

## Promoting Positive Attitude towards Elderly among Healthcare Students through Service Learning

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### ABSTRACT

The ageing population is expected to significantly increase the demand of healthcare services. To meet this challenge, it is necessary to equip healthcare students with attributes for providing quality elderly care services. Among them, a positive attitude towards older people is important to develop rapport with clients and facilitate service delivery. By adopting the service learning model where the teaching of elderly care knowledge is coupled with the delivery of healthcare services, it is anticipated that the direct interactions with elderly can promote the development of positive attitude. The present study reports the effect of service learning on fostering positive attitude towards elderly people among undergraduate healthcare students. The students attended a 14-week service learning subject designed on the platform of a nurse-led outreach mobile clinic. The subject involved preparatory classroom activities and hands-on skills training, as well as the provision of health assessment services and the delivery of health talks or workshops in local communities. Students' attitude towards the elderly was measured by the Kogan's Attitude toward Old People Scale at the beginning and at the end of the subject. The results suggested that participation in the subject led to significant improvement in attitude towards elderly in various aspects. The study provides supportive evidence for advocating service learning as a promising pedagogical method in developing favourable attributes for students, which might be difficult to achieve through traditional classroom teaching and written examinations.

Key Words: Service learning, attitude, elderly, healthy ageing, healthcare education

### 1. INTRODUCTION

Population aging is becoming a global concern in developed countries across the world. The phenomenon is partly attributed to advancement in medicine in developed countries, which prolonged the average life expectancy, and the low birth rate. Being one of the major cities in Asia, Hong Kong is no exception. According to the population statistics published by the Hong Kong Government [Census and Statistics Department 2012], it is projected that the percentage of population over the age of 65 in the city will increase from 13% in 2011 to 30% in 2041. Such a rapid growth in aged people is expected to come with an increasing demand of healthcare services for elderly. Frontline healthcare professionals will have more opportunities to encounter elderly people and provide them with necessary services. In order to better equip healthcare students with attributes for providing quality services that meet the unique needs of the elderly, healthcare educational programmes should incorporate teaching and learning elements targeted for elderly care. Specifically, promoting understanding about the process of aging and associated chronic illnesses, skills for effective communication with elderly, and a

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positive attitude towards the aged would be some of the most important educational goals for a university subject in elderly healthcare.

In the recent decades, service learning, a pedagogical method combining classroom teaching with well-organized community service programmes [Bringle and Hatcher 1996], has become increasingly popular in higher education. By presenting students with real-life situations in the community, they actually practise what they have learnt from textbooks and in classroom, and achieve deep learning through reflection upon their experience. The positive impacts of this experiential learning method on various aspects has been widely documented in the literature, including students' academic learning and learning outcomes [Astin and Sax 1998; Strage 2000; 2004], learning climate and motivation [Levesque-Bristol et al. 2010], civic responsibility [Astin and Sax 1998; Morgan and Streb 2001], and career development [Vogelgesang and Astin 2000]. In view of the significance, The Hong Kong Polytechnic University pro-actively advocates service learning in higher education. In particular, starting from the 2013 academic year, a new policy is implemented which requires every undergraduate student to complete at least one credit-bearing subject on service learning in order to be qualified for the conferment of degree. This policy is in alignment with the University's aim to develop students into all-round global citizens with the heart to serve the community.

The present paper reports a study on the effect of service learning on the promotion of positive attitude towards elderly through a service learning subject offered to students specifically designed for healthcare students of the Hong Kong Polytechnic University. In addition to attendance of lectures on health literacy for elderly and healthy ageing in this subject, students also learned hands-on skills in conducting health screening and delivered the services for underprivileged elderly in the community. They were also required to design and deliver health talks or workshops pertaining to the needs of the elderly. Reflection on the whole learning process is also an essential component of the subject. In the study, students' attitude towards older people was measured at the beginning (pre-test) and at the end (post-test) of the subject using a self-report questionnaire (Kogan's Attitude toward Old People Scale) [Kogan 1961]. Details of the subject and the study are discussed in the following sections.

