

## Implications for school nursing through interprofessional education and practice

Winsome Lam, Engle A Chan and Kit SS Yeung

**Aims and objectives.** To explore the interprofessional collaboration between nursing and social work professionals in their delivery of health services for schoolchildren.

**Background.** Interprofessional education has long been recommended as a way to meet the need for effective collaboration in school health service with a view to improving the quality of health care. No local study in Hong Kong has looked specifically at how nursing and social work professionals carry out school health services through interprofessional education and practice. Therefore, an examination was conducted of collaboration on a community-based school caring project.

**Design.** A qualitative design was employed, using semi-structured interviews, field observation and field debriefing.

**Methods.** Seven nursing students and five social work students were recruited and interviewed in 2011. The transcripts were analysed using qualitative content analysis.

**Results.** Three themes were identified: (1) early identification of children's needs through interprofessional collaboration for health promotion, (2) prompt referral for schoolchildren in need, and (3) comprehensive planning and implementation of school health service.

**Conclusion.** The strength of collaborative work between nursing and social work professionals is that it helps to identify and address these complex health needs of children. Healthcare providers are hence able to develop a fuller understanding of children's problems, which in turn enables them to provide appropriate and effective health promotion interventions.

**Relevance to clinical practice.** The development of interprofessional education for school health services should be envisaged by the local higher educational institute and policy makers to reduce children's risk-taking behaviours and promote their health and well-being. Health educators and health policy makers can better understand how interprofessional education and collaboration can promote children health service for regional and national policy and practice.

**Key words:** interprofessional education, interprofessional practice, school nursing

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### Introduction

According to the World Health Organization (WHO), the concept of the health-promoting school has been serving as a guide for the provision of school health since 1998. Within this concept, the domains for school health service

focus equally on lifestyle and the physical, social and psychological conditions that may affect schoolchildren's health (UNESCO 1998). Additionally, it is clear that given their complexity and multifaceted nature, current school health-related issues cannot be resolved by a single profession (WHO 1988). Interprofessional education (IPE) and

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interprofessional collaborative practice (IPCP) have for many years been proposed as a means to meet the calls for effective collaboration and cooperation in health and social care (WHO 1988, Barr *et al.* 2005, Craddock *et al.* 2006, Chan *et al.* 2009). This type of collaboration is assumed to enhance the provision of high-quality community care through improved communication, effective use of resources and prevention of errors during interprofessional collaboration and information exchange (Barr *et al.* 2005).

Children's health issues are becoming more complex. In the past, their physical problems, such as obesity, were the public's main concern (McTigue *et al.* 2003, Pignone *et al.* 2003). Nowadays, however, health concerns may be caused by multiple factors such as physical, psychosocial and environmental aspects (Gifford *et al.* 2010, Lohrmann 2010, Chan 2011). With mounting concern from parents and the public about schoolchildren's physical and mental health, particularly relating to the problems of new infectious diseases, obesity and mental health, the voices demanding school health services for children are increasing. In Western countries such as the US and Australia, school nurses are often the providers of school health services (Brener *et al.* 2007). Despite the theoretical understanding of IPE and its collaborative practice in health care for more than a decade in Western countries, aspects of interprofessional practice are few and far between in the provision of school health services (Shaw *et al.* 1995, Aldinger *et al.* 2008, Sulkowski *et al.* 2011). Contrary to WHO's recommendation, the health service delivery mode by school nurses involves little collaboration with other health professionals; rather, they deliver care in silos (Sulkowski *et al.* 2011).

