An English needs analysis of doctors and nurses in rural Japan

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English skills are claimed to be important to medical professionals in Japan; however, surprisingly few English needs analyses of Japanese doctors and nurses have been conducted. This study used questionnaires and interviews to ascertain the English needs of doctors and nurses at hospitals in Kagawa and Okayama Prefectures. Over 2,000 questionnaires were collected, and 20 interviews were conducted. It was revealed that doctors use English primarily for reading, whereas nurses use it mainly for speaking. Encounters with foreign patients, especially native English speakers, are relatively rare. However, both doctors and nurses feel medical/nursing students need greater training in English speaking. Also, doctors are interested in in-service English learning programs, though nurses expressed greater ambivalence. Findings from this study will help improve English curricula for medical and nursing students and extablish in-service programs for doctors and nurses.

English for specific purposes

ESP EMP needs analysis questionnaire interview

A central tenet of ESP education is that groups of students need specific English skills for their future careers, and that these needs differ from those who will enter different fields (Brown, 2016). For this reason, the needs analysis is crucial (Dudley-Evans & St John, 1998). Needs analyses typically involve a triangulation of quantitative and qualitative data gathered from various stakeholders in a particular discipline, including both domain insiders (disciplinary professionals and in-service learners) and domain outsiders (e.g., ESP specialists and administrators; Huhta et al., 2013).

Moreover, it is often asserted that medical professionals such as doctors and nurses require English skills (Oshimi, Jego, & Thomas, 2016). A number of English for medical purposes (EMP) needs analyses involving quantitative and qualitative data collection have been conducted in Europe and Asia (e.g., Antic and Milosavljevic, 2016; Hwang & Lin, 2010).

However, surprisingly few EMP needs analyses have been conducted in Japan. Those that have been conducted mainly involve medical faculty at universities in urban areas such as Tokyo (e.g., Noda, 2016; Yasunami, 2005). However, relying on students and faculty as domain insiders could be problematic; students may be unaware of the actual needs demanded of them in their fields (Serafini et al., 2015), and faculty may have different English needs from medical professionals working at non-university-affiliated clinics, who may not be involved in research. In addition, the needs of medical professionals in large urban cities like Tokyo, with higher populations of foreign residents and tourists, may differ from the needs of medical professionals in rural areas such as Shikoku, where our research team is based.

Thus, there is a need for EMP needs analyses of medical professionals at hospitals and clinics not affiliated with universities, and working in rural settings such as Shikoku. This study was launched to fulfill that need.

The purpose of this study was to identify the English-language needs of medical doctors (MDs) and registered nurses (RN) working in Western Japan, primarily in Kagawa Prefecture. Six specific research questions guided this study.

(1) Are MDs and RNs at hospitals in Japan using English at work?
(2) For what purposes are these people using English?
(3) Which English skill (reading, listening, speaking, or writing) is most important for their work?
(4) Are they satisfied with their university English education?
(5) Which English topics do they think medical/nursing students should focus on?
(6) Are they interested in in-service English training programs?

For each question, we were interested in learning whether or not there were any differences in responses between MDs and RNs at university and non-university hospitals.

Data collection for this study consisted of two phases: the questionnaire and interview phase. Each will be described in turn.

(1) Questionnaire phase
During this phase, a questionnaire was first drafted in Japanese and then piloted with 15 MDs and 17 RNs at Kagawa University Hospital. Based on feedback from pilot participants this questionnaire was then revised.

We then selected six hospitals in Western Japan: five in Kagawa Prefecture and one in Okayama Prefecture. One of these hospitals was a university hospital; the other five were not affiliated with universities. Negotiations were made by one of the researchers with office staff at these participant hospitals in order to determine the execution of the questionnaire survey. Paper questionnaires were distributed to all MDs and RNs employed at these hospitals, both full-time and part-time, apart from the hospital in Okayama Prefecture which elected to conduct the survey online. The questionnaire administered in Okayama also included a few different questions, at the request of this hospital.

In total, 427 valid responses were received from the MDs (response rate = 56%) and 2,041 were received from RNs (response rate = 76%).

