Exploring the Costs and Benefits Drivers of Clinical Education

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Objective. This study was designed to identify monetary and nonmonetary costs and benefits, as well as their drivers, to assist persons in clinical sites who are implementing clinical education to minimize costs and maximize benefits.

Method. Qualitative research methodology involved students, student supervisors, administrators, and patients in a hermeneutic dialectic process of identifying costs and benefits of Level II fieldwork in three clinical sites.

Results. Different costs and benefits were identified by the different groups of respondents. Drivers, or causes, of these costs and benefits reflected unique environmental factors in each site of data collection as well as common factors across the sites.

Conclusion. Clinical education may be enhanced and stress reduced for all persons involved in clinical education through improved communication, structure, education, and support.

O ccupational therapy students are dependent on practitioners in clinical environments to provide them with experiences necessary to integrate and apply theory to practice. The monetary costs and benefits associated with clinical education have been identified in the literature (Chung & Spellbring, 1983; Page & MacKinnon, 1987; Porter & Kincaid, 1977; Schauble, Murphy, Cover-Patterson, & Archer, 1989; Shalik, 1987). The net monetary cost benefits to facilities that provide clinical education to students are (a) revenue generated by students who provide treatment to patients and (b) increased revenue generated by therapists who are freed by students from performing clerical and administrative tasks. However, changes in health care environments, including increases in the number of students seeking clinical education and in the demands for productivity in patient treatment, have created new demands for practitioners responsible for the clinical education of occupational therapy students.

In previous cost-benefit analyses, the use of an a priori theory limited costs and benefits to those that could be monetarily quantified. The rigor required for generalization of conventional research has negated the relevance of factors that may be contextually meaningful, such as nonmonetary costs and benefits of therapists, students, patients, and administrators who have a stake in clinical education. This study was designed to identify monetary and nonmonetary costs and benefits, as well as the drivers of these costs and benefits. Identifying the drivers of costs and benefits may assist persons in clinical sites who are implementing or planning to implement clinical education to minimize costs and maximize benefits to all of the stakeholders in the clinical site.

Methodology

This study used the qualitative research methodology of naturalistic inquiry to collect and analyze data from three clinical education sites over a 6-month period. Study participants included 19 administrators and student supervisors; 14 occupational therapy students who were completing first, second, or third rotations of clinical education; and 6 patients who were being treated by the students.

The major methods of data collection were observation, individual and focus group interviews, and documents review. Data collection and analysis were done simultaneously with a constant comparative method (Glaser & Strauss, 1967; Lincoln & Guba, 1985; Strauss & Corbin, 1990). Each piece of data was grouped with similar pieces of data until clear categories that were salient to the research concern emerged. These categories provided the skeletal shape of the information needed to understand the costs and benefits drivers of clinical education. The data led to additional questions and responses that gave flesh to the skeletal shape by providing
a collaborative understanding of costs and benefits drivers of clinical education.

Trustworthiness techniques used to establish rigor for the qualitative research were prolonged engagement, persistent observation, peer debriefing, negative case analysis, progressive subjectivity, and member checks (Guba & Lincoln, 1989). Prolonged engagement was achieved by spending 6 months, or two rotations of clinical education, at each site in order to build a rapport with respondents and gain an understanding of the culture of the setting. Persistent observation, which gave depth to the study, was achieved by multiple observations and interviews with each respondent. This technique led to improved understanding of costs and benefits drivers affecting stakeholders of the clinical education process.

Two peer debriefers, disinterested parties with knowledge of the methodology and understanding of the research questions, were used throughout this study. By posing questions and suggestions, the debriefers helped focus the inquiry and kept my work consistent with the methods of naturalistic inquiry.

Negative case analysis involved looking for alternative constructions, or views, to those most often stated by respondents. As respondents generated these alternative views and discussed them with me and each other, respondents either modified their views as a result of new knowledge, or continued to hold their different views; in either case, they acknowledged that other views were also valuable in understanding the costs and benefits associated with clinical education.

Progressive subjectivity occurred when my own construction changed as a result of being better informed by respondents. Member checks provided the mechanism to ensure that a construction was in fact that of the respondent as he or she reported it. At the end of each observation or interview, data that I recorded were reviewed with the contributing respondent. Respondents either verified the accuracy or elaborated on their concerns and clarified their viewpoints. At the conclusion of the study, drafts of the final constructions of costs and benefits drivers of clinical education were distributed to all respondents for their agreement regarding data accuracy. This procedure led to additional clarification, which continued until all respondents agreed that the final construction was accurate, regardless of whether they agreed with the views of others. An audit trail referenced each piece of data reported by respondents to its source. The sources of all data have been kept anonymous.

Results

The results of the analysis indicated that students, student supervisors, administrators, and patients constructed costs and benefits drivers differently. Summaries and comparisons of costs and benefits drivers appear in Table 1.

