The Philosophy of John Dewey: How it can be Applied to Health Education to Increase Colorectal Cancer Screening

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This paper highlights ways that the writings of John Dewey may be applied to health education about colorectal cancer in the context of a tailored telephone educational program. Specific aspects of Dewey's philosophy considered include: (1) the role of the teacher as learner, (2) education as an empowering social process (promoting originality, independence, initiative), (3) the changing aims of education, (4) the dynamic nature of subject matter, and (5) the role of caring communication in education. Cases from this education program illustrate how the approach is non-traditional in that it is tailored to the participants by using a humanistic approach. Applying this philosophy to health education is significant because it is based on an important aspect that existing health education theories may not emphasize: the idea that one of the most important reasons why people change is because of trusting, genuine, interpersonal relationships.

Recognition that a caring and trust-building approach is needed for effective education is not a new concept. John Dewey (2004) articulated the humanistic approach to education, emphasizing interpersonal trust and including communication that is directed more by the learner than the educator. During educational discussion, a substantial amount of time may be devoted to talking about topics that are not directly, or even indirectly, related to the educational outcome objectives. This is because the effectiveness of educational efforts may be influenced to a great degree by the quality of the relationships developed from these interactions.

In this trust-building approach, a great deal of time can be spent by a health educator listening and empathizing with individuals about the reasons why they may not have practiced a preventative health behavior. Perhaps the greatest challenge to health educators is to understand these reasons and to help individuals make informed choices. Such understanding can only be achieved through a quality interpersonal relationship. This study explores ways in which the writings of John Dewey (1975, 1990, 2004) can be related to health education in the context of an education program for promoting colorectal cancer screening using the telephone as a communication medium (Brouse, Basch, Wolf, Shmukler, Neugut & Shea, 2003).

Despite the fact that death is almost entirely preventable through early detection and treatment, colorectal cancer is the second leading cause of cancer death, resulting in almost 60,000 deaths per year in the US (Greenlee, Murray & Thun 2001). The main forms of screening related to this disease are the fecal occult blood test, in which an individual's stool samples are laboratory-examined for trace amounts of blood, and the flexible sigmoidoscopy or colonoscopy, a procedure involving examination of the colon by a scope. Consensus recommendations stipulate that all individuals aged fifty and over should receive colorectal cancer screening (United States Preventive Services Task Force, 2002). Data show that people from lower socioeconomic groups (Morbidity and Mortality Weekly Report (MMWR), 1999;

Tong Hughes, Oldenburg, Del Mar, & Kennedy, 2000) and African Americans in particular are less likely to receive screening (Hoffman-Goetz, Breen, & Meissner, 1998; United States Department of Health and Human Services, 2001). Collectively, these data clearly show the need for educational programs to assist people in making informed choices about colorectal cancer screening.

There are several possible reasons why there are not higher rates of participation in colorectal cancer screening. The ways in which educational approaches have been conceptualized and implemented is one of many possible explanations. Nevertheless, it seems that none of the published intervention studies have used an approach that emphasizes Dewey's humanistic philosophy. This manuscript is not intended to provide definitive evidence that interventions based on Dewey's humanistic philosophy will produce all of the desired changes in population-wide rates of colorectal cancer screening, but it is intended to suggest that approaches based on this philosophy warrant development and testing. In the sections below, we outline aspects of Dewey's educational philosophy relevant to education and to health education about colorectal cancer screening, and consider how approaches based on his philosophy are different from approaches that have been used traditionally.

Dewey's Educational Philosophy

The specific aspects of Dewey's philosophy that are considered include (1) role of the teacher, (2) education as an empowering social process (promoting originality, independence, initiative), (3) aims of education, (4) dynamic nature of subject matter, and (5) role of communication in education. Following this discussion, a Deweyan approach to education is compared and contrasted with some contemporary health education programs.

