

**“Have you heard of diabetes?”—
The Use of Perspective-Checking Questions
in Creating Knowledge Needs in Taiwanese Health
Education Talks for Elderly Lay People***

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Health education for lay people, in contrast to that for clinical patients, is an important but challenging task since lay people may not feel the need to acquire this knowledge. Creating a sense of knowledge need in the lay people is thus crucial to achieving effective education. While great attention has been devoted to how participants' knowledge needs are created in various communication media (such as academic writing, commercial advertising, and education in general), less has been directed to what and how such needs are created via health education talks. Likewise, how such studies could enrich our understanding of creating a sense of need across different media remains unexplored. Based on the discourse analysis of 169 Taiwanese health education sessions where college students delivered geriatric disease knowledge to elderly people, this study argues the following: 1) creating a sense of need is a prevalent pragmatic strategy in most communication media that involve a promotional goal; 2) events such as health education talks, having spontaneous interactions and on topics of high-stake consequences, allow a wide variety of needs and needs-invoking mechanisms to emerge; 3) knowledge deliverers' use of perspective-checking questions (such as “Have you heard of diabetes?” or “Does anyone around you have diabetes?”) plays an indispensable role in enabling the recipients' knowledge needs to surface; and 4) the distribution patterns of what and how knowledge needs emerge are related to the epistemological and interactional roles of the participants.

Key words: perspective-checking questions, health education, promotional culture, creating knowledge needs

1. Introduction

Health education aims to help individuals improve their health by increasing their knowledge and influencing their attitudes (Gold & Miner 2002:6). Such education is often promoted because health literacy is a stronger predictor of health status than other sociodemographic variables (American Medical Association 1999:554). Medical researchers (Falvo 1994:6, Selander et al. 1997:188) note that the content of effective health education should be adapted to patients' different orientations of knowledge needs (e.g., background knowledge) and be relevant to these, and its

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processes should actively engage the patient, i.e., a communication form changing from the health care provider's monologue into a provider-patient dialogue.

Similar principles can also be observed in doctor-patient communication and in most educational contexts. For example, among many information-providing skills for patients recommended in the Calgary-Cambridge guides (Kurtz, Silverman & Draper 2005:44-48) is assessing patients' starting point. This is done by checking their prior knowledge to assess the information they need. Scholars in field of education also highlight the importance of learner participation in creating meaningful and relevant learning (Keller 1987). Yelon's (1996:3) ten powerful instructional principles recommend that teachers motivate students by helping them connect what they have learned to their past, present, and future, assess students' knowledge, and adjust their instructions based on this. In sum, learner engagement and need assessment are two keys to effective education activities.

While health education and counseling communication have generated great interest among discourse analysts and medical educators (Selander et al. 1997, Roberts & Sarangi 2005, Watermeyer & Penn 2009, van Weert et al. 2011), little attention has been focused on how the principles of patient engagement and need assessment are constructed in health education. Such communication training may be even more important in a cross-generation context. In Southern Taiwan, for example, while Taiwanese (the local dialect) is the main language of many elderly people, most young people are fluent speakers of Mandarin (the official language) but less so of Taiwanese. Starting in 2011, a Medical Taiwanese (Intermediate) course was offered in a medical school in Southern Taiwan with the dual goal of advancing students' Taiwanese proficiency along with their communication skills in health education sessions for elderly lay people.

In my previous study (Tsai 2015), I observed health education sessions in which students (STs) were asked to transfer knowledge about geriatric diseases to elderly lay people (LPs), I identified a group of questions by STs which served to check LPs' perspectives on the topic, i.e., perspective-checking questions (PCQs), such as questions that check LPs' background knowledge or lifestyle (see Section 3.3) While these questions elicit responses from LPs, the nature of how they work in enhancing learning motivation and revealing knowledge needs remains unexplored. Assessing LPs' information needs is especially important before any target knowledge is delivered, e.g., in the opening stage of an encounter. The current study thus investigates the following questions: In the Taiwanese health education context, how are lay people's knowledge needs established prior to the deliverer's presentation of the target knowledge, and what are these needs? Specifically, how do the deliverer's PCQs work in enhancing lay people's knowledge needs? Through a comparison of

need establishment in other communicative events, I will also discuss how the mechanisms observed in the Taiwanese health education context contribute to our understanding about needs creation across different communication genres.

2. Literature review

2.1 Health education

Health education, a combination of planned learning experiences (Gold & Miner 2002:6) aims to improve the lay public's health literacy, to influence their attitudes, and finally to change their behavior towards healthier lifestyles. These knowledge-transfer activities are both educational and promotional in the sense that the target knowledge should be something relevant to and important for the audience so they need to know about it. Medical researchers (Sanson-Fisher et al. 1991:323, Falvo 1994:6, Selander et al. 1997:188) have emphasized that, for health education to be effective, providers should address the individual's or communities' different knowledge needs and actively engage those individuals in the process of health education. Among various approaches to health education (see Glanz, Rimer & Lewis 2002), motivational interviewing is a person-centered method designed to explore the ambivalence and barriers that individuals (such as addicted smokers) have experienced and to motivate behavioral changes (Miller & Rollnick 1991). One of its key elements is to guide people through talking about their situation and finding their own solutions to problems that prevent them from leading a healthier lifestyle. Similar pre-assessment work can also be observed in doctor-patient communication. Lay patients' medical knowledge is the key to informed and shared decision-making (Lehtinen 2007, Landmark, Gulbrandsen & Svennevig 2015, Lindström & Weatherall 2015). In their well-cited guidelines for medical interviews, Kurtz, Silverman & Draper (2005:44-48) recommend fourteen strategies to facilitate physicians' information-giving tasks. Besides the presentation of accurate, well-organized, and comprehensible information, physicians should also see the patient's responses as a guide to how to proceed with information-giving, assess the patient's prior knowledge, discover the extent of the patient's desire for information, check the patient's understanding of the information given, relate their explanation to the patient's perspective, provide opportunities for the patient to participate, and elicit the patient's beliefs, reactions, and feelings regarding the information given.

While most research on health education is written by medical educators in the form of guidelines as described above, discourse analysts have also contributed to this literature by examining the conversational processes of the information-transfer. Silverman et al. (1992), for example, examined advice-giving in AIDS counseling and

argued that the nature of advice-giving, compared to information-giving, involves some normative or personalized evaluations and is more likely to cause resistance among the recipients. Therefore, providing factual information is a strategy which can stabilize counselors' advice-giving task. Sarangi et al. (2004) focused on 24 counseling sessions regarding the genetic risk of Huntington's disease and concluded that counselors' routine use of six types of reflective questions which invite clients to engage in introspective thinking can facilitate more informed and client-centered decision-making. In their analysis of 50 audio-recorded telephone consultations between genetic nurses and parents with infants diagnosed with a hereditary disorder, G6PD deficiency, Zayts & Sarangi (2013) found that the nurses' patterns of delivering risk explanations consistently oriented to the parents' existing knowledge regarding G6PD deficiency. This review of discourse analysts' contributions demonstrate the conversational subtlety of how health professional's information-giving tasks are managed or achieved in spontaneous interactions. However, issues regarding how learners' knowledge-needs are assessed and participation recruitment are enacted in verbal interactions remain less explored, and thus will be the focus of the current study.

