

## Student and Community Outcomes in Service-Learning: Part 2—Community Outcomes

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### ABSTRACT

This article is the second of a two-part series reporting outcomes from a service-learning program implemented in a bachelor of science in nursing program. Part 1 (on pages 512-515) described students' perceptions of outcomes realized from the program, and Part 2 describes the community outcomes. The purposes of the program were to provide students with history-taking, blood pressure, and heart rate assessment skills, and beginning counseling skills, as well as to provide the university community with blood pressure screening and counseling in a convenient and accessible location. Data on community outcomes were collected on a continual basis during the hypertension screening and counseling program implementation. Clients were anonymously surveyed on health behavior actions taken after their screening and on the screening process. More than 700 client screenings were performed over 2 years, with positive health behavior changes being reported by clients.

Service-learning is a well-established method to provide services to a community while also providing students with real-world experiences. Service-learning initiatives are growing in nursing as academia strives to meet the missions of the both the nursing profession and schools of nursing.

As described in Part 1 of this two-part series, research on both student and community outcomes within the same service-learning program is lacking in nursing. In 2001, Indiana University School of Nursing received funding to implement a campus hypertension screening and counseling program. Part 1 described the history of the program, the program set up from the student perspective, and student outcomes realized from the program. This article will concentrate on the research design, data collection, and data analysis of the community outcomes from the same program.

### Program Overview and Client Flow

Each 3-hour, weekly hypertension screening session was advertised via key contacts, e-mails, flyers, and the School of Nursing Web site. The time frame was either 9 a.m. to 12:00 p.m. or 10 a.m. to 1 p.m., depending on instructor and student schedules. These time frames allowed clients (i.e., staff and faculty) to attend the screening during morning break or lunch.

Rooms were reserved at various sites on campus on a rotating basis to provide for easy access on the large university campus. On entering the screening site, clients were greeted

by students or faculty and asked to sign in. Clients were assigned a code number to comply with Institutional Review Board procedures. Clients were also asked to provide a campus address, if available for a follow-up survey, and an e-mail address. Individual nursing students then escorted clients to a seating area and gathered a brief client health history, including a hypertension risk factor assessment. After gathering the data, the student took the client's blood pressure reading and apical heart rate, recording both on the health assessment form and a card that clients received. The client card was a wallet-sized card that allowed clients to record multiple readings; it also contained contact information for the School of Nursing faculty and normal blood pressure and heart rate values.

After clients signed an informed consent form, their data were entered into a database according to the client code number. The purpose of the database was to track health information for clients and to run aggregate descriptive statistics to aid the program evaluation portion of the research, when necessary.

If a client's blood pressure and heart rate were normal and his or her risk assessment was low, the client was free to leave if he or she had no further health questions. If an abnormal reading was assessed for either blood pressure or heart rate or if the client needed risk-factor modification, the faculty member would reassess the client's blood pressure and heart rates, examine his or her risk profile, and counsel the client appropriately. Any client who answered yes

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to the smoking risk factor automatically received information about the university's free smoking cessation program. In addition, any client with very high blood pressure was immediately screened for signs and symptoms of stroke.

University and community referral patterns were implemented to accommodate the range of clients encountered in the program. Students were referred to the university health center and, in some cases, a family practitioner. Full-time university employees were referred to family practitioners or cardiologists, if appropriate, as well as university wellness services offered by the health center. Noninsured, part-time employees and visitors were referred to city and county services.

## Research Design

After Institutional Review Board approval for both the student and community components, a prospective, descriptive research design was used to collect data. Procedures and results for community outcomes are presented in this article.

## Data Collection

Data were collected using anonymous surveys via campus mail. The survey contained items about health behavior changes and quality of services received, as well as open-ended questions. Data collection for this analysis began in January 2002 and continued until May 2003. The surveys were sent approximately 2 to 4 weeks after screening to allow clients to report any changes they had made as a result of their counseling. Minor changes in the survey were made during the data collection period to make the survey more user friendly and to improve the quality of data being collected.

A total of 917 client screenings were completed during the study period. A total of 553 surveys were distributed and 296 were returned, for a 54% return rate. With 296 surveys being completed for 917 screenings, 32% of all client screenings were evaluated by the clients.

Of the 203 surveys distributed in spring 2002, 88 were returned, for a return rate of 43%. In fall 2002, 152 surveys were distributed and 88 were returned, for a return rate of 58%. In spring 2003, 198 surveys were distributed and 120 were returned, for a return rate of 61%.