Role of the Teacher

A variety of Dewey's (2004) ideas concerning the role of the teacher can be applied directly to educating individuals about colorectal cancer. One of the biggest challenges for a teacher is adapting education to the background, experience, and interests of the learner. To genuinely know an individual in this way takes time. In the health education program described below, a good deal of time was spent listening to individuals reflect on their lives and to assess what they wanted to know about colorectal cancer.

The health education program was offered to individuals in the New York City metropolitan area to increase rates of colorectal cancer screening. These individuals were contacted through a common membership organization. The sixty participants were over the age of fifty-two, and tended to have low levels of educational attainment and household income. This study and the larger study it was based upon were sponsored by the National Cancer Institute (CA-81932), National Institutes of Health.

An important mindset guided the role of the educator. While the goal of the project was to increase the rate of colorectal cancer screening, the goal of the educator was to motivate, enable, and support the individual to make an informed, self-determined choice about colorectal cancer screening. In addition, while certain health education and behavioral theories underlaid the work of the educator, the guiding principle was the importance of the social relationship between the educator and the individual: the rapport, understanding, and pleasantness of the interaction. The educator was both a teacher and learner.

On one hand, the approach to the program is seemingly antithetical to Dewey's philosophy in that there is a certain amount of educational information or subject matter that the educator is responsible to communicate. However, in the approach taken, this aspect is secondary. The educator did not view her role as a disseminator of information, but rather as a facilitator of learning. She recognized that much of the educational experience occurred within the heart of the learner, rather than the mind.

One of the most important concepts that guided the educator was that there were good reasons why the individual did not choose to receive colorectal cancer screening. Perhaps these reasons included lack of knowledge or understanding; perhaps they were fear and/or lack of social support. It was only through a sympathetic, or sometimes empathetic, approach that the educator could understand the rationales, rationalizations, and sometimes defense mechanisms that may impede informed choices and personal growth. In summary, the role of the educator was to help personalize and tailor the learning experience, provide the learner with some sense of direction, and serve as co-partner in learning.

Education as a Social Process that Promotes Desirable Powers

Another key idea in Deweyan (Dewey, 2004) philosophy embodied in the approach to health education used in this project was that there is a social process behind education. The intent of this educational experience was to promote desirable powers, namely originality, independence, and initiative (Dewey, 2004). The conversation was tailored to each individual's unique experience and feelings. While communication of a minimum level of understanding about the need for colorectal cancer screening was one of the objectives, no formal protocol was followed to allow for individual variation.

Originality. An emphasis on social process rather than educational subject matter presents problems for those interested in conceiving programs that can be easily replicated and widely disseminated (Dewey, 2004). There is no cookbook approach that can create a high quality social process tailored to interpersonal response and social context. The scientific process dominating educational research in general and health education research in particular tends to favor interventions that are rigid. These interventions emphasize dissemination of health education subject matter and the establishment of goals for the learner, rather than striving to help learners identify and achieve their own goals. The common approach to health education emphasizes ease of replication rather than the social process. The latter approach can, indeed, be replicated, but only through genuine caring, patience, and skill.

Fostering Independence. Another power within the individual, which the intervention aimed to cultivate, was independence (Dewey, 2004). One of the distinct ways that this health education program differed from virtually all others was that screening kits for conducting a home stool test were not distributed. A decision not to distribute screening kits was not only based on the limitations of this being implemented on a regular basis, but also because distributing kits might foster dependence (and require that the kits be distributed annually), rather than empowerment, independence, and taking initiative to obtain a home stool test kit each year.

The two procedures involved in colorectal cancer screening are quite different. The fecal occult blood test is a non-invasive, easy procedure, while the

colonoscopy is invasive and much more complicated. Another way in which the educational approach fostered independence was that, in the case of a colonoscopy, it required the participant to schedule the appointment. While it may have been easier in the short term to schedule appointments for individuals, requiring that they do so empowered them to take more responsibility for their health. This involved the learner in contacting a health care provider and scheduling an appointment to discuss screening.