2.2 Promotional culture in other communication genres

As promotional culture dominates every aspect of modern life (Davis 2013), promoting health knowledge works in ways similar to creating needs in advertising, enhancing motivation in learning, and establishing the significance of research topics in academic writing. Following the problem-solution paradigm (Swales 1990:138), advertisements sell products by addressing problems that potential customers have (Jordan 1986:36), academic studies present findings or "products" (Hyland 2004:67-68) to respond to certain issues, educators in general cultivate the knowledge students need to face future challenges in life, and health educators transfer knowledge to help people avoid illness.

The following section reviews present four themes emerged from previous studies: 1) how making the focal knowledge or product important for and relevant to explicitly or implicitly identified recipients is the key to enhancing their motivation to learning the knowledge or recognizing their need for the product; 2) how in a monologue-style discourse (e.g., academic writing) issues on significance and relevancy are achieved in various discourse moves by the writer alone, but in face-to-face situations they are achieved by engaging the learners' participation in dyadic verbal discourse (e.g., classroom interaction).

Keller (1987) defines four major conditions (Attention, Relevance, Confidence, and Satisfaction, i.e., ARCS Model) for learners to become and remain motivated. For Keller, getting attention is both an element of motivation and a prerequisite for learning. Strategies for sustaining attention include using games, role-plays, or problem solving activities that require learner participation. The second condition, relevance, involves making the instruction relevant to students' present or future situations. Useful strategies (Keller 1987:4) include finding out what the learners' interests are and asking them to relate the instruction to their own future goals.

Sales promotion letters are usually unsolicited, since they aim to create customers' needs that did not exist before (Kotler et al. 2013). Connecting the two seemingly irrelevant parties, e.g., products and consumers, thus becomes the key to effective communication in marketing. In his study of sales promotion and job application letters, Bhatia (1993:51) commented that a failure to establish relevance can make such letters ineffective and less credible as this violates the relevance maxim proposed in Grice's cooperative principles (1975). To effectively establish relevancy with customers, most advertising relies on convincing people that they have a problem or need, and this is frequently achieved by using a "you" orientation (Bhatia 1993:45-50).

However, the task of identifying a potentially relevant readership in academic writing tends not to be done explicitly (such as "This report is for scholars in the field of..."); more often this is embedded in the text where problems or issues are stated (e.g., Hyland 2004:76). To take an example from Azar (2012:155), "Although there are now a number of excellent textbooks on the methods of teaching English... we have lacked a short, concise text on the testing of esl (sic)... It is hoped that this little book will help to meet the need by providing..."

In his CARS model of analyzing research article introductions, Swales (1990) identifies three moves: establishing a territory, establishing a niche, and occupying the niche. Hyland's analysis of abstracts of journal articles (2004:63) concludes that, to convince readers to continue articles, writers need to promote themselves as people who have the professional credibility to address the focal topic as an insider within the research community, and who have come up with important products (research findings or arguments). Azar's (2012:154) genre analysis identifies four moves commonly observed in textbook preface sections: establishing the needs of the readership, establishing orientations, introducing chapters and scope, and acknowledgements. The following summary focuses on how the above research contributes to understanding how discourse strategies create a sense of relevancy, importance, and need in readers of academic writing.

In establishing a territory, writers show the community that the research topic is part of a lively, significant or well-established area or they claim its interest, or importance, or emphasizing the frequency and complexity of the data (Swales 1990:144-146). In establishing a niche, writers start with adversative connectors such as “however”, “nevertheless”, “neglect”, “inconclusive”, etc. (Swales 1990:154-155). Hyland (2004:75-76) has considered academic writing a process of knowledge-making and research findings “a product” and found that academic abstract writers could claim the significance of their studies by persuading readers that a problem is significant or important enough that their studies are worth reading for its solution. Azar’s study of textbook prefaces found that establishing the needs of the readership was one of the most frequent moves and usually took up the initial position. This move serves to emphasize the gap in the market and thus to establish a need for the book (Azar 2012:155-160). Loi & Evans (2010) have further shown that writers of both English and Chinese research article introductions make use of the three move components in Swale’s CARS model. Chinese expressions with regard to claiming centrality (move 1), claiming significance of the study (move 3), and indicating a gap (move 2), include *guan-zhu de re-dian* ‘the focus’, *ju-you zhong-yao de* ‘important’, and *hai wei-jian you-suo shen-ru* ‘not yet been studied in depth’ (Loi & Evans 2010:2816-2817).¹

With the rich literature demonstrating how promotion is a shared goal in English/Chinese academic and nonacademic discourse, and how various moves aim to catch participants’ interest and establish their needs, it would be interesting to see whether and how these processes work in Taiwanese health education talks.

3. Methodology

3.1 Data collection

A total of 108 medical and nonmedical students with a basic command of Taiwanese took this one-semester elective course offered from 2013 to 2015. In Week One of the class, the students were informed of two required audio-taped health education sessions in which each ST presented information in Taiwanese regarding a common chronic geriatric disease (dementia, breast cancer, diabetes, benign prostate hyperplasia, etc.) to the LPs aged 70 or older whose educational background were lower than elementary school level. At the end of the semester, the students were given a written consent form detailing the procedures used for protecting their rights

¹ The romanization of the Taiwanese utterances, marked in italics in the paper, follows the Taiwan Southern Min Romanization Phonetic Scheme, established by the Taiwanese Ministry of Education in 2008.

and anonymity. Eighty-five students (47 male and 38 female, with an average age of 21) agreed to have their 169 sessions of health education included in this study. To avoid lengthy presentation of the spoken data, English translations are used mainly and the original Taiwanese (in Romanization) is included when language, e.g., lexical choice or sentence structure, is relevant to the discussion.

Twelve elderly LPs were recruited to take part in this study, seven males (average age 70) and five females (average age 71). All were urban residents and nine of them worked as volunteers in the hospital affiliated with the medical school. Their educational background ranged from elementary school (three), to junior (three) and senior high school (three), and college (three). Although they also spoke Mandarin, Taiwanese was their main language for daily communication. The LPs were instructed to use only Taiwanese, to be active listeners, and to ask for clarification if the ST's presentation was incomprehensible for people with an education level of or lower than elementary school.

3.2 Opening stage of the health education session

Most of the education session started with the STs' self-introduction (line 1, Example (1)) and an announcement of the name of a geriatric disease (line 2), and occasionally with a general introduction of the disease (line 2) or an outline of the presentation (lines 9-13). Specific details were then presented, i.e. subtopics about the target disease, such as its definition, cause, prevalence, impact, risk factors, treatment, and prevention. The average interaction time was 12 minutes and 10 seconds. To explore how LPs' knowledge needs were established prior to specific knowledge being presented to them, my analysis focuses on the interaction from the beginning to the first sentence of subtopic one (lines 1-15). This chunk serves a similar function to an introduction genre and is termed as the "opening stage" in this study.