## 2. METHOD

### 2.1 Participants

A total of 26 students enrolled on the subject. The response rate of the pre-test and post-test was 96.15% (25/26) and 92.31% (24/26) respectively. The 24 students who responded in both tests were local Hong Kong Chinese students. They were first or second year undergraduate students majoring in nursing, mental health nursing, physiotherapy or occupational therapy. The demographics of the 24 participating students are shown in Table 1.

Table 1. Demographic information of the participants in the service learning subject.

	<i>n</i>	%
<b>Gender</b>		
Male	9	37.50
Female	15	62.50
<b>Major</b>		
Nursing	8	33.33
Mental health nursing	5	20.83
Physiotherapy	10	41.67
Occupational therapy	1	16.67
<b>Year of study</b>		
Year 1	18	75.00
Year 2	6	25.00

## 2.2 Subject Design and Implementation

The service learning subject concerned in this study – *Promotion of Healthy Ageing in the Community* – was offered as a one-semester subject over a 14-week period from January of 2014. The major objective of the subject was to raise students' awareness of population ageing and its impact on the society. The students were expected to be able to address the importance of healthy ageing and demonstrate deeper understanding and positive attitude towards community-dwelling elderly upon the completion. In the subject, the students had opportunities to put knowledge into practice by conducting health screening and conveying health literacy directly to community-dwelling elderly in Hong Kong. They provided the healthcare services at the PolyU-Henry G. Leong Mobile Integrative Health Centre (MIHC), a nurse-led mobile clinic commuting to various areas in Hong Kong to deliver a range of healthcare services for underprivileged elderly, and the collaborating non-governmental organizations (NGOs).

The subject contained three components: (1) pre-service preparation, (2) service delivery, and (3) post-service reflection. In pre-service preparation, the students were equipped with the background, knowledge, and practical skills related to health literacy and healthy aging, which were necessary for them to deliver the community services in the second stage. For this purpose, lectures, workshops and seminars given by advanced practice nurses (who were subject lecturers) and experts from collaborating NGOs were arranged to share their knowledge and experience in their respective areas to the students. Students also learned specific communication skills for communicating with elderly in the local community, and received practical training in the mobile clinic to learn about integrative healthcare as well as the hand-on skills required to deliver the services. In addition, the students, forming five separate project teams, were required to design and plan for a health talk or workshop for the elderly with guidance from the subject lecturers.

In service delivery, students delivered healthcare services to underprivileged elderly individually at the mobile clinic under the supervision of advanced practice nurses. This involved basic health assessments for individual elderly, including vital signs assessments (e.g. blood pressure, oxygen saturation, BMI, blood glucose, waist-to-hip ratio, and temperature), mobility and balance assessment, visual acuity assessment, mood and cognitive assessment, nutritional and diet assessment, pain assessment, and oral hygiene assessment. Figure 1 shows a student communicating with an elder in the mobile clinic while performing diet assessment. Relevant health education was also provided by the students to the elderly individually during the health assessment services. Besides, each project team was required to deliver a health talk or workshop to a group of elderly in the mobile clinic or community centres. The topics were related to healthy aging and their professional training, including home care for hypertension, stretching exercise, prevention of dementia, healthy diet, and fall prevention. The talks and workshops integrated health information delivery with interactive activities to stimulate the interest of the elderly. For example, in the talks on stretching exercises, the participating elderly performed different exercises by following the demonstrations and advice provided by the students. In the talks on dementia, the elderly played interactive games on card matching and on shopping with a list of items in order to practise their memory. In the fall prevention talks, the students demonstrated improper footwear choices through a role-play, and the proper use of walking aids and ways to maintain balance of the elderly. Figure 2 shows the students giving a health talk to a group of older people in the mobile clinic. One of the central objectives to be achieved through the delivery of the health assessment services, talks and workshops was to

equip the elderly with knowledge on health literacy and healthy lifestyle, thereby promoting lifestyle modification for healthy ageing.



Fig. 1. A student performing diet assessment for an elder in the mobile clinic.



Fig. 2. A health talk on hypertension was delivered to a group of elderly in the mobile clinic by service-learning students.

