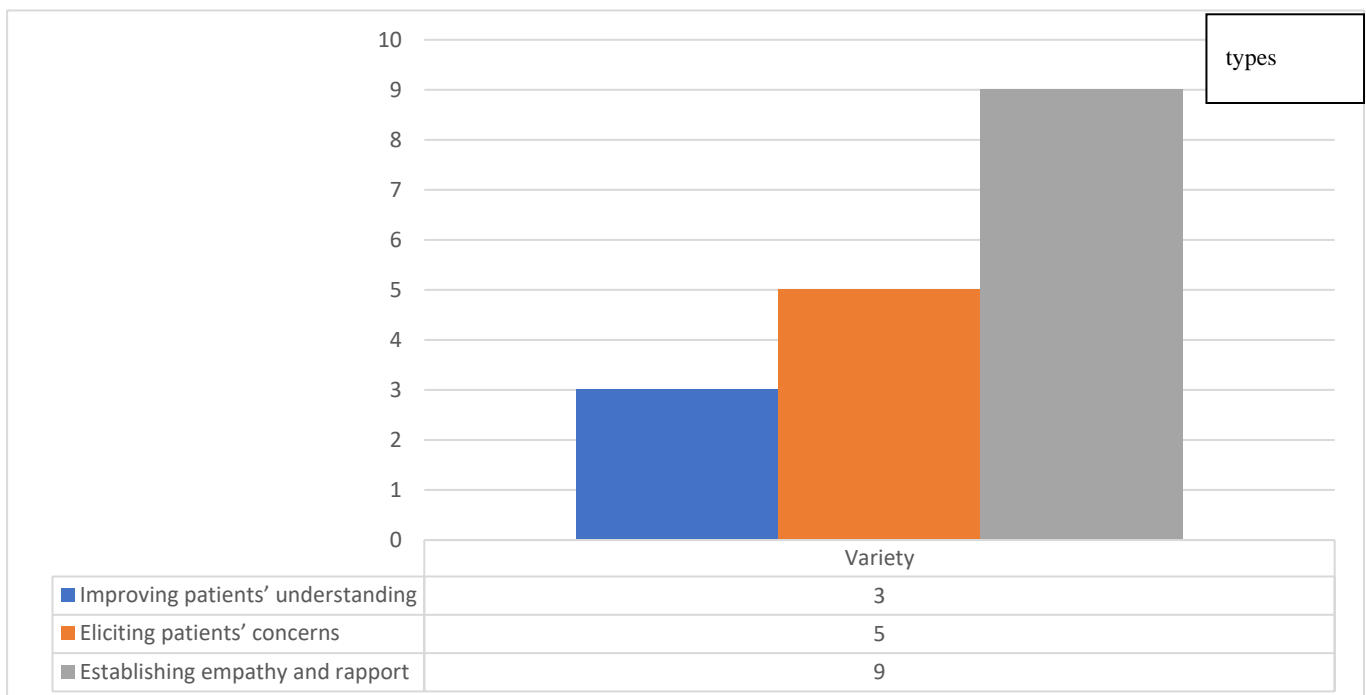


Figure 3. Type of engagement versus variety of communication strategy.

3.2. Move Analysis

In terms of 'IRF' moves, the distribution of Nana's engagement strategies was not even across the different moves, as shown in Table 6. The highest density of her engagement strategies was during the move of Initiation (76.74%), followed by Response (50%) and Follow-up (33.33%). That is, 76.74% of Nana's Initiation moves showed engagement with

the patient, or, from another angle, 80.5% of all her engagement-related moves (82) were during the Initiation stage of her exchanges (66). These results suggest that a nurse is more likely to construct engagement in his/her initiation moves.

Table 6. Frequencies of engagement strategies in each move.

