SERVICE LEARNING FOR MEDICAL STUDENTS: PROGRAM DEVELOPMENT AND STUDENTS' REFLECTIONS

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ABSTRACT
We designed a cross-disciplinary interdepartmental volunteer program, which involved student participation in "community care teams for the elderly living alone." Our aim was to enhance communication between students and the elderly. Students were expected to meet and learn to get along with the elderly, to develop listening and communication skills, and learn to cooperate with student participants in other services. Students were required to devote at least 14 hours per semester to this two-semester program. Between September 2008 and June 2009, 19 students (1st semester), 34 students (2nd semester), 7 students (both 1st and 2nd semesters), respectively, and 15 elderly participants became involved in the program. Students were divided into 15 groups (each with 2–4 students), and each group visited the assigned elderly person at least 6 times per semester. According to student accounts, these visits improved their interpersonal and communication skills and their ability to express concerns with self-confidence. Our analysis of students' reflections found that early exposure to such community experiences increases their capacity for self-reflection and teaches them how to show respect. The opportunity to develop empathic communication skills with the elderly and learn to cooperate with faculty and colleagues can be beneficial to students in their future medical practice and strengthen the quality of community care.

INTRODUCTION
Medical care reflects not only scientific knowledge, but also communications skills and desire to improve the quality of medical care. In clinical practice, doctors frequently miss opportunities to respond to patient emotions and to strengthen the patient-physician relationship (Avdi, Barson, & Rischin, 2008). Because of the brevity of doctor-patient interactions, it is difficult to establish trust (Rhodes et al., 2004; Klig, 2005).

Klig (2005) and Little (2002) both proposed that teaching medical humanism could improve the relationships between health care providers and patients and that health care providers could be trained to treat every patient humanely, and to be sensitive to patient values, culture, and ethnicity. Shapiro et al. (2009) suggested that periodic visits to members of the patient's family would increase a student's understanding of how the psychological, spiritual, or economic circumstances of patients impact the course of their diseases. Students would understand the true meaning of caring. Students would thus become more thoughtful medical professionals for the sake of their patients.

The major goal of medical education should be improving the empathic communication skills of medical students (Avdi et al., 2008). In Afghani's study (Afghani, Besimanto, Amin, & Shapiro, 2011), 55% of responders (3rd and 4th year students) thought that empathy could be taught. Evans and colleagues reported that a consulting skills course could improve students' empathic behavior. In the study by Borges and Hartung (2007), 87% of students were inclined to volunteer their time to the indigent. Community service learning has been shown to increase communication skills. However, most previous studies on service learning were short term, and their findings were based on questionnaire surveys. One study revealed that 10-week service learning activities significantly increased medical and nursing students' overall knowledge of aging and their understanding of mental health needs in old age. However, the effect was not long-lasting (Leung et al., 2012). There has been little research on service learning over a longer period of time and using repeated exposure and feedback to sustain attitude change toward older adults.

Leung, Liu, Wang, and Chen (2007) commented that planned feedback as well as the opportunity to work with different people as a team are necessary for the program to succeed. Therefore, we developed a multidisciplinary

service-learning program aiming to enhance the student caring experience through longer exposure to the community. In this program, students learned listening and communication skills during visits with elderly individuals living alone, and how to cooperate with students in other departments. This article describes the program's development and provides student feedback about this program.

THE STUDY

Fu-Dey Citizen House is located at the center of the capital Taipei. The residents were low-income, similarly aged elderly people who lived alone. Most were jobless and relied solely on low-income subsidies from the Taipei City Government. In addition, many residents were physically impaired, sick, handicapped, and facing the possibility of resettlement due to demolition of their homes. They were therefore afraid of leaving their familiar environment and uncertain of the future.

This community consisted of 3 three-story and 3 four-story buildings, and a house used as an activity center. Each household contained a bathroom, kitchen, and living room. The actual space available was very limited, accounting 216 square feet per room. The average age of residents was 80.4 ± 11.2 years for males and 67.8 ± 16.0 years for females.