In post-service reflection, students performed critical reflection on their experience in the whole service learning process by means of a written reflective journal, from the aspects of community service, underprivileged elderly, social impacts of population aging, and promotion of healthy aging. Each project team also wrote a report and gave a presentation in the class regarding the learning experience they gained from the talk or workshop.

### 2.3 Measurement

The self-report questionnaire used to measure the students' attitude towards the elderly in this study was the Kogan's Attitude toward Old People Scale [Kogan 1961]. The scale has been psychometrically verified as having high reliability and good content and construct validity in Taiwan Chinese population [Yen et al. 2009]. The scale has also been translated into different languages (including Japanese, Swedish, Greek and Iranian) and has been shown to be a reliable and valid measurement of attitude towards old people in different settings, with the reliability index Cronbach's alpha ranging from

0.80 to 0.87 for the total scale in these studies [Lambrinou et al. 2005; Ogiwara et al. 2007; Rejeh et al. 2012; Söderhamn et al. 2001].

Kogan's scale consists of a total of 34 statements describing perception towards old people in eight different aspects. Seventeen items express negative sentiments about old people, and each is paired with a positively-worded statement describing the reverse. Six response categories are provided for each item, including "strongly disagree", "disagree", "slightly disagree", "slightly agree", "agree", and "strongly agree". For the positively-worded items, these responses correspond to the scores of 1, 2, 3, 5, 6, and 7 respectively. For the negatively-worded items, they are scored with 7, 6, 5, 3, 2, and 1 respectively. In the rare case where the respondent failed to respond to an item, a score of 4 was given. Consequently, the possible range of the total score (obtained by adding up the scores of all items) was from 34 to 238, with a higher score representing a more positive attitude towards old people. Furthermore, the seventeen pairs can be clustered into eight categories based on their manifest content [Kogan, 1961]. Item pairs 1, 5, 12 are related to the residential aspects of old people. Item pairs 2 and 8 concern the feeling of discomfort and tension in accompanying old people. Item pairs 11 and 13 measure the perceived extent of difference among old people. Item pairs 9, 10, and 16 measure the nature of interpersonal relations across age generations. Item pairs 4 and 17 represent the theme of dependence of old people. Item pairs 3 and 6 are related to the cognitive style and competency of old people. Personal appearance and personality are tapped by item pairs 14 and 15. Item pair 7 on itself measures the perceived socioeconomic power of elderly. Scores in all items of each category are added up to compute the composite score of the corresponding category.

## 2.4 Data Collection

The survey was administered at two time points: at the third week of the semester after the subject add-drop period (pre-test); and at the end of the subject, i.e. in the fourteen week of the semester (post-test). The questionnaire was attached with a consent form and an information sheet explaining the purpose of the study. All participants in this study signed and gave informed consent regarding the objectives and procedures of the study. The study was approved by the Human Subjects Ethics Sub-committee of the University.

## 2.5 Data Analysis

The data were analyzed using the IBM SPSS Statistics Version 20 package (IBM Corporation, Armonk, New York). Paired-samples *t*-tests were performed to compare the pre-test and post-test scores. The analyzed items included the total score (which is an overall measure of positive/negative attitude towards older people), the composite score obtained from summing up all positive items, the composite score for all negative items, the composite scores of the eight different aspects described in the previous section, and the score for each individual item. The significance level was fixed at .05 for the analyses.

## 3. RESULTS

Table 2 shows the pre-test and post-test scores of the total score and composite scores obtained from the attitude towards old people scale. The analysis revealed that the service learning subject had a strong effect in promoting positive attitude towards elderly among the healthcare students. The total score [ $t(23) = 5.303, p < .001$ ], the composite score for positively-worded items [ $t(23) = 5.013, p < .001$ ], and the composite score for negatively-worded items [ $t(23) = 4.668, p < .001$ ] all showed statistically significant increase when comparing the post-test scores with the pre-test scores. While

the perceived extent of difference among old people did not show a significant change, all other seven aspects of perception towards elderly exhibited a significant improvement in attitude after the students had completed the subject. Paired-samples *t*-tests comparing the pre-test and post-test scores of the individual items indicated significant increases in score for 15 out of the 34 items, while no item showed a significant decrease in score.