Example (1)

- 1 ST: *A-peh li ho, gua-si tai-gi-khe e hak-sing, gua kio-tso Lim Hiauhong.*
(pseudonym)
'Uncle, I wish you well, I'm taking a Taiwanese language course and I'm Lim Hiauhong. (pseudonym)'
- 2 *Gua kin-a jit beh ka-li kai-siau-e si ko-hueh-ap. Tse-si tsit-tsiang lau-lang tiann-tiann u-e bun-te.*
'What I'm going to talk about with you today is about hypertension. It's a common problem that elderly people often have.'

- 3 *Li it-tsing kam u thiann-kue ko-hueh-ap?*
‘Have you heard of hypertension before?’
- 4 LP: *U-a u-a.*
‘Yeah, yeah.’
- 5 ST: *Ko-hueh-ap li tsai-iann siann-mih?*
‘What do you know about hypertension?’
- 6 LP: *Tioh si kong hueh-ap kuan.*
‘It’s about high blood pressure.’
- 7 ST: *Li kam tsai-iann ko-hueh-ap beh an-tusann u-hong?*
‘Do you know how to prevent hypertension from happening?’
- 8 LP: *Gua m-tsai, li kong hoo gua thiann-kuann-mai e?*
‘I have no idea. Why don’t you tell me about it?’
- 9 ST: *Ho... gua tan-leh to-lai kai-siau... gua ka-I hun-tso sann-e poo-hun.*
‘OK... I’m going to talk about it. I’ve divided my presentation into three parts.’
- 10 *Te-it poo-hun si an-nua tsia-e tso-sing ko-hueh-ap,*
‘The first part is about what causes hypertension,’
- 11 *A-lai to-si i e u siann-mih tsing-thau.*
‘and then what symptoms it has.’
- 12 LP: *Tsing-thau, hng.*
‘Symptoms, I see.’
- 13 ST: *Henn, henn. A teh-sann to-si beh an-tsuann lai u-hong.*
‘Yeah, yeah. And the third part is about how to prevent it from happening.’
- 14 LP: *Ho,*
‘OK,’
- 15 ST: *Ho, lan sing-lai kong ui-siann-mih e tso-sing ko-hueh-ap.*
‘OK, let’s start with what causes hypertension.’

3.3 Perspective-checking questions

In my previous study (Tsai 2015), I identified three types of “perspective-checking questions” (PCQs): knowledge-checking, characteristics-checking, and responses-checking. The first two are commonly used in the opening stage and defined as follows. Knowledge-checking questions ask about what the LP already knows about an illness, e.g., *Li it-tsing kam-u thiann-kue ko-hueh-ap?* ‘Have you heard of hypertension before?’ or *Li kam tsai-iann siann-mih penn kah ki-ti u-kuan-he?* ‘Do you know any disease related to memory problems?’ and these questions usually involve verbs of knowledge (e.g., *thiann-kue* ‘heard of’ or *tsai-iann*

‘know’), or cognition (e.g., *liau-kai* ‘understand’ or *siunn* ‘think’), or feeling (e.g., *kam-kak* ‘feel’). Characteristic-checking questions relate the LP’s personal psychosocial features to the target knowledge from three aspects: 1) lifestyle or risk factors relevant to the LP (e.g., *Li kam-u tsiah-hun?* ‘Do you smoke?’); 2) illness experiences of the LP or a disease sufferer from the LP’s social network (e.g., *Li pun-sim iau-si sim-pinn e tshin-tsiann ping-iu kam-u lang u thng-jio-penn?* ‘Do you or any of your friends or relatives have diabetes?’); 3) the health status or specific behavior of the LP (e.g., *Li kam-kak li-e kian-kong an-tsuann?* ‘How do you feel about your health?’).

3.4 Needs indicator

Communication events involving a promotional goal requires that information to be promoted should be something important for and relevant to the recipients, so that such knowledge is needed and the recipients are motivated to learn more about it. Linguistic presentations of knowledge needs in the health education session are identified and outlined as five need indicators in the following subsections.

3.4.1 LPs’ insufficient knowledge status

“LPs’ insufficient knowledge status” as a need indicator refers to the situation when the LP expresses his/her lack of knowledge about the topic disease that the ST will introduce in the session (i.e., the focal disease). This includes two typical contexts in the LP’s response to the ST’s knowledge-checking questions (e.g., ‘Have you heard of diabetes before?’): 1) there is a negative expression indicating the lack of (sufficient) knowledge (e.g., ‘I’ve rarely heard about it’ or ‘I know very little about it’); or, 2) after being provided with some knowledge about the disease, the LP expresses some uncertainty (‘Yes, I’ve heard of diabetes. It has something to do with insulin, right?’). The above coding marks the distinction between an individual’s *epistemic status* with regard to a knowledge domain (Heritage 2012:4-6) and their *epistemic stance*, i.e., the speakers’ degree of certainty about the focal knowledge and commitment to the truth of the propositions that they claim (Ochs 1996:410), and weighs more on the stance than status in measuring the LP’s knowledge needs. An LP may hold a relatively higher amount of knowledge regarding diabetes, and yet display uncertainty towards it. This uncertainty thus calls for more knowledge to be acquired.

3.4.2 LPs' request for information about health knowledge

“LPs' request for information about health knowledge” as a need indicator refers to the situation when the LP asks questions regarding a disease which has not yet been introduced by the ST, or asks the ST to share more information, for example, ‘I know that cataracts are a kind of eye problem for old people. What can we do to prevent them?’ or ‘I myself have diabetes. Tell me more about it’.

3.4.3 Prevalence or impact of a disease

“Prevalence or impact of a disease” as a need indicator refers to the situation when either LP or ST mentions that the focal disease is common or detrimental to health, e.g., ‘Many people have this disease and people often talk about it on the TV news’ (by LP), ‘It is said that there are at least 300 million diabetes patients in the world’ (by ST) or ‘Cervical cancer, a gynecological disease, is a killer in Taiwan. Many women, because of this cancer, die... Every year in Taiwan, there are about 950 who die of this cancer’ (by ST).

3.4.4 Disease sufferers in LPs' or STs' social network

“Disease sufferers in LPs' or STs' social network” as a need indicator refers to the situation when the LP or the ST mentions that s/he or one of his/her family members or friends have the focal disease. For example, in response to a characteristic-checking question, ‘Do you or any of your friends or relatives have diabetes?’, a LP says ‘I myself have diabetes’; and to a knowledge-checking question, ‘How much do you know about cataracts’, the LP provides some first-hand experience by replying ‘I know about cataracts. Quite a few of my friends have them and they all had surgery’. Sometimes, the STs also mention their relatives' or friends' experiences such as ‘My nephew, just 15 years old, already has diabetes’.