Moves	Initiation	Response	Follow-Up	Total
Moves that were for the purpose of engagement	66	1	15	82
Total number of Moves made by the nurse	86	2	45	133
Percentage	76.74%	50%	33.33%	61.65%

As for the moves that were Response, although half of hers concerned engagement, Nana only made 2 responses during the observations, while the other responses were all made by the patient. This indicates that, compared with the patient, the nurse is more likely to lead the interactions with the patient, possibly due to the nature of the job. According to the literature, one of the nurse's roles is to be responsible for appropriate conduct of the interaction with the patient even though nurse-patient engagement is bidirectional during their communication [24,25], because the patient often enters the interaction while experiencing stress and anxiety [66] or without knowing enough to ask certain questions [67]. This reason can also explain why nurses, as carers, are expected by patients to be the ones in charge in nurse-patient interactions. Such asymmetrical nurse-patient relationships, especially in Asian contexts, were also reflected in previous studies such as the research conducted by Ishikawa and Yamazaki [68]. Based on the above analyses, it makes sense to focus the teaching of engagement strategies on the moves of Initiation or Follow-up.

In the qualitative analyses of the moves, it was found that nurse always adopted more than one strategy to enact engagement within a move. For example, in an initiation move during the scenario of patient education, Nana said, *"I will personally transfer you to the Department of Respiratory Medicine, and I will see you when I have time."* In this example, Nana simultaneously used three different communication strategies to engage with the patient. She stated an intention to help the patient transfer to another department, used the first person to express her concerns for the patient, and then offered spoken reassurance, telling the patient that she would visit him later.

3.3. Speech Function Analysis

As for speech functions, we report only on the most salient features. First, all Nana's initiating open-ended questions, such as *"How do you feel today?"*, served to enact engagement (see Table 7), since the strategy of using such questions is to allow the patient to respond in a variety of ways with extended responses, and thus realize the purpose of eliciting patients' concerns. Beyond this, some other strategies of engagement also involved open-ended questions. Table 8 presents these strategies and corresponding examples that include open-ended questions (see the words highlighted in bold). These examples are from different scenarios, labeled in square brackets, in the observed nurse-patient interactions.

Table 7. Frequencies of engagement-oriented open and yes/no questions.

Question Types	Open	Yes/No
Questions for the purpose of engagement	11	24
Total number of Questions asked by the nurse	11	27
Percentage	100%	88.89%

Table 8. Engagement strategies that can use open-ended questions.

Communication Strategies	Examples
(1) paying attention and responding to patient's spoken or non-spoken cues	Nurse: How do you feel today? [taking injections]
(2) asking focused questions that limit the range of the response	Patient: My body is getting better, but I didn't sleep very well last night. Nurse: Why is that? [taking injections]
(3) employing probes that are used to pursue further detail about a specific area	
(4) exploring the patient's emotional state	Patient: Uh...I am a little nervous. Nurse: What's the matter? [patient education]

Second, as Table 7 shows, a large proportion of the yes/no questions initiated by Nana (88.89%) also concerned engagement. This suggests that, in addition to open-ended questions, yes/no questions can also be used to promote engagement (e.g., "Is it comfortable for you to lie like this?"), even though this type of question has been widely characterized as typically eliciting minimal information [5]. Table 9 shows the communication strategies that can involve the use of yes/no questions to engage with patients, and corresponding examples from the data.

Table 9. Communication strategies using yes/no questions to engage with patients.

Communication Strategies	Examples
(1) paying attention and responding to patient's spoken or non-spoken cues	I raised the head of the bed. Do you feel comfortable? [measuring vital signs]
(2) asking focused questions that limit the range of the response	Tony, is it comfortable for you to lie like this? [taking injections]
(3) negotiating decision-making during procedures	Can I take your blood pressure here in a minute? [measuring vital signs]
(4) exploring personal health-related habits or asking questions about sensitive topics, such as alcohol consumption, smoking, drug use, and sexual activity	Are you allergic to any medicine? [taking injections]
(5) showing respect or expressing praise for a patient	Can I start the injection now? [taking injections]
(6) stating an intention to help and support	Do you need me to help you go to the bathroom? [taking injections]
(7) expressing care or/and concerns in the first person	
(8) offering spoken reassurance through which a sense of hope is created	Nurse: I'm putting a tourniquet on you. It may be a little tight, but it will make the blood vessel more obvious. Would you please hold on for a while? [taking injections]