It should be noted that individuals' choices to receive screening appear to have been based on very different factors. In some cases, the factor may have been improved knowledge and understanding, while in others it may have been recognizing and overcoming fear or denial, and in others it may have been based on a desire to fulfill verbal commitments made to the educator on the phone. But in all cases, the decision to receive screening was made independently.

Aims of Education. The goals of education are constantly changing (Dewey, 2004). This dynamic nature is influenced by the learner's interest and receptiveness to learning at a given point in time and the context of the immediate and larger environment. Having an attitude of openness and flexibility to change one's aims is extremely useful in health education because it allows the health educator to abandon preconceived aims and orient instead to making a strong connection with the learner, which is of ultimate importance.

It is no surprise that many of the interactions for this project on colorectal cancer screening had little to do with cancer or screening; interactions covered a wide variety of topics, such as other health concerns, family problems, cooking, hobbies, religion, and the events of September 11, 2001. By de-emphasizing the aim of cancer education and by using a caring approach of listening to the learner, longer-term educational objectives and the quality of the educational experience are enhanced.

Dynamic Nature of Subject Matter

According to Dewey (1975), subject matter is continuously becoming obsolete. For example, dietary recommendations of the 1950's are no longer advocated. Obsolete or inaccurate recommendations include: advocating the consumption of red meat, whole milk, and eggs; use of annual x-rays; use of numerous medications (DES, thalidomide, and even aspirin in relation to Reye's syndrome), the safety of tobacco, the healthfulness of body fat, and the safety of sunbathing. Therefore, as Dewey recommends, not only must subject matter change, but also, more importantly, the aim of education must shift from learning subject matter to increasing the power of the individual (Dewey, 1975).

One of the biggest challenges in contemporary society is dealing with health information overload. Media advertisements and health alerts daily extol the benefits of specific foods or supplements such as broccoli, tomatoes, vitamin E, garlic, omega-3 fatty acids, and soy. Regularly, health care spokespersons disagree, leaving the majority of consumers confused.

Health education that concentrates on increasing the power of individuals to critically evaluate information to identify credible resources for learning is more useful than memorization of facts that have a limited half-life. An example of this evolution of knowledge is that, in the past, the colonoscopy was considered only as a diagnosis and treatment procedure, but increasingly it is being used as a screening test.

Dewey (2004) argues strongly that communication is at the core of education.

Unfortunately, one of the reasons many children and adults are disenchanted with education is that much of the quality of interpersonal communication has seemingly been lost, resulting in a decline of the quality of life. Lack of high quality interpersonal interaction in the context of education may be an unfortunate consequence of our "progress" as a society. Perhaps if an educator takes a genuine interest in communicating with the learner, the learner will not only really enjoy the experience, but will learn a great deal as well (Noddings, 1984; 1992). This may be especially important when dealing with personal and emotionally charged subjects such as cancer.

Research in Context

We reviewed the literature to identify qualitative research on colon cancer screening. We identified a number of qualitative studies related to cancer and cancer education, but none of these specifically focused on assessing particular educational approaches.

Ashbury, Lockyer, McKerracher and Findlay (1997) conducted focus group discussions with fifty-eight cancer patients to describe their experience with symptoms, treatment and symptom management. Similarly, Ness, Holmes, Klein, Greene and Dittus (1998) conducted six focus groups with thirty-eight colorectal cancer patients to characterize the nature and scope of symptoms based on the patients' experience. Brundage, Leis, Bezjak, Feldman-Stewart, Degner, Velji, Zetes-Zanatta, Tu, Ritvo, and Pater (2003) conducted six focus groups with thirty-three patients who had recently completed treatment for cancer to determine the best methods to measure health-related quality of life, while O'Connor, Wicker and Germino (1999), after qualitative interviews with thirty patients, described how persons recently diagnosed with cancer search for meaning

Two other studies centered on the emotional impacts of cancer. Wilson and Fletcher (2002) described emotions of a fifty-year-old woman dying from colorectal cancer using in-depth face-to-face interviews and written correspondence with her. Kramish, Campbell, Meier, Carr, Enga, James, Reedy, and Zheng (2001) compared two methods of data collection, face-to-face and on-line focus groups, with twelve individuals affected by colon cancer to describe health behavior changes that occurred after being diagnosed.