3.4.5 Risk factors applicable to the LPs

“Risk factors applicable to the LPs” as a need indicator refers to the situation when factors related to the focal disease such as age, gender, or family history are mentioned and applicable to the LP's situation. For example, since all of the LPs were aged 70 and above, when old age is mentioned by either party as a risk factor, it is a need indicator (e.g., ‘I know that cataracts are a kind of eye problem for old people’).

Mentioning a disease is gender specific is regarded as a need indicator only when such mention is directed to the specified gender or when relevancy is established. For example, in the following two topic announcements of “cervical cancer” to a male LP, the first one is not regarded as carrying a need indicator, but the second is: ‘the disease that I will introduce to you today is very important for women to know about’ versus ‘the disease that I will introduce to you today is something that you would never get, but your wife could’.

3.5 Quantifying need indicators

In quantifying these need indicators, the occurrence of any of the indicators described above, be it in the LPs’ or the STs’ utterances, was coded as one instance. Two indicators that display a similar sense were coded as one occurrence, as shown in the following Examples (2) & (3).

Example (2)

1 ST: *Gua kin-a-jit beh ka-li kai-siau tsit-tsióng tiann-tiann e huat-sing tih lau-lang e sim-tsióng e bun-te, kio-tso kuan-sim-penn. Li it-tsing kam-u thiann-kue?*

‘I’m going to introduce to you a kind of heart disease that occurs quite often among older people. It is called coronal heart disease. Have you heard about it before?’

2 LP: *U-lah, m-ko bo-kai-tse. M-bo li kong-hoo-gua thiann-khuann mai e?*

‘Yeah, but not much. Why don’t you tell me about it?’

[coded as two need indicators by ST, two need indicators by LP]

Example (3)

1 ST: *Kin-a-jit gua beh ka-li kong jit-kua thng-jio-penn e tai-tsi. Li kam tsai-iann thng-jio-penn?*

‘Today, I’m going to give you some information about diabetes. Do you know about diabetes?’

2 LP: *Toh-si hueh-thng, kam-si? Tsiok-tse lang long-u tsit-tsióng bun-te, tian-si ma tiann-tiann leh kong.*

‘It’s about the sugar in your blood, right? Many people have this disease and people often talk about it in the news on TV.’

[coded as two need indicators by LP, the second and third ones convey the same sense of prevalence)]

4. Findings

Table 1. Perspective-checking questions and participation

	Number of cases	Average number of syllables in the LPs' utterances
Opening with PCQs		
With 1 PCQ (47 cases)	80 (47%)	163.42
With 2 PCQs (21 cases)		
With 3 PCQs (12 cases)		
Opening without PCQs	89 (53%)	77
Total PCQs	169 (100%)	

Table 1 shows that in 80 of the 169 opening stages (47%), the STs used a single PCQ or more than one PCQ (47 and 33 cases) and the average number of syllables observed in the LPs' utterances in the 80 opening stages with PCQs was 163 syllables, whereas in the 89 non-PCQ ones, the average was 77 syllables.²

² The Taiwanese conversations in this study were transcribed using Chinese characters, each of which represents one syllable which is generally considered as one word. The word count tool in Microsoft Word was used to measure the LPs' participation. This measurement takes into account of the occurrence of discourse elements, such as repair, repetition, hesitation, back channeling and so on, which signal the speakers' engagement in spontaneous interaction. The use of a syllable-count in quantifying speakers' discourse space was also adopted by Aronsson and Rundstrom (1988:165).

Table 2. Numbers and types of perspective-checking questions

Knowledge-checking questions	Number of questions	Total
<i>thiann-kue</i> ‘heard of’	43 (30%)	
<i>in-siong</i> ‘impression’	1 (1%)	
<i>tsai-iann</i> ‘know’	45 (31%)	
<i>liau-kai</i> ‘understand’	15 (10%)	
<i>siunn</i> ‘think’; <i>kam-kak</i> ‘feel’	5 (3%)	
Total	109	(75%)
Characteristic-checking questions		
Lifestyle or risk factors relevant to the LPs	13 (9%)	
First-hand disease experience		
of the LPs’	9 (6%)	
of the LPs’ social network	8 (5%)	
Health status or behavior of the LPs	7 (5%)	
Total	37	(25%)
Total (knowledge- & characteristic-checking questions)	146	(100%)

In Table 2, among the 146 PCQs used in the opening stage, most of them were knowledge-checking (75%, 109 instances), and the rest were characteristic-checking (25%, 37 instances). The top two verbs of knowledge used in the former group were *tsai-iann* ‘know’ and *thiann-kue* ‘heard of’ (45 and 43 instances), and among the three aspects regarding how disease could be related to the LPs, first-hand disease experiences of the LPs or people from their social network was the most common (17 instances).

Table 3. Numbers of need indicators emerging in the LPs’ and the STs’ utterances

Need indicators emerging in the LPs’ utterances					
The LPs’ insufficient knowledge status	Prevalence or impact of a disease stated by the LPs	Disease sufferers in the LPs’ social network	Risk factors applicable to the LPs	LPs’ request for information about health knowledge	Total in the LPs’ utterances
33 (37%)	3 (3%)	30 (34%)	17 (19%)	6 (7%)	89 (53%) (100%)
Need indicators emerging in the STs’ utterances					
-	Prevalence or impact of a disease stated by the STs	Disease sufferers in the LPs’ social network	Risk factors applicable to the LPs	-	Total in the STs’ utterances
-	35 (48%)	7 (10%)	31 (42%)	-	73 (47%) (100%)
Total in LPs’ and STs’ utterances					162 (100%)

Table 4. Distribution of need indicators expressed in the conversation

Need indicators expressed on the LPs’ own initiation	3 (2%)
Need indicators expressed as a response to STs’ PCQ	86 (53%)
Need indicators expressed on the STs’ own initiation	73 (45%)
Total	162 (100%)

Tables 3 and 4 show that a total of 162 instances of the five need indicators were observed (89 by LPs and 73 by STs), and they tended to emerge in the LPs’ responses to STs’ questions (53%, 86 instances), or in the STs’ descriptions (45%, 73 instances), with only three emerging at the initiation of the LP (2%).

While the need indicators, “insufficient knowledge” (37%) and “disease sufferers in the LPs’ social network” (34%), were mentioned most frequently by the LPs, the top two indicators mentioned by the STs were “prevalence or impact of the disease” (48%) and “risk factors applicable to the LPs” (42%).