In Hong Kong, the concept of school nurse was introduced only a few years ago, in 2009, and few mainstream local schools have a school nurse stationed on site (Lee 2011). The majority of school health services are conducted by school teachers. Depending on the time available, some health services might be carried out by invited speakers, nurses from the Department of Health or occasionally the school social worker, but separately. Due to the continued silo mentality of each health professional's care practice in addressing the school health needs, a perpetually fragmented and inconsistent service provision exists. As stated by (Chan *et al.* 2009), an earlier integration of IPC experiential learning into the undergraduate programme, not only as a theory but rather as a curriculum redesign, is essential to enable the health professional students to truly appreciate and understand what collaboration means, as well as the outcome of health service for the end-user. Given the introduction of the school nurse

system for the mainstream school-based health service in 2009 (Lee 2011) and the growing understanding of the importance of interprofessional practice, it behoves us, at least theoretically, to look closely at the development of a school health service/intervention based on a collaborative interprofessional design. Generally, a teacher is an expert in education, a nurse has biomedical and nursing knowledge, and the social worker is responsible for counselling services. Given the physical and psychosocial school health foci, there are more reasons to believe that these three professional experts should work together towards the type of interprofessional school health services that are currently lacking. If the quality of school healthcare service is important, IPE should be in place.

To our knowledge, there has been no local study in Hong Kong that has looked specifically at how nursing and social work professionals carry out a school health service through interprofessional education and practice. Given this backdrop, a collaboration of students from nursing and social work on a community-based school caring project, initiated by the teachers of two primary schools, was conducted. This article is part of a larger study and focuses on analysing the data drawn from the qualitative part of the study.

## Methods

### Research approach

The study adopted a qualitative method with focus group interviews, field notes and field debriefing. Focus groups were adopted because they 'capitalize on the interactions within a group to elicit rich experiential data' (Asbury 1995, p. 414) that enabled students to share their similar and different views through interactions. The multiple views generated from participants help us to understand their experience that would not be as easily accessible through individual interview. Field notes and debriefing were used as another source of data triangulation and provision of more contextual understanding of the focus group interviews. The framework chosen for this study was based on previous research (Whittington 2003, Chan *et al.* 2009, 2010) from the Centre for Advancement of Interprofessional Education (CAIPE) in the UK and from the Centre of Interprofessional Education in Canada. The method of IPCP for this project had two phases. First, the students from social work and nursing were introduced to interprofessional learning through two interprofessional reflective seminars. They were then involved in various community practices in phase two. In this study, the

community practice in school is the focus. Two practice teachers from each profession were responsible for this joint supervision for a student team during the placement period.

### Participants

In phase 1, 33 nursing students (NSs) and 32 social work students (SWSs) in their senior year were recruited voluntarily for two interprofessional seminars. They were categorised into four groups with an equal mix from each profession. Each group had two facilitators from each profession. Subsequently, in phase 2, seven SWSs and five NSs were invited to participate in the school health project.

### Ethical considerations

This study was approved by the university's ethical review committee. At the first seminar, the purpose of the project and its voluntary nature were explained to the students and their written consents obtained. All participants were explained about their rights to withdraw from the study at any time without any penalty. Although some researchers were lecturers, none had direct responsibility for the students in the study, thus minimising the likelihood of conflict of interest or coercion.

Study approval was received from the schools after the school principals were provided with information related to the project aims and details. Parents/guardians of the schoolchildren were also provided with the information before consents were obtained. All participants were recruited on a voluntary basis and had the choice to withdraw from the programme at any time without penalty. Parents/guardians of the schoolchildren were able to contact the principal investigators for further details, clarification, doubts or complaints. No school personnel were involved in the data collection. All personal information remained strictly confidential and anonymous with assigned code numbers. The raw data were accessible only to the research team members and only used for the research study.

### Learning activities for the interprofessional practice learning

#### *Phase 1: two interprofessional problem-based reflective seminars*

The first seminar enabled the students to get acquainted with each other through some ice-breaking activities and a general introduction to the meaning of interprofessional

education. The students were asked to share their reasons for wanting to become social workers or nurses, their roles, their general learning in class and their practice. During the second seminar, the students were asked to bring along a scenario relating to caring and decision-making from their uniprofessional field placement, for discussion. The facilitators helped the students to discuss their different conceptualisations of problem priorities and possible ways to address them. Each seminar spanned three hours.