3.4. Post-Observation Comments

All of the findings discussed above were confirmed by Nana in the post-observation interview when she commented on her own performance of engagement in the observed scenarios. Overall, she was satisfied with how she engaged with the patient through the various communication strategies. Nana also saw a real need for students to learn related

communication strategies that would help them engage more with patients, especially non-Chinese patients. As she said, *They are more likely to feel anxious and lonely, being in a foreign country, and thus might appreciate a greater level of engagement with nurses.*

For these reasons, she stressed the importance of ESP nursing courses having a focus on engagement. Such ESP courses represent the main opportunities for nursing students to learn about how to engage with non-Chinese patients in English.

Nana suggested that such courses should not focus on teaching words and phrases as things to only memorize in a context-free way, but as communication strategies embedded within the context of achieving the important nursing objectives of patient engagement and patient satisfaction. Such a course would show how each utterance or sentence serves to achieve specific engagement goals, thus better ensuring that our future nurses will not only survive but thrive in the workplace, which would be the goal of any sustainable ESP course: enabling nurses to consistently be good communicators who engage interactively with patients, instead of basic communicators who can just get by. Nana, along with other nurses interviewed for this project [26], also suggested that these strategies should be taught using authentic dialogues based on real-life interactions between experienced nurses and their patients, which is precisely what was collected in the current project.

4. Discussion

Through the above analyses, the actual engagement practices of an experienced nurse were explored both quantitatively and qualitatively. The quantitative analysis showed that, among the three types of communication strategies, the nurse used the strategies for establishing empathy and rapport with patients most frequently, and with the greatest variation in strategy. This result chimed with our previous study of nurses' perceptions regarding engagement [26]. The nurse interviewees in that study also felt that the category of *"establishing empathy and rapport with patients"* had the widest variety of communication strategies [26]. This finding indicates that teaching strategies for establishing empathy and rapport with patients is more difficult and complicated because there are so many different ways/different strategies to achieve this end. This finding is also in line with the study by Shao et al. [69] who found that communicating empathetically was not always a straightforward undertaking for nurses. For example, nurses may lack the ability to recognize the emotional cues of patients in order to empathetically respond [70]. Several studies conducted at hospitals in China also reported that nurses often had limited ability to evaluate the emotional state of patients [71,72]. Moreover, communication may be adversely impacted if nurses miss or ignore the opportunity to express empathy owing to their busy work schedules [73]. In addition, patients under stress usually do not fully express their feelings to nurses [74]. These obstacles suggest that it is necessary to teach nurses to develop the habit of using proactive empathetic communication skills: perhaps they can learn to do more of *"Eliciting patients' concerns"* during their initiation moves, to ensure that they do not miss these concerns, before they can respond with *"Establishing empathy and rapport"*. When nurses have the proper training, and start using the strategies as a matter of routine, the habitual nature of their use will help overcome the abovementioned obstacles. The evidence-based engagement strategies developed in the current study (as can be seen in Figure 2a,b or Table 5), therefore, will be a valuable contribution to the field, and will help not only novice nurses and nursing students but also currently practising nurses if taught as part of a professional development program.

The majority of the communication strategies identified in the observational data, such as showing respect or expressing praise for a patient [45,69], have been listed in existing literature. However, there appeared to be a new strategy not previously described. Consider the following scenario where the nurse is about to administer an injection (see Table 10).

Table 10. An example of the observed nurse-patient conversation involving the new strategy.