Table 5. Number of PCQs and the emergence of need indicators

Number of PCQs	Emergence of need indicators	Number of cases (%)
Cases with 0 PCQs	Cases with need indicators	3 (3%)
	Cases without need indicators	86 (97%)
Cases with 1 PCQ	Cases with need indicators	25 (53%)
	Cases without need indicators	22 (47%)
Cases with 2 PCQs	Cases with need indicators	16 (76%)
	Cases without need indicators	5 (24%)
Cases with more than 2 PCQs	Cases with need indicators	12 (100%)
	Cases without need indicators	0

Table 5 shows a positive relationship between the number of PCQs and the emergence of the need indicators. The chance of the emergence of need indicators is only 3% in non-PCQ cases, rising to 53% in single PCQ cases, increasing to 76% in two-PCQ cases, and reaching 100% in more-than-two-PCQs cases. The highest number of total need indicators was four in the two cases where four PCQs were used by the STs.

5. Discussion

The above findings lead to the following four arguments:

- 1) Creating a sense of need is a prevalent pragmatic strategy in most communicative events which involve a promotional goal.
- 2) Events such as health education talks, with spontaneous interactions and on topics of high-stake consequences, allow a wide variety of needs and needs-invoking mechanisms to emerge.
- 3) Among these, the knowledge deliverers' use of PCQs plays a dominant role in enabling the recipients' knowledge needs to surface.
- 4) The distribution of the need types and their emerging patterns can be accounted for by the epistemological and interactional roles of the participants.

5.1 Creating a sense of need in the promotional genre

As the literature review section has demonstrated, establishing a sense of need is a common pragmatic strategy observed in communicative events with promotional

goals. Following the problem-solution paradigm (Swales 1990) in modern competitive society (Bhatia 1997:188), writers' motivation in going through the knowledge-making process (Hyland 2004:63) is to convince community insiders that they are about to be offered a better solution to existing problems. The writer's first task is an explicit statement of the problem, which can be defined as a move alternatively referred to as meeting or creating customers' (artificial) needs (Kotler et al. 2013), establishing a niche (Swales 1990), or convincingly identifying a problem (Hyland 2004:76).

My study of health education talks also observed a similar move—one that aimed explicitly more at “creating a sense of need” than at “meeting needs”. Most people do not seek help until they are sick or at the point of their suffering being no longer bearable. In this curative care context, the health professionals' task is to meet the needs of patients who approach them for help. Within preventative care, health professionals voluntarily provide this service to the public—a group who may not yet perceive their latent needs. Thus, creating a sense of need or sense of crisis in the healthy public is crucial to giving a meaningful and relevant health education talk.

Similar to an abstract or preface text, the opening stage of health education talks share discourse moves that help create a sense of knowledge needs, and since such talks center on high-stake issues and involve spontaneous interactions between the deliverers and recipients, they allow a rich variety of need indicators to emerge via various discourse mechanisms. The next section discusses what sense of needs can be created and in what ways.

5.2 Mechanisms and need indicators

5.2.1 Perspective-checking questions

Although the need indicators of importance and relevancy may be volunteered by LPs, especially by those with a high level of health literacy or patients with the focal disease, my analysis shows that the LPs rarely volunteer such information (2%, Table 4). Instead, these needs surface mainly in their responses to the STs' PCQs (53%, Table 4) or in the STs' descriptions (45%). In other words, the knowledge deliverer plays a dominant role in building the recipients' awareness of their knowledge needs, and the use of PCQs is the trigger for the LP to acknowledge such needs. This is confirmed by the following evidence. The more PCQs that are used in a session, the more frequently the LPs will talk (163 versus 77 syllables, Table 1), and the higher the chance that needs will emerge (from 20%, 53%, 76%, to 100%, Table 5).

My findings also show that the secondary mechanism via which need indicators emerge is STs' descriptions. The next three sections discuss four types of need indicators and functions of PCQs in soliciting these needs.

5.2.2 Knowledge-checking questions and the need indicator of insufficient knowledge status

The majority of the PCQs used in the opening stage are knowledge-checking questions (75%, Table 2). This preference accounts for the result that "insufficient knowledge status" is the highest need indicator expressed by the LPs (37%, Table 3).

Knowledge-checking questions are formulated with a verb or noun of knowledge or cognition in the following patterns. *Thiann-kue* 'heard of', the second most commonly used verb (30%) which asks whether an LP recognizes the name of a particular disease, tends to appear in the first PCQ and collocates with a noun phrase of the disease name (e.g., *Li kam-u thiann-kue ko-hueh-ap?* 'Have you heard of hypertension before?'). In contrast, the most common verb, *tsai-iann* 'know' (31%), which solicits the LP's prior knowledge of the disease, tends to appear later, e.g., after the focal disease is announced or a "heard-of question" is posed. The phrases that collocate with *tsai-iann* 'know' can be either a noun phrase of the disease name (*Ko-hueh-ap li tsai-iann siann-mih?* 'What do you know about hypertension?') or a WH clause which focuses on a subtopic (*Li kam tsai-iann siann-mih-lang khah-e u ko-hueh-ap e bun-te?* 'Do you know who is more likely to have hypertension?'). The propositional content of the latter question's construction asks for more specific information regarding the disease than the former one does (see Examples (5a) vs. (5b)). The contrasting distributions and collocation patterns of the verbs, *thiann-kue* 'heard-of' versus *tsai-iann* 'know', are shown in Example (4).

Example (4)

- 1 ST: *Gua beh ka-li kai-siau-e si ko-hueh-ap. Li it-tsing kam u thiann-kue ko-hueh-ap?*
'What I'm going to talk about with you is hypertension. Have you heard of hypertension before?'
- 2 *U a.*
'Yes.' [no need indicator]
- 3 *Ko-hueh-ap li tsai-iann siann-mih?*
'What do you know about hypertension?'
- 4 LP: *Tioh si kong hueh-ap kuan.*
'It's about high blood pressure.' [no need indicator]

- 5 ST: *Li kam tsai-iann ko-hueh-ap beh an-tusann u-hong?*
 ‘Do you know how to prevent it?’
- 6 LP: *Gua m-tsai, li kong hoo gua thiann-kuann-mai e.*
 ‘I have no idea. Why don’t you tell me more about it?’ [two need indicators]

Alternatively, when the verb *tsai-iann* ‘know’ is used in a WH clause, it can be replaced by verbs such as *liau-kai* ‘understand’ (10%, Table 2) or verbs of cognition or feeling *siong-tioh* ‘think/come to mind’; *kam-kak* ‘feel’, 3%), all of which ask for more specific information regarding the disease, as shown in Examples (5b) to (5e):

Example (5)

- a. *Li kam tsai-iann tiong-hong?*
 ‘Do you know about strokes?’
 [general information: know + noun phrase of the disease name]
- b. *Tiong-hong li tsai-iann gua-tse?*
 ‘How much do you know about strokes?’
 [specific information: know + WH clause]
- c. *Tiong-hong li liau-kainn gua-tse?*
 ‘How much do you understand about strokes?’
- d. *Li kam-kak sia-mih-lang kha-u kko-ling e u ni-gam?*
 ‘What kind of people do you feel are more likely to get breast cancer?’
- e. *Li na thiann-tioh ni-gam e siong-tioh siann?*
 ‘What comes to mind when you hear of breast cancer?’