#### *Phase 2: field practice in community settings*

In the second phase, some nursing and social work students were invited to join an interprofessional practice in two different schools. They worked collaboratively as a group in planning and caring for the schoolchildren. Two to three debriefing sessions were conducted during the placement period to facilitate their interprofessional learning and practice.

*Details of the interprofessional school project on caring, entitled 'Planting Seeds'.* Before commencing the collaboration with the school, some preparation work was done and logistical arrangements were made with the help of the school teachers. First, consents were obtained from the parents to allow their children to participate in the activity. Second, rearrangement of the teaching timetable of the students was tailored to ensure that there were no clashes between classroom teaching and project activity. Third, the school hall was reserved for the project activity. Apart from the above, shared decision-making amongst nurses, school teachers and social workers was exercised during the planning and implementing of this school health project.

The project named 'Caring for All' lasted for 8-10 days. The aim was to educate the children to implement caring for themselves and others through an activity called 'Planting Seeds'. The components of the project included three parts, starting with a health education talk on 'Caring' and followed by two activities: one was 'Planting Seeds' and the other was 'Harvest Sharing'. Before planting the seeds, an education talk was delivered to the children regarding sharing the meaning of caring in diverse perspectives and addressing how to show their care to others and what were the appropriate behaviours of caring. On day 2, children were asked to plant and take care of the seeds for one week. Log books were also provided to them for drawing or keeping a record of the process/condition of the seeds. Reminders such as the method of planting seeds, caring for the seeds, timely and adequate watering and daily monitoring were reinforced to the children by the project members

daily. Once the seeds grew into vegetables, the final activity, named 'Harvest Sharing', occurred on the last day. All the children gathered in the hall and used their grown vegetables to make a different salad paste for sandwiches. At the end of the activity, children were told to share their harvests with whoever they cared about, such as a parent, teacher or best friend.

### Data collection

Two seminar discussions and one postplacement focus group interview were audio- and videotaped and transcribed verbatim for data analysis, with the purpose of exploring their perceptions and performance of interprofessional competence in school health service. Interview questions covered the similarities and differences between the two disciplines, students' changes in attitude, understanding about each other's roles, communication, value, teamwork, collaboration and influencing contextual features. The interviews were conducted by project team members who were not involved in the practice. The interviews lasted from ninety minutes to two hours. In the school projects, field notes were taken and field debriefing was carried out to record the researcher's observations (Morse & Field 2002) and feedback. The recordings included the environmental settings, children's interaction with other classmates, school teachers and project members, and some relevant, specific non-verbal gestures, behaviour and facial expressions of participants throughout the project.

### Data analysis

Qualitative data from the seminar discussions, focus group interviews, field notes and field debriefing were read and reread for both their manifest content of communication and the interpretations of latent content (Polit & Hungler 1999) for categories and themes. Sections within the text that yielded certain categories from the codes were collated into various theme clusters. Members of the research team would then meet and engage in in-depth discussions of the themes and conduct further analysis where needed. The extracted meanings were related back to the whole for new ideas/insights. An example was used to illustrate the data analysis process in Table 1.

### Findings

From our data, three emerging themes were identified: early identification of children's needs through interprofessional collaboration for health promotion, prompt referral for

children in need, and comprehensive planning and implementing of school health service through interprofessional learning.

### Early identification of children's needs through interprofessional collaboration for health promotion

Although not every school has its own nurse, the school-children were familiar with nurses, who were periodically invited by the school teachers to give various talks. The nurse, hence, was in a unique position to initiate communication with the children as a primary caregiver (Chan *et al.* 2009, Gifford *et al.* 2010). The children's familiarity with the nurses' role was identified in the study and illustrated as follows:

At beginning of the health talk, when project members from nursing asked the children about the purpose of today's activity, most of the children responded quickly and correctly without any hints. Almost all answers, such as health promotion, health talk, healthy life, etc. were in keeping with the question and reflected the children's understanding of the job nature of nursing professionals. (Field notes 1)