(2) Interview phase
In order to clarify and expand upon findings, semi-structured interviews were conducted with 10 MDs and 10 RNs working at two of the participant hospitals (one university hospital and one non-university hospital). Participants were selected through opportunity sampling (Dörnyei, 2007), or their willingness to participate in the interviews. The only selection criteria was that participants should have had at least 5 years of working experience as MDs or RNs. Interviews were conducted by one or two of the researchers, in Japanese (except for one MD), and approximately 30-60 minutes in length. Interviews were audio-recorded and fully transcribed. Interview questions were grouped into three categories: 1) participants' past

experiences learning English; 2) their assessment of their own English skills; and 3) their experiences with English as MDs or RNs.

(3) Data analysis

Questionnaire results for both MDs and RNs were input into SPSS 24 (IBM) and analyzed statistically. Responses were divided into two groups for both MDs and RNs: the university group (U) and non-university group (NU).

Interview transcripts were analyzed thematically in NVivo 11 (QSR International); The constant comparative method (Boeije, 2002) was employed during analysis; major themes and sub-themes emerged inductively as transcripts and notes were examined.

All research instruments as well as the research plan were approved by the Ethics Committee at Kagawa University Hospital.

This section will focus on findings from the questionnaire survey. At the end a few findings from interviews will be described briefly.

(1) English use at work

First, it was found that the majority of MDs have used English at work, though this figure was considerably lower for RNs. Tables 1 and 2 displays these results for MDs and RNs respectively. A chi-square comparison found that MDs and RNs at the university hospital have used English significantly more frequently than those at the non-university hospitals.

Table 1. English use at work (MDs)

Hospital	YES	NO
U ($n = 186$)	180 (97%)	6 (3%)
NU ($n = 241$)	221 (92%)	20 (8%)

Table 2. English use at work (RNs)

Hospital	YES	NO
U ($n = 482$)	312 (65%)	170 (35%)
NU ($n = 1,538$)	843 (55%)	695 (45%)

(2) Purposes for using English

Participants were provided with a list of possible purposes for using English, including communication with patients and to find information, and asked to select the item or items which applied to their own use of English at work. It was revealed that MDs at both university and non-university hospitals use English mainly

for finding information in journals or online, etc. (about 70%). Other common purposes include manuscript preparation and talking to patients and their families.

RNs, on the other hand, in both groups, use English mainly for talking to patients and their families (over 83% for both U and NU groups). Other common purposes include communicating with staff and finding information.

Several significant differences were found between MDs and RNs in the university and non-university groups; MDs and RNs in the U group, for instance, used English significantly more frequently for manuscript preparation and international presentations. Clearly, MDs and RNs in the U group are using English significantly more often for academic or research pursuits.

(3) Most important English skill

For MDs in both the U and NU groups, the English skills considered most important to their work was Reading, followed by Speaking, Listening, and Writing. No significant differences were found between groups. The ranking of skills by MDs in our study is identical as that found by Taşçi (2011). For RNs, the most important skills were given as Speaking, Listening, Reading and Writing. There were no significant differences between groups. These results for MDs and RNs are displayed in Tables 3 and 4.

Table 3. Skill ranking (MDs)

U ($n = 176$)		NU ($n = 219$)	
Skill	Num. (%)	Skill	Num. (%)
1. R	91 (52)	1. R	116 (53)
2. S	42 (24)	2. S	54 (25)
3. L	23 (13)	3. L	34 (16)
4. W	20 (11)	4. W	15 (7)

R=Reading, S=Speaking, L=Listening, W=Writing

Table 4. Skill ranking (RNs)

U ($n = 325$)		NU ($n = 929$)	
Skill	Num. (%)	Skill	Num. (%)
1. S	178 (55)	1. S	500 (54)
2. L	97 (30)	2. L	311 (34)
3. R	44 (14)	3. R	107 (12)
4. W	6 (2)	4. W	11 (1)

How frequently these skills are being used is also an important question, and this question was

asked only to MD and RN respondents at the hospital in Okayama. It was found that over 70% of MDs are reading in English at least once a week, with 32% reading every day. However, the skills of speaking, listening, and writing are used much less frequently, with the majority using these skills only a few times per year or not at all. For RNs, about half of respondents use speaking and listening skills about once or twice per year, and writing and reading skills are used either not at all or once or twice per year.