## Data Analysis

Survey items with forced response choices were analyzed using frequen-

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cy distribution techniques. Open-ended items were analyzed using a frequency analysis of key code words.

## Results

### Health Behavior Data

The results across both program years show that the hypertension screening and counseling program prompted clients to take action to lower their blood pressures or to reduce their risk for high blood pressure. Clients initiated a variety of actions, including diet change, weight loss, exercise, and scheduling an appointment with their health care practitioner.

The survey was modified for the spring 2003 data collection cycle to include data on whether client action plans were successful in lowering

blood pressure. This is critical data because it directly links the service-learning program to not only behavior change, but also the ultimate goal of lower blood pressure or risk for high blood pressure. Of the 51 clients who received counseling, 20 (39%) had already lowered their blood pressure or risk for high blood pressure.

## Process Data

The survey contained items to evaluate issues related to program mechanics, such as sufficient personnel and convenience of session dates, times, and locations. The process indicators were encouraging, with 99% to 100% of clients rating the dates, times, locations, and availability of personnel positively.

In the open-ended portion of the survey, a few clients did provide additional information about crowding at location sites and about the skill performance of some students, both positive and negative. In addition, clients suggested other services that would be beneficial to them, such as blood glucose and cholesterol screening.

## Discussion and Implications

Through some minor survey modifications, actual health behavior changes and blood pressure changes directly resulting from the counseling were able to be determined. The session locations and times and the availability of personnel to facilitate the process were evaluated very highly. Ratings on these screening process items and the number of clients screened reveal that the screenings removed barriers to accessing this key health service.

After fall 2002, a decision was made by the faculty participants to intensify counseling on risk factors for hypertension, even if clients were not hypertensive. The result was a significant increase in the number of clients who received counseling. The most critical goals of the program are reflected in clients' responses to the items on taking action and their success. These data were best captured on the spring 2003 survey, which showed that nearly 63% of those who

had received counseling had taken action to reduce their blood pressure or their risk for high blood pressure by the time they completed the survey. In addition, at the time of the survey, 39% of clients who had received counseling had noted success in lowering their blood pressure or risk for high blood pressure.

Bellack and O'Neil's (2000) review of the 1998 Pew Health Professions Commission's final report urged more links between education and practice or service sectors. The goal of these links is to prepare future nurses to deliver contextually relevant care in community settings. Similarly, Keefe, Leuner, and Laken (2000) reported on the ability of service-learning to integrate research, practice, and education. Because the philosophy of service-learning combines the desire to fulfill a community need with fulfilling educational objectives, service-learning can be an effective tool for accomplishing some of the recommendations made by the Pew Health Professions Commission.

There have been several nonresearch reports in the literature about health care delivery models using service-learning concepts. For example, Wood (2001) used free clinics to merge student learning experiences with a community need. Hurst and Osban (2000) described the model of a Nightingale Mobile Clinic where students deliver care to the community. Another report detailed a distance telehealth promotion project implemented by nursing students (Green et al., 2000). Finally, college-age students were the target population in a health promotion service-learning activity reported by Diebold, Chappell, and Robinson (2000).

Overall, this blood pressure screening and counseling program was highly rated and has been successful in meeting its community health goals. As a result of survey suggestions, the

School of Nursing has secured funding to implement blood glucose screening to the campus and community as an extension of current services. The opportunity to partner with a variety of community resources is rich, and the potential for creating high-quality student and community outcomes is high. This research establishes

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service-learning as a viable method for improving outcomes in both nursing education and the community.

### Conclusions

This research was conducted on clients in one university community and is not generalizable to all communities. In addition, the researchers were not able to survey clients who were screened but who did not have a campus address. However, the researchers were able to send surveys to 553 of the 917 clients screened (60%) and experienced an overall survey return rate of 54%. Therefore, the researchers were satisfied with the amount of data received to evaluate the effectiveness of the program. De-

spite some of the limitations, positive outcomes were realized for many clients who would not have otherwise received this service.

This research demonstrates that service-learning in a baccalaureate nursing program can result in a number of positive community outcomes. Students perceived gains related to skill improvement, counseling skills, and professional role socialization, as well as development of civic responsibility. For the community, changes in health behaviors that resulted in lowered blood pressure, reduced risk for high blood pressure, and an overall healthy lifestyle were realized. Larger-scale studies are needed in other kinds of service-learning programs to further substantiate the value of such programs for undergraduate nursing students and to provide larger datasets for the demonstration of community health outcomes.

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