After the introduction and the ice-breaking activity, to further strengthen this rapport, it was necessary to possess good communication skills and astute observation of children's concerns, which were used to further explore their health needs. Although nurses are often in a better position to dialogue with clients initially, their learning from social work students' communication with and their observations made about the children impressed them as creative and lively, captivating the children's attention. Relationship building through good communication and observation skills between the children and the school health service is an important component for the early identification of the children's needs for health promotion. The following are illustrations of this theme:

... I can only use incentives to draw the children's attention. However, they [SWSs] have very good presentation skills. They can teach the children in a lively, creative, humorous way. They use various methods to interact with students in order to attract their attention. For me, when all my incentives were used up, I didn't know how I could further retain the children's attention. (191 NS2)

... because their [SWS] work involves understanding how their clients think, they have the intention to and are observant in taking care of people around them... Unlike us, they [SWSs] are very conscious and sensitive to avoiding the use of jargon, and they are aware of clients' understanding of the content and context

Table 1 Data analysis of development of themes

Quotes	Codes	Categories	Themes
At the beginning of the health talk, when student participants from nursing asked the children about the purpose of the activity, most of them responded quickly and correctly, with enthusiasm and without any hints, such as for 'health promotion', 'it is a health talk', 'how to have a healthy life', etc. The children's responses reflected their understanding of the job nature of nurses in the school. According to their principals, they had had previous visits from nurses. (Field notes 1)	The schoolchildren had previous exposure to health services provided by nurses The children's familiarity with nurses enhanced the ice-breaking activity initiated by the nursing student participants	Unique roles of nurses and social workers in developing rapport with the schoolchildren Better understanding of the children's needs through information exchange	Early identification of the children's needs through interprofessional collaboration for health promotion
...During the question & answer session of the health education talk, it became apparent that my own practice [NS] was very different from theirs [SWs]. I could only use incentives to draw the children's attention. However, they [SWs] have very good presentation skills. They taught the children in a lively, creative, humorous way. They used various methods to interact with students in order to attract their attention. For me, when all my incentives were used up, I didn't know how I could further capture and retain the children's attention. (191 NS2)	Because their presentation skills were lively, creative and humorous, the SW students were better able to retain children's attention than their nursing counterparts		
...Because the SW students tended to be more involved in the understanding of how others think... how their school children think, they intended to be and were more observant of people around them. Sometimes, during conversation, we [NSs] were unaware of our use of jargons or medical terms. Unlike us, they [SWs] were very conscious and sensitive to avoiding the use of jargon, and they were more aware of the schoolchildren's understanding of the contents and the context throughout the conversation. Every time we used a medical term unintentionally in front of the children during the activities, they would immediately help us to elaborate, or they translated for us because they knew the children would not understand what we were talking about... (113 NS1)	Social work students were sensitive to the children's understanding of the contents and avoided the use of jargon that was beyond the children's understanding		

Table 1 (Continued)

Quotes	Codes	Categories	Themes
In our [SWs] usual practice, we tend to have a clear role division and hand over the physical aspects of health to nurses. Hence, we are less aware of the physical needs of school children. If the care is delivered interprofessionally during the planning stage [both physical and psychological needs will be better assessed at the same time in the beginning], the important intervention will not be missed during the process. (157 SW52)	Intervention through better understanding of schoolchildren's needs as information exchange between nursing and social work professionals		
.....take the activity 'making a sandwich' as an example: during the preparation stage, we [SWs] went to the supermarket, bought the food and all the necessities such as bread, salad dressing and paper towels for the activity...we observed that the NSs checked and read all the nutritional information/food labels to see what were the contents and to identify whether the food was healthy, how many calories it contained, etc....However, I only checked the expiry date and that was all. It was because I was a bit confused and not sure of the information on the label. This experience reflected and enabled us to understand the difference between IPE and non-IPE practice. This implied that only if collaboration between nursing and social work disciplines was initiated in the planning stage could appropriate health interventions be designed that would enhance the subsequence phases. [176/178 SWs1]	Emphasis on the different aspects of planning reflected a need for collaboration, which enhances the intervention		