(4) Opinions about English education

Respondents were given four statements related to their university English education: 1) This education was useful to my current work; 2) I am satisfied with this education; 3) Using English is a source of stress for me now; and 4) English is necessary for my work. Respondents could select 5 Likert scale responses ranging from "strongly agree" to "strongly disagree."

Responses show that MDs and RNs in both the U and NU groups feel that their university English education was neither useful nor satisfactory; RNs were even less satisfied than the MDs. Both MDs and RNs tend to agree that using English is a source of stress. The MDs strongly agree that English is necessary for their work, while the RNs tend to agree with this statement. These findings are shown in Tables 5 and 6.

Table 5. Opinions on education (MDs)

	U (*n* = 184)	NU (*n* = 240)
	M (SD)	M (SD)
1. Useful?	2.85 (1.27)	2.96 (1.27)
2. Satisfied?	2.39 (1.04)	2.43 (1.03)
3. Stressful?	3.82 (1.18)	3.78 (1.22)
4. Necessary?	4.72 (0.59)	4.64 (0.63)

Table 6. Opinions on education (RNs)

	U (*n* = 487)	NU (*n*=1,535)
	M (SD)	M (SD)
1. Useful?	2.36 (1.06)	2.25 (1.06)
2. Satisfied?	2.21 (0.98)	2.10 (0.96)
3. Stressful?	3.78 (1.17)	3.80 (1.20)
4. Necessary?	4.31 (0.77)	4.02 (0.86)

(5) Important English topics for students

Respondents were given a range of English topics, including speaking, Medical English, reading, etc., and asked which topics they felt medical or nursing students needed to study most (they were allowed to select more than one item).

At least 80% of MDs and RNs at both U and NU hospitals selected "speaking/English conversation." Listening, presentation/debate, and reading were also selected by about 50% of all MD participants; interestingly, Medical English and TOEIC/TOEFL were ranked in the last two positions by MDs.

Results for RNs were similar, though presentation/debate were ranked lowly by RNs in both the U and NU group, while medical English was the second most frequent selection for RNs in both groups. What is clear, however, is that both MDs and RNs feel the greatest need for speaking/English conversation training.

(6) Interest in in-service English training

Finally, it was found that MDs hold a strong interest in in-service English training, especially among MDs at the university hospital (71% express an interest). RNs, on the other hand, expressed a significantly greater ambivalence, especially at the non-university hospitals. These results are shown in Tables 7 and 8.

Table 7. In-service interest (MDs)

Hospital	YES	MAYBE	NO
U	132	37	4
(*n*=186)	(71%)	(20%)	(5%)
NU	166	53	22
(*n*=241)	(69%)	(22%)	(9%)

Table 8. In-service interest (RNs)

Hospital	YES	MAYBE	NO
U	236	171	77
(*n*=484)	(49%)	(35%)	(16%)
NU	644	589	294
(*n*=1,527)	(42%)	(39%)	(19%)

(7) Interview findings
Findings from interviews largely confirm findings in the questionnaire phase of this study. Three significant findings are given below.
(A) *The needs of doctors and nurses at a university hospital differ from those at non-university hospitals.* Doctors/nurses at a university hospital require English for several research-related purposes, and thus seem to feel a greater need for English than those at non-university hosp*itals.*
 (B) *Encounters with foreign patients (especially native-English-speaking foreign patients) are relatively rare.* Nurses and doctors report that they may only have to speak in English to a

foreign patient once or twice a year, and these patients are most often from other Asian countries such as Bangladesh or China. Basic communication skills are needed more than refined grammatical knowledge (where speaking is concerned).

(C) *MDs have a strong interest in in-service learning programs centering on English, especially with regard to speaking.* RNs are more ambivalent to these programs, citing a lack of time due to work and family constraints.

(8) Conclusions

This study has made clear that MDs and RNs in Western Japan use English work, though mainly for reading (in the case of MDs) and speaking (though rarely, in the case of RNs). Both MDs and RNs believe that English curricula for medical/nursing students require a greater emphasis on speaking skill development. Based on these findings, we are currently developing in-service English learning programs for MDs and RNs at hospitals in Kagawa and Okayama Prefecture (funded by MEXT grant 18K00653, 2018-2020).

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