Knowledge-checking questions have four main functions. The primary one is to serve as a filter checking what and how much new information to deliver. More works need to be done if the LP has never heard of hypertension before, whereas knowledge can be further advanced if the LP already has a basic understanding. Secondly, since the verbs, *tsai-iann* ‘know’ and *liau-kai* ‘understand’, are more likely to collocate with a WH clause (while the verb *thiann-kue* ‘heard-of’ tends to collocate with a noun phrase, i.e., a disease name), they ask about the LP’s prior knowledge regarding some specific aspects of the disease (‘Do you know what causes strokes?’). Simultaneously, these questions function to pre-announce upcoming subtopics.

The tendency to start with “heard-of questions” followed by *tsai-iann* ‘know’ or *liau-kai/siong-tioh/kam-kak* ‘understand/think/feel’ verbs, and the lower frequency of using the latter group (*liau-ka*, *siong-tioh* and *kam-kak* 10% and 3%, Table 2), suggest the third and fourth functions. Regarding the third function, since *thiann-kue* ‘heard-of’ was less cognitively demanding than *tsai-iann/liau-kai/siong-tioh/kam-kak*

‘know/understand/think/feel’, this sequence of knowledge-checking questions starting with *thiann-kue* ‘heard-of’ is more likely to solicit an affirmative, and thus less face-threatening, response. In this sense, the LP is more cognitively prepared and psychologically secured (‘at least I have heard about strokes, and what is coming may not be something completely alien to me’). In contrast, the more demanding questions such as ‘how much do you know/understand about strokes’ tend to elicit a negative response (‘I don’t know much about it’) and thus fulfill the fourth function—turning the LP from the “knowing” to the “unknowing” party (Heritage 2012:6) and creating a sense of need in the opening stage.

Acknowledging an insufficient knowledge status is the most common indicator used by the LPs (37%, Table 3). This functions similarly to academic writers’ claim that disciplinary insiders’ lack of sufficient knowledge regarding the research topic in statements such as “although considerable research has been done on..., much less is known as to...”, (Swales 1990:156) or “recent studies ... have argued for the inclusion of hedging in EAP syllabi but have not, unfortunately, worked from a common understanding of the concept” (Hyland 2004:79). In health education talks, this indicator always occurred as a response to STs’ knowledge-checking questions, and occasionally would win an invitation from the LP asking the ST to fill this gap (7%), such as ‘I have no idea. Tell me more about it’. In other words, the STs (the knowledge carriers), like the writers of research articles, play a dominant role in creating a needed status for the knowledge they are promoting.

5.2.3 Prevalence or impact

While a statement of insufficient knowledge is the most common need indicator expressed by the LPs, “prevalence or impact of the disease” is the top one (48%, 35 instances, Table 3) used by the STs to secure the LPs’ interest in the opening stage. Similar to Swales’s observation (1990:144-146), writers establish a territory by constructing the research topic as a well-established or complicated one. Hyland (2004:75-76) also noted that emphasizing the significance of a research topic is a common move to convince readers to read further. Following the mainstream quantitative approach in medicine, the aspect of importance within the context of health education is represented by expressions of quantity or gravity, such as high-frequency words and morbidity or mortality rates (See Example (6)).

Example (6)

- a. *Nau-tiong-hong si tsit-ma lan tai-uan tsap-e siong-tsu-yau-e si-bong guan-yin lai-te te-ji-miann, te-ji-tse e.*
 ‘Strokes ... this disease, it is now the second most common disease that causes death in Taiwan... Among the ten major diseases ... it is the second, the second most frequent one.’ (by ST)
- b. *Tsu-kiong-king-gam si tai-uan hu-kho gam-tsing e tsit-e sat-tshiu, tsiok-tse tsa-boo-lang in-ui tsit-tsiung gam-tsing si-e, mui-tsit-tang tai-uan tai-iok u kau-pak-goo-tsap-lang in-ui tsit-tsiung gam-tsing si-bong.*
 ‘Cervical cancer, a gynecological disease, is a killer in Taiwan. Many women, because of this cancer, die... Every year in Taiwan, there are about 950 who die of this cancer.’ (by ST)
- c. *Peh-lai-tsiung tsit-ma honn, tsiok-tse-lang na lau-a long-e tik-tiok, na goo-tsap-hue-i-siong u lak-tsap-pha- e lang u, na lak-tsap-hue i-siong u peh-tsap-pha, a-na tshit-tsap-hue i-siong tio-u kau-tsap pha, sng-kong-honn, mui-tsit-e-lang it-ting long-e tit-tiok an-ne la.*
 ‘About cataracts, this disease, now, many people get this when they are old. For those older than 50, the chance is 68%, and 80% for those 60 or older, and 98% for those 70 or older. Practically speaking, it is virtually certain that everyone will get this disease.’ (by ST)

5.2.4 Characteristic-checking and risk factors

Even when the prevalence and impact of a disease is well established, the audience may still hold a “none-of-my-business” attitude if its relevancy to the LP is not spelled out. A statement such as “ability in distinguishing aspirated consonants from non-aspirated ones is important” will find no audience unless it was tagged with a *for*-statement such as “for Chinese learners”. In the academic writing literature, this *for*-statement designates membership, insider, or readership, but in a healthcare context, it defines the vulnerable/susceptible group, the risk group, or the stakeholder. To facilitate my discussion, I use the term *the need group*.

As I commented earlier, instead of the use of explicit expressions in referring to a group of community insider (such as “this book is for learners of ...”), the need group in academic writing tends to be embedded in the text where writers identify the related disciplinary fields, state the problems, or establish a niche in the market. In health education, the tendency seems to be the opposite. For example, the linguistic forms that describe the need group often have two key components: the risk factor noun phrase and a referent noun phrase, either a pronoun, general referent term of

people, or a relative clause (such as *lan* ‘we (including the addressees)’, *u-e-lang* ‘some people’, *tsa-po* ‘men’ *tsa-bo* ‘women’, *lau-lang* ‘old people’, *gin-a* ‘kids’ or *...e lang* ‘people who...’, as shown in Example (7).

Example (7)

- a. *Nau-tiong-hong si e ui-hiap tiah lau-tua-lang sinn-miann e tiong-tsing, lan tsit-ma ti-liau bo kha-tsin-poo, soo-i lan tiah sin-lai tsun-pi kha-tiong-yau.*
‘Strokes are a serious disease that will affect the elderly’s health, and as of yet we have not progressed further in its treatment, so let’s be well prepared for it.’ (by ST)
- b. *Hi-iam tiann-tiann e huat-sing ti jin-ho ni-hue e lang, tan-si lau-tua-lang ka gin-a, a ko-u sin-the kha bo-ho e lang, kha-e huat-penn.*
‘People of any age can catch pneumonia, but the elderly and kids and especially those in poor health are more likely to catch it.’ (by ST)
- c. *U-tsit-kua-lang e kha-iong-i tik-tioh ni-gam, phi-lu-kong lin-tshuh-lai-the u lau-bu ia-si tsi-mue-a bah tik-tioh ni-gam e lang.*
‘Some people are more likely to develop breast cancer, for example, those whose mother or sisters have had it.’ (by ST)

Besides the STs’ citation of risk factors well documented in open resources, the STs’ use of a question is a secondary strategy which relates the LP to a particular disease’s risk group. For example, in response to a ST’s knowledge-checking question about a disease, ‘Do you know anything about dementia?’, some LPs identified the elderly population as the most vulnerable group to the disease ‘When you get old, you have this kind of problem’.