Table 2. The pre- and post-test scores obtained using the Kogan's attitude toward old people.

Item	Pre-test		Post-test		<i>t</i> (23)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Total score	154.83	13.386	172.08	10.701	5.303	< .001
Positively-worded items	79.00	7.071	87.21	6.058	5.013	< .001
Negatively-worded items	75.83	9.049	84.88	6.674	4.668	< .001
Residential aspects (6 items)	29.42	3.866	32.67	2.632	3.535	.002
Discomfort and tension in accompanying old people (4 items)	16.42	3.787	19.79	3.526	3.526	.002
Difference among old people (4 items)	18.79	2.604	18.96	2.851	0.261	.797
Interpersonal relations across age generations (6 items)	26.42	2.918	29.33	3.144	3.489	.002
Dependence (4 items)	15.50	2.919	17.42	2.796	2.752	.011
Cognitive style and competency (4 items)	19.50	3.190	21.67	3.199	2.904	.008
Personal appearance and personality (4 items)	20.25	3.207	22.67	2.239	3.509	.002
Socioeconomic power (2 items)	8.54	1.668	9.58	1.692	2.566	.017

#### 4. DISCUSSION

The present study shows that the service learning subject *Promotion of Healthy Ageing in the Community* could bring substantial improvement in attitude towards elderly among the healthcare students, as evident from the statistically significant *t*-test results. However, regarding the perceived extent of difference among old people, the change was not significant although the post-test score increased slightly. Extension of the subject to a longer period, say, two semesters, for more and deeper interactions with elderly might be needed to allow the students more time to feel and appreciate the subtle differences among elderly.

The improvement in attitude was not limited to narrow specific areas, but involved improvements in students' perception on various aspects towards elderly. In addition to academic and professional expertise, this is an important attribute that the students need to develop in order to provide quality services to elderly in the future when they become healthcare professionals. The encouraging finding suggests that a university service learning subject merging the teaching of academic and professional knowledge with the delivery of community services is a promising pedagogical model. Healthcare education providers can be more open to integrating service learning elements in their subjects to achieve deep-level learning outcomes (such as attitude towards older adults in this study) rather than sticking with traditional approaches that largely rely on class teaching and written examinations.

In line with the results of the present study, a number of previous studies have also reported on the effect of promoting a more positive attitude towards older people by engaging students in service learning. The effectiveness of service learning on enhancing students' knowledge and attitude towards older people have been reported in subjects in a range of professions involving human services [Blieszner and Artale 2001], physical therapy [Beling 2003; 2004], nursing [Burbank et al. 2006] and medicine [Shue et al. 2005]. In addition to fostering a positive attitude towards elderly, service learning has also been found to enhance students' knowledge about elderly [Beling 2003; 2004], as well as awareness and view towards the students' own aging in their later lives [Bringle and Kremer 1993].

As described in the reflective journals of many students, they highly appreciated and treasured the opportunity to communicate and interact with the elderly so closely and directly in our service learning subject, especially for those who did not have much

previous experience. In fact, for service learning involving elderly, one critical factor that determines the outcome and effectiveness is genuine communication. Through actually interacting and exchanging ideas, students can obtain a realistic view on the elderly, which can reduce bias and prejudice towards older adults. This makes the students more passionate and enjoyable in engaging in gerontological services, thus enhancing their service quality. Further effort has been made to take this further by the development of intergenerational service learning subjects which were enrolled by both young students and older adults awarded with scholarship [Knapp and Stubblefield 2000]. The two generations work closely in the intergenerational service learning subjects and learn about healthy ageing together, where the older age students can also share their experiences and feeling with the young university students. In the study by Knapp and Stubblefield, it was found that, benefited from the positive images of aging exhibited by the older age classmates, the young students had demonstrated increased knowledge about the process of ageing and improved perception towards elderly. In addition to engaging older adults into classes, service learning subjects with components requiring students to conduct personal interviews with elderly or making friendly visits have also been reported to be an effective means to promote student understanding of elderly [Dorfman et al. 2003; Gutheil et al. 2006]. These pedagogical approaches will be referenced for the development of new service learning subjects concerning healthy ageing in the future.