Some studies, however, were oriented to primary prevention and to increasing screening. Peterson, Watts Koehly, Vernon, Baile, Kohlmann, and Gritz (2003) conducted a qualitative study of thirty-nine family members at risk for cancer to learn how families communicate about genetic testing. They found that family members were willing to share information and that family members who were persuaded to seek counseling and testing by the proband were most likely to seek such services.

Ramsey, Wilson, Spencer, Geidzinska, and Newcomb (2003) described attitudes and barriers toward genetic testing for cancer among cancer patients, relatives and community members formed by conducting focus group discussions. They found that misconceptions were widespread, but even after correct information was disseminated, most participants were still not interested in testing due to perceived risk among other factors.

Shankar, Selvin and Alberg (2002) conducted focus groups with health care providers and African American urban residents to improve understanding about beliefs and barriers to cancer prevention. Their discussions yielded consistent results between the two groups, namely that cancer

evoked fear and stigma, and that feelings of fatalism, misconceptions, competing priorities, and a crisis orientation toward health care served as barriers to prevention.

Jerigan, Trauth, Neal-Ferguson and Cartier-Ulrich (2001) conducted focus groups with older African American men and women to examine psychological factors that may influence cancer screening. They found that men and women perceive cancer screening in different ways and express different barriers that prevent or discourage screening.

Finally, Beeker, Kraft, Southwell, and Jorgensen (2000) conducted a qualitative study on colorectal cancer screening that involved conducting fourteen focus groups with men and women fifty years of age and older family members. These data were useful in generating a variety of hypotheses about barriers to colorectal cancer screening that warrant further study.

Collectively, these studies show that qualitative methods have been used to improve understanding about colon cancer and colon cancer screening, but we did not identify any published studies that specifically used qualitative research methods to assess particular educational approaches to colorectal cancer education and screening. Thus, little is known from a qualitative perspective about the impact that an educational approach that fosters caring would have on prevention and detection of colorectal cancer.

In the study presented here, the health educator used an informal and conversational communication style. The subject matter varied for each participant and was determined by factors centered on individual characteristics of participants. The participant guided the flow of the conversation, and the aim of the education often drifted away from cancer and cancer screening. There was an emphasis on creating a caring, trusting relationship between the health educator and the participant.

Cultivating such a relationship increases the likelihood that the learner will communicate openly about his or her fears and concern rather than responding in a socially desirable way. Understanding about fears and concerns, and the defense mechanisms that often accompany them, is very helpful in tailoring education to meet the needs of a given learner.

Methodology

This study describes aspects of Dewey's philosophy of education implemented in a tailored telephone educational program. The tailored telephone education program, which is described in greater detail elsewhere (Brouse, 2003), entailed repeated telephone conversations over a six month period with low-income urban residents who had not been screened for colorectal cancer in the past two years. A six-month time frame was imposed in order to create and foster independence as well as a matter of practicality.

A semi-structured educational approach was put into place to assess initial levels of knowledge, beliefs and preferences, and, where appropriate, correcting misconceptions. But the approach was tailored and influenced to a great extent by the learners and what they wanted to talk about. Excerpts from handwritten notes taken during the telephone conversations by the researcher are used to illustrate points in this discussion. A description of the study methods is available elsewhere (Brouse, Basch, Wolf, and Shmukler, 2004).

Findings

The First Case

Let us begin with excerpts from one of the telephone interview cases. When I (Brouse) first spoke with one fifty-seven-year-old female, she told me that she was unfamiliar with colorectal cancer screening tests. I described the tests to her, and she quickly stated that the fecal occult blood test was her preference because it was non-invasive. I explained how to get the test, and she made a verbal commitment to call her doctor within the month.