More often, characteristic-checking questions contributed to this work of establishing relevancy in a more straightforward way. Since the focal diseases assigned to the STs are geriatric diseases, all the LPs in this study fit into this group. Gender, however, can be a challenge to a male LP when he tries to learn about a female disease (e.g., cervical cancer) and vice versa for a female LP (e.g., prostatic hyperplasia). It can be seen in the data that the STs sometimes raised questions concerning this to the male LPs, e.g., *A-kong, li kam-e kam-kak-kong thiann tsu-kiong-kim-gam e tai-tsit tui-li lai-kong khah bo-hau?* ‘Grandpa, do you feel the information about cervical cancer is irrelevant to you?’. However, STs with more sophisticated skills manage this awkwardness by transforming the irrelevant party to a relevant one, i.e., relating the risk to close family members, such as by asking a male LP, *Gua-beh kai-si kong it-tsing ... li kam-u tsa-boo-kiann ... li kam-u tsa-boo-sun?* ‘Before I start, ... do you have daughters ... do you have grand-daughters?’ or by

stating, or *Gua kin-a-jit beh ka-li kai-siau-e bun-te kho-ling li long be-tu-tioh, m-koh li-e thai-thai ko-ling tioh-e tu-tioh* ‘The disease that I will introduce to you today is something that you could never get, but your wife could’.

Thirdly, since an unhealthy lifestyle also leads to illness, characteristic-checking questions which solicit any personal features related to the LPs, such as daily activities, dietary habits, or living arrangements, contribute to effective need establishment, and these make up 19% of the needs acknowledged by the LPs (See Table 3). In Example (8), prior to presenting subtopic information about chronic obstructive pneumonia, the ST asks three characteristic-checking questions regarding smoking, regular exercise, and wearing masks when commuting by bike. In response to these questions, two need indicators surface: the LP did not exercise regularly and when commuting by bike, he did not like wearing a mask. They are coded as need indicators because the ST later explicitly states the relevancy: ‘People who take exercise are less likely to get sick, and by exercising you will be less likely to get pneumonia’ (line 12) and ‘But you had better wear one, because the air outside is quite polluted’ (line 11).

Example (8) LXF2-22M-2TW1012

- 1 ST: *Li ping-siong-si-a kam-u-leh tsiah-hun iah si?*
‘Do you smoke or...?’
- 2 LP: *Bo, bo, bo,*
‘No, no, no,’
- 3 ST: *bo-tsiach-hun, an-ni tsiok kian-khong e.*
‘Not smoking is a very healthy practice.’
- 4 LP: *Henn-la, henn-la,*
‘Yeah, yeah,’
- 5 ST: *A u un-tong bo?*
‘Do you play any sport?’
- 6 LP: *Bo un-tong, tshut-mng long khia kha-ta-tshia.*
‘No sport, but I commute by bike.’
- 7 ST: *Oh, kha-tah-tshia o?*
‘Oh, biking?’
- 8 LP: *Long khia kha-tah-tshia.*
‘I bike all the time.’
(Some utterances have been omitted.)
- 9 ST: *A li khia-kha-tah-tshia e si-tsun kam u-leh tih tshui-am-a?*
‘When you are cycling, do you wear a mask?’

10. LP: *Bo, tshui-am-a beh-kuan-si.*
'No, I'm not used to wearing a mask.'
11. ST: *Tan-si ing-kai si ai tuah-tsit-leh, in-ui-honn, tsit-ma-e khong-khi tsiok la-sap-e.*
'But you had better wear one, because the air outside is quite polluted.'
(Some utterances have been omitted.)
12. ST: *U-leh un-tong tioh e kha-be tik-tiok siann-mih penn, a an-ne-e-ue tioh kha be kong tik-tioh hi-iam.*
'People who take exercise are less likely to get sick, and by exercising you will be less likely to get pneumonia.'

5.2.5 Characteristic-checking and social network

Table 3 shows that mentioning one's own history of illness or that of a relative or friend was the second major indicator used by the LPs (34%). Further analysis showed that a very similar number of disease sufferers as indicators emerged both on the LP's own initiation (47%) and as a response to a PCQ (53%). This high frequency of citing a first-hand example might be related to the high morbidity rate of the focal disease among the elderly population in Taiwan. Based on the observation of Grice's relevancy maxim (1975), upon hearing the name of a particular disease, 14 LPs in the current study immediately volunteered the information that they themselves or people around them suffered from it. In another 16 cases, the STs asked whether the LPs had a health problem (eight cases) or if anyone around them had it (eight cases) and all of the STs' questions had positive responses. Seven STs, on the other hand, also brought up a first-hand experience of illness of their own relatives, such as 'My nephew, just 15 years old, already has diabetes', and 'In fact, my father has diabetes'.

Among the various need indicators, bringing up an experience of illness is not only a common pattern but is probably the most powerful one in a healthcare context in Taiwan since it presents an immediate, close, and real sufferer of the focal disease right in one's social network which is highly valued in a group-oriented culture like Taiwan. The health status of close relatives or friends spreads quickly by word of mouth in tight-knit communities, and thus a first-hand experience is likely to raise community members' awareness of a healthy lifestyle and strengthen their motivation to maintain health. This phenomenon is in contrast to academic written discourse in which the supreme principle of objectivity discourages the use of personal experiences.

5.2.6 Epistemological and interactional roles of the participants

Information regarding an LP's background knowledge, first-hand experiences of illness in the LP's social network, and the applicability of certain disease risk factors to the LP is not accessible to STs unless they probe for it. In contrast, knowledge regarding the prevalence and impact of a disease and certain disease risk factors (e.g., gender and age) is open or observable. Theoretically speaking, the LPs with access to all the above information or with a high level of health literacy are in a position to initiate or volunteer such information (e.g., 'cervical cancer ... I know about cervical cancer ... people on TV talk about it all the time'). However, the results in Table 3 suggest that the five types of need indicators seem to emerge in a complementary manner—while need indicators like insufficient knowledge status and first-hand experiences of illness in their social network tend to emerge on the LP's side, indicators such as, prevalence, impact and risk factors surface on the STs'. This complementary distribution might be related to the source of knowledge, face-saving, and the role that the two parties play in this activity of education speech.

Playing the role of information deliverers, STs are supposed to be omniscient, but in reality they are limited to open knowledge related to the focal disease. This constraint accounts for the top two need indicators volunteered by the ST—if they need to grab something to catch the LP's attention, observable risk factors (e.g., gender) and statistics which highlight the prevalence and impact of the disease are the clearest and most obvious approaches.