The costs and benefits drivers were considerably different among student supervisors both across the three clinical sites and within each site. Stress was a nonmonetary cost for all student supervisors, but this stress was driven by different situations indigenous to each site. In some sites, student supervisors identified external pressures to lower standards for student performance so that students who performed poorly would pass the clinical education experience. In two sites, student supervisors reported feeling stressed by organizational structure over which they believed they had little control. In two sites, there were conflicting constructions of nonmonetary cost drivers among student supervisors and their administrators in the organization, which created additional stress for therapists, students, and patients in the sites. When these types of conflicts existed, students identified them as contributors to a stressful clinical education experience.

There were some similarities among student supervisors' constructions of nonmonetary cost drivers. Students' egocentrism and dependence on their supervisors drove costs in all three clinical sites. Some students' beha-
viors, such as delayed response to treatment team members (especially when this was mentioned by other health care providers), contributed to the student supervisors’ negative image of the profession. Student supervisors had to take their own work home in the evenings as a result of the time they spent supervising their students during the day. Although student supervisors from all sites agreed on these drivers of nonmonetary costs, administrators did not identify these drivers. However, administrators agreed that students might be a cause of frustration to student supervisors.

All student supervisors identified the same monetary costs. Student supervisors and administrators agreed that there was minimal cost associated with providing students materials such as manuals and supplies in the clinics. Greater costs were associated with space needed for students in the sites, especially when space was scarce. Another cost was lost revenue driven by the need for student supervisors to spend time educating students instead of treating patients. When students were assigned the task of preparing patients’ charges, they missed some of the charges due to inexperience with the billing process.

Student supervisors and administrators agreed that monetary benefits were gained from students treating patients, especially after students completed the first half of a clinical education rotation. Cost savings resulted from hiring students to become staff therapists in the sites studied.

Identification of nonmonetary benefits of clinical education was similar across sites. Student supervisors said they experienced satisfaction and increased knowledge because of their work with students. Students gave their supervisors positive feedback, and supervisors believed that they were doing a service to the profession by educating future clinicians. Student supervisors kept current in treatment techniques and research related to patient care so that they would be better able to teach their students. Students brought new ideas with them to the clinics and completed projects and assignments that were beneficial to their supervisors. When students were performing well, their supervisors had additional time to spend with patients or in other related activities. Students were credited with bringing a freshness and new enthusiasm for clinical practice, which some of the student supervisors identified as a benefit. Administrators in the three sites also tended to be in agreement with these benefits of clinical education.

Students at the three sites identified similar monetary costs drivers, including housing, utilities, and food. All had to pay tuition to their academic institutions for credit hours they received for clinical education. These costs were driven by the requirement to complete assigned clinical education as part of their academic programs. Transportation was another monetary cost, because most students lived a distance from the clinical sites and incurred local transportation expenses. Some students traveled from another city or state for clinical education. Some students needed to purchase clothing to wear in the clinics because the clothes they owned were not suitable for the clinic. A few students lost revenue from jobs they either gave up or reduced hours for in order to devote their time and energy to their clinical education experience.

Students across the three sites also identified similar nonmonetary costs. Students experienced considerable stress as a result of their clinical education. This stress resulted in symptoms of illness and some absences from the clinic. As some students became more stressed, their performance worsened. This set in motion a vicious cycle in which the students’ stress led to poor performance, which in turn resulted in negative feedback from their supervisors. The negative feedback exacerbated the students’ stress and, in at least one case, was identified as the cause of student failure. Some of the drivers of stress identified by the students included being watched by supervisors; having trouble with critical thinking, time management, and communication; lacking skills in specific treatment techniques; fearing failure; having heard negative comments about the clinical education site or the supervisors in the site; dealing with the reality of very sick patients; and adjusting to the role of worker. Adapting from a student role to a worker role was especially difficult for students during a first clinical education experience. Just getting to work through morning traffic and working an 8-hr day were identified as being highly stressful. In addition, most of the students said they took large amounts of work home in the evenings.

Some students were more satisfied than others with their clinical education sites, and this satisfaction mitigated the stress they experienced. Students who were in a site that they had requested as their first choice for clinical education were more satisfied than students who were not placed in their first choice sites. Students who were in a site in which they were fairly certain they wanted to continue working after completing their clinical education were the most satisfied and the least stressed.

All of the student respondents agreed that they experienced no monetary benefits from being in the clinical sites studied. They did not identify future monetary benefits that would result from this education process. They did identify cost savings because they did not have to buy textbooks for clinical education. Several students said that their parents were supporting them through clinical education—another form of cost savings.

Nonmonetary benefits were similar for all students who participated in this study. Students learned skills necessary for clinical practice; they also learned more about themselves. Learning in the clinics was driven by exposure to patients and supervisors. Application of theories and techniques learned in school were integrated and given relevance in the clinic settings. Students in-
creased their confidence in their abilities when they were successful in treating patients and received positive feedback from supervisors. Students identified contact with supervisors as helpful in shaping both a professional image and a sense of belonging to a professional group. Some of the drivers decreasing stress identified by the students were receiving a good orientation to the site; having other students with whom to share the clinical education experience; and receiving manuals and handouts that specified expected performance in the sites. Almost anything that increased the structure of the clinical education experience was considered a stress reducer by students.