Table 1 (Continued)

Quotes	Codes	Categories	Themes
.....I think different people have different views, even on the same thing. Although we have various perspectives, our aims are the same: serving school children for better health outcomes. A nurse may implement an intervention that first addresses the immediate needs of the school children. A social worker, on the other hand, may use an alternative approach to understand the background reason for the school children's needs...Even if the approaches are different, the purpose of what we do is the same, for the benefit of schoolchildren's health... I think there are many areas in which we can collaborate in the future. For example, now we have a better understanding of each other's roles and responsibilities. If children need either medical or psychosocial services, or both, we can refer them to appropriate disciplines through IP consultation. (438 NS6)	Collaboration was based on a common goal through different approaches from the different health professions Referrals could be made to either medical or psychosocial services through a collaborative platform in the school	Development of a collaborative platform for easy access to professional consultation and school health services	Prompt referrals for children in need
.....Just like if we [NSs and SWs] had school children suffering from mental problems and needing medication, we couldn't administer the medication without being equipped with any drug knowledge...if I knew the side-effects of a drug, such as sleepiness, nausea, etc., I would understand more about its influence on a child's physical condition. I would bear this in mind when looking after school children. Definitely, the health service would be tailored accordingly for them at the planning and implementation stages... It is good to collaborate with the nursing profession, because when I encounter any medical problem, I can seek advice from them to better understand a school child's condition and the availability of community resources. The complementary effect of this collaboration is beneficial for healthcare providers from both the nursing and social work professions. (122 SW55)	Each profession has its own strengths. Collaboration between nursing and social work has a complementary effect on school health service during the planning and implementation stages	Unique knowledge of nurse and social worker in comprehensive school health service Better decision-making regarding school children's needs	Comprehensive planning and implementation of school health service through learning from each other

Table 1 (Continued)

Quotes	Codes	Categories	Themes
The school principal and teachers believe that a combination of the health services provided by the nursing and social work professions is a perfect fit for the school health service, since half of children's health needs come from the psychosocial perspective, whilst the other half arise from physical concerns. (Field debriefing 1)	Complete scope of services for children's physical and psychological needs to provide a nursing-social health care interface approach		
'Caring' means to take care of children both physically and psychosocially. People assume that nurses focus more on schoolchildren's physical needs, while social workers take more care of the psychosocial perspective. This assumption may be based on the job nature of the two professionals... However, as healthcare providers, we need to integrate them (the physical and the psychosocial) into our daily health service practice in order to make the health service comprehensive and schoolchildren-centred. (388 NS5) ...I agree that under the IP collaboration and practice, I acquired more knowledge of physical health. As social workers, we treat people equally in the physical and psychosocial aspects.... If there is space for further development of this type of IP collaboration in the future, I am sure it will give me a better understanding of the condition and needs of my schoolchildren, which is important during the planning and implementation of healthcare services. Therefore, the service provided by IPC is better than that delivered in silos. (347 SW54)	Each profession has its own expert areas, such as nurses' competence in medical knowledge and psychomotor skills and social workers' competence in psychosocial and counselling skills		
	Discussion between two groups of health professionals in terms of schoolchildren's biomedical and psychosocial needs led to a more comprehensive decision-making process		



throughout the conversation. Every time we used a medical term unintentionally in front of the children during the activities, they would immediately help us to elaborate or translate because they knew the children would not understand what we were talking about or what the content meant... (113 NS1)

SWs' and NSs' learning from and with each other for the early identification of the children's needs in their collaborative school health service shed further light for their own uniprofessional practice. Examples are as below:

From our [SWs] usual practice, we tend to have a clear role division and hand over the physical aspects of health to the nurses. Hence, we are less aware of the physical needs of the client [schoolchildren]. If the care delivered is through IPE during the planning stage [both physical and psychological needs will be assessed at the same time at the beginning], the important intervention will not be missed during the process. (157 SWS2)

.....Take the activity 'making a sandwich' as an example, during the preparation stage, we [SWs] went to the supermarket, bought the food and all the necessities such as bread, salad dressing and paper towels for the activity...We observed that the NSs checked and read all the nutritional information/food labels to see what were the contents and to identify whether the food was healthy, how many calories it contained, etc.....However, I only check for the expiry date and that is all...Through this experience, the difference between IPE and non-IPE practice was reflected and realized. This implies that only if collaboration of nursing and social work disciplines is initiated in the planning stage can tailored and appropriate health intervention be enhanced in next phases. (176/178 SWS1)

All the above competencies ensure good interaction with clients, which can broaden professionals' understanding of children's views of health needs in the planning stage. Earlier identification of health needs allows for prompt referral to the school health service. In our findings, we observed the following.

### **Prompt referral for the children in need**

Schools' access to health service consultation emerged as a dominant issue in which teachers reported substantial frustration caused by the absence of a direct referral system or expert consultation (Rothi & Leavey 2006). The presence of health professionals facilitates better school health awareness amongst the teachers and children in a familiar and easily accessible environment in which early identification and appropriate referral can be made to appropriate health disciplines. The experience of working directly with social workers and nurses also provides a platform to

school teachers for knowledge/information exchange; thus, better use of community resources can be accomplished. For instance, if schoolchildren suffer from anorexia, school teachers can consult both nursing and social work professionals at the same time, as anorexia may be caused by physical and psychological reasons. Through this IPE, prompt consultation/discussion of the health issue and ultimately prompt referral can take place. With the help of health professionals, it also allows for a more unified approach and furnishes the school with the opportunity to support the needs of children before their difficulties escalate. As the SWS stated:

.....I think different people have different views, even on the same thing. Although we get slightly different perspectives, our aims are the same: serving the client for better health outcomes. A nurse may implement an intervention addressing the immediate needs of the client first. On the other hand, a social worker may use an alternative approach to understand the background reason for clients' needs.....even if the analysis approach is different. The purpose of what we do is the same, for the benefit of clients' health... I think there are a lot of areas in which we can further collaborate in the future. For example, now we have a better understanding of each role and job nature. If children need either medical or psychosocial services, or both, we can refer them to appropriate disciplines through IP consultation. (438 NS6)

Given the complex nature and the multiple needs of schoolchildren, interprofessional collaboration is indispensable because no single health profession can comprehensively address all the health needs of a child. IPE is a vital resource in achieving better health outcomes for children because it contributes to addressing the fragmentation of the school health service system. This theme was reflected as follows.

### **Comprehensive planning and implementation of school health service through learning from each other**

Learning about and collaborating with each other did facilitate their better understanding of each other's roles, serving to remind the nurses of the importance of the psychosocial issues of care and raise the social workers' awareness of the potential use of a relatively less sensitive area of clients' physical health in this caring project. The students in our study valued each other's disciplinary knowledge and skill as complementary. The discussions between the two groups of health professionals in terms of the client's biomedical and psychosocial needs led to a more comprehensive decision-making process (Mason &

Wood 1999) that was client-centred. The following comments evidence this process:

.....just like if we [NSs and SWSs] had a client suffering from mental problems and needing medication treatment, we couldn't administer the medication without being equipped with any drug knowledge....if I know the side-effects of a drug, such as sleepiness, nausea, etc., I would understand more about the influence of the drug effect on the client's physical condition. I will bear this in mind when looking after clients. Definitely the health service will be tailored accordingly for them at the planning and implementation stages .... It is good to have collaboration with the nursing profession. This is because when I encounter any medical problem, I can seek advice from them for better understanding of client's condition and the availability of community resources. The complementary effect of this collaboration is beneficial for both healthcare providers from nursing and social work professions. (122 SWS5)