The fact that the focal diseases are common geriatric ones and that information about these diseases has been highly publicized in the mass media constructs the elderly as a high-risk group. Given this, we wonder why the elderly LP in our study neither volunteered the open knowledge nor initiated any personal knowledge, but instead waited until they were approached. There are three possible reasons for this. The elderly population in Taiwan which makes up this cohort is relatively lower educated compared to their younger counterparts who have not only received a higher level of education but also have easy access to information online. Secondly, even though some of the LPs had a relatively high level of health literacy (since most of them were volunteer workers in the medical center and some had chronic diseases), they were asked to be active listeners and to ask for clarification if what they heard might be incomprehensible for people of a lower education level. This might have prevented them from active/over participation. An audience member who pours out all they know in the opening stage of an institutionalized educational event may seem to be challenging or acting against the norms of etiquette, especially in a status-oriented culture like Taiwan because it may suggest that the speaker is not

needed. Therefore, instead of volunteering all they know, most learners follow the institutionalized education norms of Asian culture and articulate what they know only upon being asked.

Teachers (i.e., information deliverers), on the other hand, actively ask (advanced) knowledge-checking questions (75%, Table 2), in contrast to the low use of characteristic-checking questions (25%, Table 2). That is to say, rather than establishing the relevancy between the target knowledge about a certain disease and the LPs' knowledge of the disease, the STs (taking on the teacher role) are more eager to shape the LPs as the epistemologically inferior ones in the opening stage, and thus further strengthens their institutional role as information deliverer.

Thirdly, even though risk factors such as smoking, inactivity, and fried foods³ might be common knowledge and applicable to some LPs' lifestyle, very few acknowledged this awareness on their own initiation. This might be because revealing personal information about one's risky behavior is much the same as acknowledging one's vulnerability to illness and poor self-control in maintaining health—a potentially face-threatening act (Brown & Levinson 1987). Such non-observable risk factors as need indicators thus tend to arise only upon being asked for with characteristic-checking questions.

6. Conclusion

In response to my first research questions regarding what and how lay people's knowledge needs are created and how PCQs contribute to this process, the main findings are as follows. Indicators of the LPs' knowledge needs include the LPs' insufficient knowledge status (37% in LP's part, Table 3), the LPs' request for information about health knowledge (7%), the prevalence or impact of the disease (48% in ST), the existence of disease sufferers in the LP's social network (34% in LP and 10% in ST), and noting risk factors applicable to the LP (42% in ST). These indicators share two core features: the importance of the knowledge and its relevance to the LPs in a personal way. The primary mechanisms by which these need indicators emerge are the LPs' acknowledgement of the needs in their response to STs' PCQs (53%, Table 4) or the ST's mentioning them in their introduction (45%). As the key pragmatic strategy in creating the LP's knowledge needs, ST's knowledge-checking questions (53%) function to filter what new information needs to be delivered, to prepare the LPs for what is to come in a less cognitively demanding and face-threatening way, to pre-announce the subtopics, and to construct the LP as the

³ Fried dumplings, sausages, and vegetables are popular in Taiwan.

epistemologically inferior one. Characteristic checking (25%, Table 2) contributes to bridging the relevancy between the knowledge and the LP. With the solicited personal information revealed by the LP, it also turns the ST from the epistemologically inferior one to a superior one who is now able to relate the LP's personal status to the disease information he/she will deliver. Finally, the LP's acknowledgement of their (relatives'/friends') status as sufferers of illness (34%, Table 3) also contributes to creating a sense of need.

This study contributes to the fields of genre studies in applied linguistics, medical discourse, and medical education in the following ways. With a micro analysis of discourse features observed in Taiwanese health education talks, this work has demonstrated that, similar to findings in English-based genre analysis of academic writing, the opening stage of a verbal educational event also has a promotional goal—to attract the lay public's interest in the target knowledge. The two shared core features in these events are that the information to be delivered is important and relevant, in one case, for the insiders of an academic community, and in another case, for the risk group of geriatric diseases. While the knowledge deliverers in these events share similar discourse strategies in discovering their participants' knowledge needs, the spontaneous interactional nature and high-stake consequences of health education talks allow a wide variety of need indicators and need establishment mechanisms to emerge. Although grounded on non-commercial activities, the findings of this work also reflect the consumer culture that operates in a capitalistic society, and demonstrates how a promotional culture and market mentality (Davis 2013) are so deeply rooted in every aspect of our lives that individuals are allocating all of their resources to promote their products or beliefs (Sarangi & Slembrouck 2013).

The above findings and arguments can be applied to medical education in the following ways. In health education talks for the less-motivated lay public, the use of knowledge and characteristic-checking questions in the opening stage help medical speakers encourage the audience's participation, build up an interactive dialogue, create their need for the knowledge, and thus strengthen their learning motivation. However, the strong pattern of STs' making a considerable effort to construct the LPs as the epistemologically inferior party in these exchanges rather than building up the relevancy between the LPs and the target knowledge suggest that more pedagogical intervention might be needed to cultivate the ST's learning of this communication skill.

A major limitation of this work is that it was confined to a sample of elderly subjects who do not really represent the elderly monolingual speakers in Taiwan for which medical service conducted in Taiwanese is most needed. Although the ideal participants would be elderly individuals who had not even completed elementary

school or those with a low health-literacy level, many difficulties encountered in our recruiting process resulted in settling for more informed participants. In spite of that, the study raises further questions. Issues regarding how the use of perspective-checking questions has an impact on information recipients' learning health knowledge are important ones worthy of further research.

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「你敢有聽過糖尿病？」：台語衛生教育演講中透過 探索年長者觀點以創造知識需求感之言談技巧

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針對常民的衛生教育對醫療人員而言是挑戰，因為他們不同於門診病人有強烈的健康知識需求，因此創造常民的醫療知識需求是有效衛教的重要基礎。雖然學者對於其他溝通情境中強化參與者動機之言談分析有諸多探討，甚少針對衛教情境，因此我們缺乏對於各種互動情境或類型中創造需求之言談模式的深入了解。本文以言談分析為方法，檢視 169 個大學生以台語為年長者介紹常見慢性病相關知識的衛教互動對話，主要論點如下：（1）大多數涉及行銷或促進某目標的互動類型中，激發訊息接收者的需求感是共通的語用策略；（2）衛生教育演說之屬性為參與者間的即時對話，主題涉及重要健康議題，因而可見豐富之知識感需求類型與引發需求感浮現之言談機制；（3）衛教知識傳遞者使用的「探索觀點問句」（例如「你敢有聽過糖尿病？」「身邊敢有人有糖尿病？」）是促使知識需求感浮現的必要機制；（4）知識需求類型與浮現機制與參與者的認識論角色和互動地位相關。

關鍵詞：探索觀點問句、衛生教育、行銷文化、知識需求感之創造