Taipei Medical University is located in the municipal area of the capital city, and offers caring experience courses intended to preserve community health and teach students how to serve and communicate with the elderly. The service learning courses were given to first-year students of our university. Two semesters per year were offered as an optional non-credit course. The curriculum was free and open to all students, but at least 14 hours of service per semester were required to pass the course.

The course was tutored by two teachers (SHY, WPC) and two teaching assistants (CHL, HTP) with service experience. Between September 2008 and June 2009, a total of 26 and 41 students attending nine different schools were assigned to community care teams for the first and second semesters, respectively. Students were from departments of Medicine (1st semester, 4; 2nd semester, 10), Dentistry (2, 6), Pharmacy (2, 2), Medical Technology (2, 3), Health Care and Nutrition (3, 12), Public Health (3, 3), Hospital Management (6, 0), Nursing (1, 4), and Nursing & Health Care for the Elderly (3, 1). Of these participants, 7 students completed two semesters of the course.

Four social workers selected the family services provided to residents of the Fu-Dey Citizen House. Initially, the elderly of 384 households were screened based on their service needs, compliance with a set of criteria, and absence of mental illness. Finally, a total of 8 men and 7 women (15 households) were chosen to participate for 2 semesters.

On the first day of the 1st semester, the community health center staff held a one-day garden party to introduce students to all residents of the 384 households, increase their familiarity with one another, and allay feelings of strangeness and fear. In addition to the students enrolled in caring experience courses, 120 second-year medical students joined and participated the garden party day. Activities covered the basic health check, depression scales assessment, and health education to prevent falls and address nutrition concerns.

After the garden party day, each group of students (2–4 people per group) was assigned one elderly person. At least 6 visits per semester to the same venue and regular scheduling of service were required to complete the course. The services selected were decided during the first home visit after the needs of the clients were determined. Needs were roughly divided into static and dynamic services. Static services included chess playing, newspaper reading, and information (current photos and data on the hometowns of the elderly) sharing. The dynamic services included assistance with climbing stairs, showering, and walking. In addition, students provided the elderly with the experience of warmth by giving cards and small gifts to them at certain festivals in particular. If the students could not visit the elderly regularly, they would mail their cards instead.

Students were accompanied by their teachers on the first and second home visits and were unaccompanied on follow-up visits. In addition to providing conversation, the students documented the life stories of the elderly after receiving their consents.

Before the first visit, the teacher briefed students on the basic characteristics of the community and clients to be served, to eliminate the tension and to familiarize students with the curriculum support system.

After the first home visit, each student (by completing the "Table of Learning Program Experiences") summarized the background data collected from the elderly subjects, the plans for future learning experiences,

and the expected outcome of that experience.

On subsequent visits, students chatted with the elderly, so that they would have someone to talk to. Information gained from these visits was recorded in the "Learning Log", including the dates of each visit and the names of the families visited (Part I) and observations, feelings, reflections, changes, etc. (Part II).

The students met to share experiences after the end of the course, and express their opinion on the services offered the elderly during the semester. Furthermore, the students submitted final reports describing their impressions of the services they provided, the difficulties they encountered, the solutions to problems, event-related growth and change, service-related issues, ways to improve the course, and insights into future volunteer service.

The learning support system included contact links between teachers and students by phone and via online social networking. Teachers and students engaged in interactive discussions before, during, and after the courses, to ascertain the student's level of progress and need for help to deal with problems or difficulties.