Another social work student also made similar comments:

.....I agree that under the IP collaboration and practice, I acquired more knowledge of physical health. As social workers, we treat people equally in the physical and psychosocial aspects.... If there is space for further development of this type of IP collaboration in the future, I am sure it gave me a better understanding of the condition and needs of my client, which is important during the planning and implementation of healthcare services. Therefore, the service provided by IPC is better than the service delivered in silos. (347 SWS4)

The caring project also taught NSs and SWSs the meaning of caring with one heart and client-centred. The student said:

'Caring' means to take care of the children both physically and psychosocially. People assume that nurses focus more on clients' physical needs while social workers take more care of the psychosocial perspective. This assumption maybe based on the job nature of the two professionals... however, as healthcare providers, we need to integrate them [the physical and the psychosocial] into our daily health service practice in order to make the health service comprehensive and client-centred. (388 NS5)

On the other hand, this nursing-social health care interface approach to caring for primary school students is highly valued by the school principal and teachers. Their positive comments constitute good evidence to support the multidisciplinary collaborative approach to school health service, in particular health service from nursing and social work:

As claimed by the school principal and teachers, a combination of health services provided by the nursing and social work professions

is a perfect fit to the school health service. The reason is because half of health needs come from the psychosocial perspective, whilst the other half are from physical concerns. (Field debriefing 1)

## Discussion

Due to the burgeoning of healthcare costs, increasing chronic disease and diminished healthcare-related human resources worldwide, literature has identified the need to deliver IPE to healthcare professionals as a means of training them to work together to help address these issues (World Health Organization 1988, 2006). Many research studies have also been carried out heading to this direction. However, their research canons mainly focused on participants' gained knowledge, changed attitudes and beliefs through IPE and IPCP. The effects on the IPCP were little studied (Cooper *et al.* 2001, Larivaara & Taanila 2004). Only few studies related to the effects of IPE and IPCP in hospital or community setting, but not in school setting, were searched (Reeves & Freeth 2002, Reeves *et al.* 2002). As reported in Reeves and Freeth's study (2002) that compared participants receiving IP health service with those receiving non-IP health service, the results reflected that the satisfaction rate of participants receiving IP services was higher and this group of participants felt that the students communicated better with them in terms of listening to them, answering their questions and providing them with the information they needed. Although there has been no comprehensive understanding of the range of effects produced by interprofessional education on school health globally or locally, the findings of this collaborative school health service study provided a rare qualitative and useful insight into the impact on how an effective school health service can be delivered through IPE and IPCP.

## IPE for effective school health promotion

Indeed, many childhood health issues are the result of health-risk behaviours that can be prevented through health promotion in the early stages of the child's life (National Scientific Council on the Developing Child 2010). Enhancing collaboration with other health professionals is imperative to assist with the complex physical and mental health needs of school students (LeFever *et al.* 1999, Brener *et al.* 2007). The implementation of behaviour-change interventions through IP collaboration significantly reduces risky behaviour and incidents (Howze & Redman 1992, McTigue *et al.* 2003, Pignone *et al.* 2003). As observed and

reported, current school health issues such as depression and drug abuse, a global and regional issue affecting both health and social care, provide compelling reasons for nurses to work with our social work colleagues. Taking this caring project as an example, with the integration of these two health professionals' knowledge and ideas, better school health service plans can be formed. Social work students are more responsible for the psychological aspect, whilst nursing students focus more on the physical aspect. Between the collaboration and the discussion, members from the two health professions can take this valuable platform for idea/information exchange in school health service. In addition, screening in advance from a different professional's perspective provides an assurance of core elements for the targeted health service and enables good planning with no missed items prior to implementation.