One month later, she told me that she had called her doctor, and he said that she needed to come in for an office visit. She made an appointment to do that, at which time she planned to get her three-day fecal occult blood test. She had questions about the colonoscopy, which her doctor encouraged her to think more about. She decided that she did not want to have that test, and that she was going to "stick to requesting the three day kit for the time being." She decided that she would have the colonoscopy if her results from the fecal occult blood test were positive. We discussed her weekend plans, and I felt that we developed a friendly relationship.

She decided to skip going to the doctor and get the fecal occult blood test from the lab at work. I recommended that she speak with her doctor about this in case she needed follow up care. She said that she would speak with her doctor only if the test came back positive. She was grateful that I supported her decision.

When I followed up to see if she got the kit at work, she told me that she had. In the meantime, she called her doctor to ask him a question about it, and she claimed that he was "ignoring her." She expressed that she was incredibly frustrated by this and she exclaimed, "He doesn't even want to help me do something good." I suggested that she choose a new primary care physician and she stated, "That's exactly what I want to do." She was reportedly going to spend the next few weeks deciding on a new doctor to see. At this point, she decided that she would wait to complete the fecal occult blood test that she picked up from the lab, and get one from her new primary care physician.

When I followed up with her, she was happy to report that she had chosen a new doctor, and had already booked an appointment. She would ask her for a fecal occult blood test. Unfortunately, the appointment was scheduled one day after her six-month intervention period ended. When I told her that I would not call back, she exclaimed, "Please don't give up on me!" I reassured her that I was proud of her for getting a new doctor, and maintaining an interest in colorectal cancer screening. I clarified that I was not giving up on her, and let her know that I had faith she would complete the fecal occult blood test.

This case was not unique. Like other participants, this person was unfamiliar with colorectal cancer screening tests. After learning about the alternative tests, she preferred the fecal occult blood test for its non-invasiveness. She did not want to have a colonoscopy test and would "stick to having the three day kit." She was assertive as evidenced by her choice to select a new physician. Her words, "Please don't give up on me!" are telling. They indicate that she valued our relationship and did not want to let me down. This also illustrates, however, the limitations of the caring approach used in this project.

While we proposed that caring was a cornerstone of the approach taken, the nature and extent of caring was limited by the context of the project. For example, the education and support was only to be provided for a defined period of time (six months). From this perspective, the

participant might justifiably feel that the educator only cared about them for the allotted amount of time, which amounts to not truly caring in a deep and meaningful way. Nevertheless, within the context of a time limited educational program, we believe that a caring approach is an important aspect of education that shows respect and concern for the learner.

While the participants have to take the initiative to obtain and take the fecal occult blood test or to make and attend appointments for a colonoscopy, the educator takes the initiative to call the participant. Some individuals would not take initiative to seek cancer screening without the educator's intervention. The possibility of cancer understandably evokes fear. Likewise, the screening procedures themselves, whether dealing with one's stool or subjecting oneself to a potentially dangerous and scary procedure, are not the kinds of activities most individuals opt for. Nevertheless, this health education program is designed to promote individual initiative resulting in better health and independence. It is through understanding and patience that the educator attempts to cultivate such initiative.

A Second Case

When I first spoke with another subject, a sixty-three-year-old female, she told me that she was familiar with colorectal cancer screening tests and guidelines. I explained the importance of screening, as well as each of the tests. Her preference was the colonoscopy because of its perceived reliability. She made a verbal commitment to request a referral from her doctor within the month. Before the conversation ended, we briefly discussed her holiday plans.

I really enjoyed speaking with her. Despite the fact that she was familiar with the colorectal cancer screening tests, she was willing to speak with me further about the guidelines. I thought we developed good rapport, and looked forward to speaking with her again.

When I called her back one month later, we did not even speak about colorectal cancer screening for the first half of the conversation. We discussed issues in her personal life, namely her dissatisfaction at work. She stated, "I really appreciate all of your support. That's why I want to be part of this project." She proceeded to tell me that she had made an appointment for a colonoscopy for two weeks from then. I congratulated her for making the appointment and answered some questions for her about the test. She did not seem apprehensive about the test. I told her that I would be anxious to hear how it went, and she asked that I call her a few hours after the procedure. I assured her that I would. I gave her my number in case she had any more questions.