The main challenge in the service learning subject lied in bridging the gap between theories and hands-on practice. To cope with the challenge, the subject lecturers provided the students with more chances to explore and reflect on their own capacity in problem solving [Kohlbray and Daugherty 2013], while acting as facilitators to guide and encourage the student during the process. For example, the development of good communication skills with elderly is a key component of the subject. In Hong Kong, nuclear family was a common family structure after the industrialization, where many youngsters nowadays do not live with their grandparents and thus do not have much opportunity to communicate with elderly people, unlike the situations in earlier generations. Although workshops on communication skills had been provided in classroom sessions, a number of students still experienced difficulty in communicating with elderly during hands-on practice. To deal with the issue, the subject lecturers arranged elderly to share the life experience with the students while the students interviewed the elderly about their daily life. In this interactive process, students were able to gain deeper understanding on age related changes to daily life and the functional capacity of the elderly. The experience sharing consolidated the theories learned from classroom teaching through real practice. Furthermore, it helped changing students' negative impression on elderly. Most students indeed found elderly creative and easygoing albeit limitations due to the age related changes like poor vision or joint stiffness.

Besides, it was necessary to deal with practical and logistics issues in order to run the subject with the mobile clinic setting where the space is limited. Students were thus encouraged to carry out some parts of the workshops outdoor. Here, they were required to plan and coordinate thoroughly before conducting of their health talks or workshops. For example, they needed to develop a contingency plan in case of raining, e.g. identify potential shelter for the elderly and modify their original plan accordingly. Despite the time consuming preparation, the process not only encouraged the students to anticipate and accommodate changes, to be resilient, but also nurtured teamwork.

Two factors contributing to the positive results of the study were the use of interactive teaching approach and the mobile clinic setting for student placement. On the one hand,

in addition to the teaching of theories and principles, the classes also involved activities like role playing and group discussions to reinforce the theories learned. These interactive approaches encouraged active participation and facilitated self reflection. Responses from peers and subject lecturers stimulated students to think more deeply and critically (Figure 3). On the other hand, as pointed out by Rosing et al. [Rosing et al. 2010], unlike placement in hospitals or rehabilitation institutions, students receiving training in a mobile clinic focusing on health screening services for community-dwelling elderly had much more opportunities to interact with older people. During the health screening services, as well as the preparation and delivery of health talks and workshops, students could gain a better understanding of the elder's capacity, and reflect on how healthcare professionals can help in promoting healthy ageing, which in turn could cultivate students' positive attitude towards older adults.



Fig. 3. Group discussion with feedback from peers and subject lecturers.

Though the present study demonstrated some promising results in favour of the service learning pedagogy, a number of limitations could be identified. First, considering the fact that the present study was questionnaire-based, the sample size of 24 might be too small to produce replicable results. In addition, the participating students might have varied social backgrounds and different prior experience in interacting or communicating with elderly (e.g. some may have previously participated in community services or volunteer work). This could be a potential confounder affecting the evaluation of the effectiveness of the subject in changing the students' attitude towards elderly. Currently, the subject study was only offered to students in the healthcare field. It is not sure if the subject can produce the same effect on students from non-healthcare disciplines, e.g. engineering or science. Future studies can be conducted to explore these issues with a larger scale, to seek for more generalizable implications regarding the service learning approach in university-level education.

## 5. CONCLUSION

In conclusion, our service learning subject which integrates the teaching of academic knowledge and practical skills with the delivery of community services on person-to-person basis was found to be an effective means in promoting a positive view towards older people among healthcare students. The exposure provided by the experiential learning is believed to offer the students a different perspective about the subject matter through actual practice and active involvement, which are helpful to render a better

overall picture to clear their misunderstanding, bias, and misbelief. Communication with clients is a critical element in the profession of health care, where person-to-person contacts are frequent and essential. Service learning offers a new option for healthcare education providers to expose students to the real and practical situations, rather than merely achieving superficial understanding from textbooks.

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