In the existing local school health practice, different professionals come to the client and sometimes may give him/her part of the same care already provided by another professional (Lau 2006). This results in overlaps and duplication of treatment, wasting of resources and confusing messages to school teachers and students, who often experience frustration with this fragmentation and lack of coordination. Combining services through an interdisciplinary approach prevents fragmented care and creates a safety net for overlooked problems (Rodgers 1994). In Hong Kong, links essential to health and social service between health institutions appear to be wholly absent. Although school teachers are permitted to refer through the educational student health service, referring through this under-resourced service often creates delays that can lead to the expulsion of pupils before help is obtained. Undoubtedly, interprofessional collaboration makes referrals between different professionals easier.

IPCP not only enables them to view clients' issues from a wider perspective but also has inherent benefits in terms of interprofessional work (such as our nursing–social care interface), including enhancement of the decision-making process and, importantly, a timely referral of services for clients. A similar suggestion was also made by the participating school teachers. They recommended that a health triage system held by nursing and social work should be established as quickly as possible for the early recognition and prioritisation of the children most in need of resources and support. By linking with community resources and achieving synergy between the various health professions, schools will be able to make the best use of the available skills, resources and time.

## IPE on school health service in formal tertiary curriculum

Professional competencies responsive to changing school health needs are a crucial factor in children's health service in the community because children's health is being challenged by new infections, and environmental and behavioural issues (Gifford *et al.* 2010). Many important health issues require coordinated medical, social and mental health involvement, ensuring that clients with complex care needs have access to an appropriate range of professionals (Mason & Wood 1999). It is time for healthcare providers and educators to rethink and review preregistration education in order to align it with the existing demands.

IPE has been complimented as a cost-effective approach in tackling health issues (Thousand & Villa 1992) and practised for many years in Western countries. However, the services provided are mainly in hospital-based settings (Chung *et al.* 2011). Few health services are provided to clients in the school-based setting (McCombe *et al.* 2008). Even though various benefits can be achieved from IPE with regard to children's health service, school health programmes still face significant obstacles. These barriers have been categorised as lack of administrative support, local barriers, limited governmental support and traditional funding patterns (Baldwin 1996, Parsell & Bligh 1999, Gardner *et al.* 2002). A lack of resources and genuine commitment at the highest levels of academic decision-making can negatively influence interprofessional education initiatives. This is a critical topic that needs to be further explored. Before convincing and gaining support from the public and government in launching formal IPE in tertiary education, it is essential to engage in collaborative efforts whilst promoting optimal school health promotion programmes. From the experience gained from this caring project, different health professionals should be fully integrated into the school environment, working closely with teachers to devise school health strategies for the whole school (Rothi & Leavey 2006). Obviously, administrative support and future funding are more likely with convincing scientific data from a successful programme (Wyatt 2000). Hence, a scientific approach to the programme is suggested for the purpose of collecting valuable information and evaluating its effectiveness.

## Limitations of the study

Whilst the findings are positive, there is a limitation to this study in the form of the purposive sampling method. Students who volunteered to participate, from one university,

might already have the openness and motivation to learn from peers of another discipline.

## Conclusion

Children's health issues have become more complex recently. IPE is known as an effective way to relieve children's health issues. It should therefore be launched at the undergraduate level to align with existing public demands. By working together collaboratively, healthcare providers are able to develop a fuller, more complete understanding of children's problems and hence provide appropriate and effective health promotion interventions (Papa *et al.* 1998).

## Relevance to clinical practice

Interprofessional education has long been suggested as a way to meet the demand for effective collaboration in school health service with a view to improving its quality. To optimise the health professions' contribution to children's health, a more strategic approach is required in partnership with education, along with research into the effectiveness of school health service. The findings of this

study fill the gap in the literature by identifying the potential for interprofessional collaboration in school health service in Hong Kong. It provides important evidence for health educators and health professional policy makers to understand how interprofessional education and collaboration are practising and promoting child and adolescent health services, which in turn can inform national and regional policy and practice.

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## Contributions

Study design: WL, EAC, SKSL; data collection and analysis: WL, EAC, SKSL and manuscript preparation: WL, EAC.

## Conflict of interest

There is no conflict of interest in our study.

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