Speaker	Talk
Nurse	Which hand do you prefer?
Patient	Right hand.
Nurse	Please give me your right hand so I can check the skin and blood vessels.
Patient	[give his right hand]
Nurse	The skin on the back of your right hand is fine, and the blood vessels are elastic. We can use the right side for the injection.
Patient	Good.

In this example, the nurse asked the patient about his preference for an injection site, thus involving the patient in the decision-making process. This helped the nurse to elicit what could have been a concern of the patient, and encouraged him to express himself more and take a bigger role in what was happening. This strategy was also found in a previous study on effective communication between patients and clinicians in some Australian emergency departments, although that study was conducted on clinicians rather than nurses [75]. In the current study, this strategy was used by a nurse, and we have labelled this “*negotiating decision-making during procedures*”. It will be useful to teach this to nurses as strategy to engage with patients and elicit what their wishes are. Patients will be encouraged to express themselves more and get more involved in their own health care.

5. Conclusions

The results of this needs analysis answered RQ1 and RQ2, by exploring a frontline hospital nurse’s current engagement practices and comparing it with what has been found in the literature. The multiple strategies the observed nurse used to engage with her non-Chinese patient in the hospital observations were identified, classified, and further examined using move analysis and speech function analysis. These analyses provide us with a detailed picture of the various speech functions that realize engagement and how they are used at various stages of nurse-patient interactions. The speech function analysis in conjunction with the identification of specific engagement strategies form a good organizing framework for a language syllabus [76]. As part of this project, the detailed three-layered analyses were fed into the materials development of an ESP nursing course focused on engagement. Details on the development and post-implementation evaluation of that engagement-focused course will be published separately, but it can be noted here that a first trial run of the engagement-focused course on a group of nursing students resulted in a marked increase in awareness and appreciation of the importance of nurse-patient engagement, accompanied by a significant increase in the usage of engagement strategies by the students. Those results validate the usefulness of the needs analysis and discourse analyses of authentic interactions discussed in the current paper, where the focus was on showing the kinds of analysis can be done to plug a gap in current ESP courses on nursing communication to make them more sustainable and fit for purpose.

This study is one of the first to specifically focus on Chinese nurses’ engagement practices. The findings will have a positive influence on future nurses if implemented in ESP courses, as the use of engagement strategies can ensure patient-centered communication, which research has shown leads to positive clinical outcomes [14,77–79]. Further, the communication strategies and authentic examples provided in this study can help novice nurses quickly adapt to the real-world clinical environment and improve the quality of their nursing care. This is because the strategies are highly practical and authentic, being based on hospital observations.

The findings reported in this study are not limited to the specific research setting and participants: they are highly applicable to many other contexts, whatever the language situation or nurse-patient profile. Whether it is nurses in English-speaking countries speaking to patients from a non-English background, or nurses in China speaking Mandarin to Chinese patients, nurses can be trained to take a more proactive and active role in

communicating with patients, deploying these strategies to better engage with patients from any background. It is hoped that future studies will apply these findings to new contexts, extending and adapting them to various national or intercultural situations, and provide further validation that such engagement-focused and workplace-relevant training can result in better, more sustainable higher education outcomes for nursing students.

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Appendix A.

Appendix A.1. The Observation Guide for Nursing Engagement with Patients

Table A1. The Observation Guide for Nursing Engagement with Patients.

Date:					
Time	Place	Clinical Tasks	Nurse/Patient's Talk	Functions of Talk	Comments

Appendix A.2. Post-Observation Interview Questions

1. What was the purpose of your saying this?
2. During this nurse-patient interaction, did you have any specific spoken strategy to better understand patients' ideas?
3. During this nurse-patient interaction, did you say anything to make yourself better understood by your patients?
4. During this nurse-patient interaction, did you say anything to elicit as many patients' concerns as possible, especially about their emotional needs?
5. During this nurse-patient interaction, did you say anything to build empathy and rapport with the patient?
6. Can you comment on your engagement practices during this nurse-patient interaction?

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