Costs and benefits identified by the patients were different from those of the other groups of respondents. Patients discussed major monetary costs due to illness and treatment that were not specifically related to treatment in a clinical education environment. They identified nonmonetary costs associated with separation from families and loss of functional abilities due to their illnesses. However, patients identified benefits resulting specifically from the services they received in a clinical education environment. They learned about their illnesses or injuries from supervisors’ explanations to students about the treatment process. Patients said that if a supervisor trusted a student, the student must be capable of doing a good job and that the treatment he or she received from that student was of good quality. Patients saw little difference in skill levels between students and student supervisors. Some patients identified differences in attitudes between students and student supervisors. In the sites where student supervisors were more stressed by their working conditions, patients identified students as more enthusiastic than student supervisors about work.

Students and student supervisors identified different reasons for student failures. Student supervisors said that students were not adequately prepared for the work in clinic sites; that students had difficulty because of poor technical, problem-solving, and communication skills; and that students demonstrated inadequate self-awareness. Students said that failures were a result of inadequate supervision, poor communication, inadequate feedback, lack of structure, and personality clashes with supervisors. Students accepted responsibility for contributing to their own failures. Some of the student supervisors shared responsibility for student failures, saying that they could have intervened sooner to prevent failures.

Conclusion

Although the results of this study are not generalizable, information about costs and benefits drivers of clinical education may be useful to other clinical education sites.

Bureaucratic organizational structures of the three sites contributed to nonmonetary costs of clinical education for students and student supervisors. Decisions made at high levels of the organization were transmitted to persons at lower levels for implementation; however, persons providing direct services to patients believed that high-level decision makers were not adequately informed to make those decisions. The discrepancy between student supervisors and administrators regarding the drivers of costs and benefits appeared to be a result of inadequate communication across hierarchical lines.

When student supervisors were not satisfied with administrators of their work units, there was a direct effect on the clinical education of students; students who heard their supervisors talking about their dissatisfaction became stressed. Student supervisors who were the most stressed seemed to be the least satisfied with the responsibility of educating students. When student supervisors were cohesive with other supervisors in their work units, clinical education was a positive experience for students. Student supervisors’ report of satisfaction with autonomy in their work and with their relationships with each other and with their administrators seemed to result in the best environment for providing clinical education to students.

As data collection for this study progressed, respondents began to make changes in their environments. Communication improved among respondents, and more structure was provided for students in some sites. Administrators’ concerns with what was occurring in clinical education sites appeared to increase. Some of the changes that were made to improve clinical education appeared to be the result of the interactive nature of the research methodology used in this study. Naturalistic inquiry seemed to be the catalyst for turning ideas expressed by respondents into actions that would maximize benefits and minimize costs of clinical education.

Recommendations

The goals of cost-benefit analysis are to maximize benefits and minimize costs. On the basis of this study, the following six guidelines are recommended to facilities that want to establish or improve existing clinical education programs and reduce stress to all persons involved.

1. Establish effective communication between administrators and student supervisors related to worker satisfaction. Informal and consistent communication between administrators and subordinates lessens stress in the work environment and enhances clinical education.

2. Decentralize decision making related to task performance within the clinic sites, including decisions related to clinical education. Persons with direct contact with students in the work environment have the greatest information with which to make decisions about scheduling, supervising, and terminating students. Decentralized decision making allows decisions to be made quickly and...
to be made in response to changes in the environment. If decentralized decision making is not possible, the administrator responsible for making decisions should spend time in the clinic site and be willing to discuss and negotiate decisions with those subordinates responsible for carrying out the tasks of clinical education.

3. Offer education and support to supervisors. Student supervisors in clinics that have well-established, successful education programs, in which student supervisors and students have satisfying experiences, should share their methods with student supervisors in other sites who have less satisfying experiences. This sharing of information may be accomplished through supervisor support groups or individual mentoring of a new supervisor by a more experienced supervisor who enjoys working with students.

4. Provide students with a structured learning experience. A clearly defined structure for clinical education assists students in adapting to a work environment and maximizes their performance. Such a structure includes frequent formal evaluation of students so that the students know how they are performing. Students should also be accountable for tasks in the site; a checklist of performance expectations would be helpful to both students and their supervisors.

5. Establish criteria for student performance. Academicians who send students into clinical education sites should be aware of the requirements for student performance in each site. Students should be prepared to adequately perform tasks required in the clinic sites. Additional course content, including training in assertive behavior, critical thinking, and time management, may need to be added to improve student success. (In this study, students had more difficulty with general behaviors than with specific treatment techniques.)

6. Limit some clinical education sites to students who are in a second or third rotation of clinical education. (In this study, when a clinical site required specialized skills, students on a first rotation had great difficulty performing while adjusting to the new role of worker.)

References