Students' reflections were qualitatively analyzed. Representative feedback was quoted when we thought it was relevant to the goal of the project (Côté & Turgeon, 2005). A non-quantitative process was used to interpret and conceptualize the original data. Statements with similar meanings were merged into one category and the number of people expressing the same thought was noted. The datasets were based on the classification of student skills into communications and interpersonal skills, decision-making and critical thinking skills, processing and self-management capabilities (Taiwan Health Promoting School, 2012). (Table 1)

Table 1: The Hypothetical Variables of "Skill-based Life Health Education"

Communications and interpersonal skills	Decision-making and critical thinking skills	Processing and self-management capabilities
1. Interpersonal skills	1. Decision making and problem solving skills	1. Ability to increase self confidence, self discipline, and take responsibility, influence, or promote change
2. Negotiations and rejection capabilities	2. Critical thinking skills	2. Ability to control ones' emotions
3. Understanding the feelings of others		3. Ability to control ones' emotions and anti-stress
4. Cooperation and team work		
5. Advocacy capabilities		

Modified from “Taiwan Health Promoting School” (2012)

FINDINGS

Interviews of elderly clients by students elicited the following information.

For example, as quoted from the records of Student A5, "At first I did not know what to talk about, but finally I felt encouraged to speak with him, and the dialogue eventually seemed to become more natural. This was very encouraging to someone like myself who had always been at a loss for words."

As quoted from the records of Student A4 commenting on interpersonal skills: "The elderly are actually very eager to be taken care of, and we should be more active in looking after them."

As quoted from the records of Student B5 commenting on understanding the feelings of others: "Caring means knowing when someone needs to be cared for. It is a matter of give and take, and it can not be achieved unilaterally" (spirit of serving). However, the ability to negotiate and reject was not significantly improved because most of the time students are listening and so they are unable to make recommendations except at a superficial level. Students could raise issues and comment on them, but they could not troubleshoot them. Student A6 provided an example: "Social change has led to increased numbers of single people and double-income-no-kids families. Thus the number of vulnerable families and vulnerable elderly has increased. More volunteers devoted to caring are highly encouraged" (advocacy capabilities).

From observations during their period of service, students were able to comment or raise issues bearing on the care and environment of the elderly. For example, "I found that many elderly people have serious hearing impairments, so that we must speak loudly and slowly."--Student B22.

An example of focus on issues of the elderly: "The actions of students can be more focused on community care

by encouraging more participation and meaningful community service activities."--Student B29.

An example of focus on current environmental issues: "Recruiting young students to establish social service teams in order to regularly help with clean-up work."--Student C3.

An example of raising issues of current service, not just silently receiving service: “Listen to what the elderly say, and find practical ways to help them, other than ways that we think subjectively are ideal and feasible."--Student B15.

"One day we will finish the course and never visit uncle Chen again. What will he think of us then?! What will the other elderly not served by us think of us then?!"--Student C4.

Students who provided more substantial feedback indicated that the service learning program helped enhance their confidence, ability to handle issues and take responsibility, and self-management skills. Through visits, students overcame communication barriers with others, addressed the concerns of others appropriately, identified personal strengths and weaknesses, and recognized self-value.

For example: "I’ve learned how to express other peoples' concerns, how to initiate conversation and chat with people."--Student B9. "Service not only helped others, but also enabled us to gain experience, adopt new attitudes, and find practical ways to resolve problems."--Student A11. "Participation in social service activities will greatly influence our future service as doctors and nurses. Only by providing service at basic levels, can we become good doctors in the future!”--Student B19.

Students learned that it was sometimes necessary to provide services under poor hygienic conditions. Controlling emotions and stress in such circumstances was a challenge. For example: "Some old people were incontinent, and they were unable to get rid of the flies attracted to their faces and feet. I need to learn to accept such a situation which I would never have tolerated before."--Student C5.

The feedback from our students can enhance future service learning as summarized below.

An excellent medical staff needs to be knowledgeable and needs to have good communication skills. Our students will be members of future health care teams. Though their backgrounds, abilities, and attitudes currently vary and their social class and environment may differ from those of their elderly clients, students find through service learning courses and listening that the elderly are not that difficult to get along with.