In the meantime, she contacted me and told me that she had to cancel her appointment because she could not get the day off from work. She was frustrated because the doctor to whom she was referred only had appointments on Wednesdays. She was upset that she would have to wait for a new schedule to come out at work to see when she could make another appointment. She asked that I call her in two weeks when she would have a better idea of when her appointment would be.

Two weeks later, she had rescheduled an appointment for a colonoscopy. She asked me the following questions: (1) Is it painful? (2) What happens if they find something? (3) How long does it take? I was considerate of her questions, and took the time to answer them as best I could. At this point, I began to sense that she was afraid of completing the procedure. I tried to calm her by discussing how beneficial it was, and she replied. "You always make me feel better about this. I

wish you could come with me!" I guaranteed her that I would call back to see how everything went after her appointment.

Much to her dismay, she had to cancel her appointment for the second time. Apparently, it was because she ran out of sick days and did not have any left; she told me that it was very hard for her to get time off, and reminded me that this was still a priority. She assured me that she would have an appointment as soon as possible. She informed me that she had the same issues when she was trying to get a mammogram earlier in the year, but in the end she found the time to complete one.

When I spoke with her again, she told me that she made a third appointment. It was scheduled for a date one week before her intervention period ended. When I informed her of this, she told me that she was confident that this time, she would be able to attend her appointment.

The last time we spoke was right after she had attended her third scheduled appointment (the only one she kept). She told me that she was okay, but she did not feel like discussing it. I told her I understood, and told her that I was proud that she completed the test. She thanked me as well, and told me "I am happy I had your help to finish this."

One significant thing that can be gleaned from this case was the statement, "I really appreciate all of your support. That's why I want to be part of this project." This statement and the emotion it expresses illustrate how important social support is for some individuals, and how useful it can be in a health education program. It seemed that she did not have much other social or emotional support from others in her life. I was somewhat surprised when she asked me, a virtual stranger, if I could accompany her to her colonoscopy. Even though she said she was not afraid, I definitely sensed that she did have fears about the procedure itself and the possible outcome. This is very understandable to me, as a purpose of screening is to identify a problem before it is otherwise apparent.

Two other aspects of this case are noteworthy. First is that this person preferred the colonoscopy because of its perceived reliability. Second, her work responsibilities made it difficult for her to obtain the colonoscopy. A closely related issue is that where she received care, colonoscopies were only available on one day of the week, which in her case was not very convenient. These points illustrate the need to design health care to accommodate individuals' preferences and constraints.

Discussion and Conclusion

While this study does not provide any conclusive definitive findings regarding the best approaches to improving public health through education, it makes the case that educational approaches that emphasize respect and caring for the learner warrant consideration. Such an approach recognizes that the goals for public health specialists and those of a particular population of learners may be different, and failing to consider the latter will make it hard to achieve the former. Therefore, to the extent that public health specialists want to integrate such an approach into their practice, they must be willing to take the time to listen to what the learners have to say, try to understand why they think and feel the way they do, and adapt educational methods and content in a way that shows respect for the learner's point of view. Failing to do this will not only result in a greater chance of alienating the learners, but will reduce the chances for success in reaching public health goals.

The philosophy and methods of John Dewey seem directly relevant to health education in general and health education

about colorectal cancer in particular. While Dewey's work was oriented to elementary and secondary education for children and adolescents, many of his concepts and methods can be applied to health education with adults. The dynamic interactions between the educator, the learner, and the educational subject matter are occurring no matter how young or old the learner may be.

This analysis of the applicability of Dewey's work to health education is no doubt limited in scope. The limits are set by the incomplete extent to which his work has been examined. Nevertheless, it seems clear that health education programs might benefit from a greater consideration of the philosophy and teaching/learning methods conceptualized and implemented by John Dewey. Health educators may benefit from reviewing the work of John Dewey and returning to a stronger emphasis on the historical goals of promoting self-determination.

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