During service-learning courses, students discover their shortcomings and identify issues. "I used to think that the elderly at home were annoying, but now I can adapt and take the initiative to care for the people around me, especially the elderly at home. Caring must be self-initiated, through empathy for the feelings of the elderly, changing one's attitude for the sake of the elderly, and learning how to care for them."

Having learned how to think and see things from different perspectives, students then thought about "how to improve the health of the elderly", "whether visits to provide services would disturb the elderly", "what aspects of life would be changed for elderly who received visits and those who did not at the end of the course", etc. Thus the attitudes of students toward the elderly were improved.

During the service learning period, students gained greater respect for service, the efforts made by their teachers, the importance of the community of volunteers, and the hard work of enthusiastic volunteers.

Students learned that there were community elderly in need of care, identified the social problems, and learned that basic education, concepts, and work improved these problems. Vulnerable groups need love in addition to material support. Learning to help the elderly living alone, students become more confident in their ability to provide care. Service learning enhanced empathy, self-satisfaction, and knowledge of how to care for vulnerable people and how to communicate with others. Service learning is expected through the process of sharing to reduce future occurrence of medical malpractice.

CONCLUSIONS

Traditional medical education including classroom teaching and internship training cannot meet the needs of those with chronic diseases, especially the elderly (Shapiro et al., 2009). More and more scholars have recommended exposing students to real patients as early as possible during training (Shapiro et al., 2009; Borges & Hartung, 2007). In Shapiro’s study (2009), students taking the course "long-term community care" noted that

the elderly were in fact their teachers. Second-year medical students visited chronically ill patients on average of 4.4 times during eight months. The course was highly rated by students for its impact on enhancing their appreciation for patient-centered care, improving their knowledge of community resources, and improving their understanding of the roles of allied health professionals. In Borges' study (2007), first-year medical students spent six hours helping to prepare and serve food to clients at community-based agencies. Most students endorsed volunteering their time to assist the indigent. Our project involved more students and longer and repeated home visits (at least six times or 14 hours per semester). Through direct experience, students can learn and improve communications and interpersonal skills, decision-making and critical thinking skills, and processing and self-management capabilities.

The American Association of Medical Colleges includes altruism, compassion and empathy, trust and honesty among the qualifications of twenty-first century physicians. Effective communication increases the level of satisfaction of both doctors and patients, supports the treatment program, and facilitates the making of more appropriate medical and policy decisions. Service courses teach students to pay attention to the cultural and ethnic background sensitivities of their patients (Klig, 2005). Crandall and Marion (2009) believe that use of effective communication tools and multiple opportunities to practice these skills paired with constructive feedback provided by educators will preserve and enhance student attitudes. In our project, students were able to overcome the language barrier, identify subjects of conversation, and reduce the barrier to student-elderly interaction by being willing to listen.

Though negative attitudes toward medically underserved patients have declined (Crandall & Marion, 2009; Chen, Lew, Hershman, & Orlander, 2007), empathy level was reported to be highest in first-year students but lower by the end of internship and throughout residency (Chen et al., 2007). The attitudes of students in traditional or problem-based learning curricula become increasingly negative over the four-year period of study (Prince et al., 2000; Seabrook, 2004) and are not influenced by the preclinical curriculum. A lack of attending and resident role models and time pressure were described as major barriers to empathy (Afghani et al., 2011).

The present study has a few limitations. The reflections of students who visited elderly living alone program were self-reported. Similar to other studies (Leung et al., 2007), our study found it difficult to determine 'real' feedback outcome even by objective assessment. Long-term outcomes are often difficult to obtain. Further research on community service volunteerism before college admission may predict a change in social attitudes. Such an achievement requires proper supervision and guidance.

Through experiencing, students learned to recognize the differences between the living environment of others and their own living environment, view things from a new perspective, communicate with others, and then change themselves. Experiencing also improved doctor-patient communication and increased the student's capacity for empathy, ensuring that students will look forward to their future as medical practitioners.

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