

Determining features of peer health education in recovery coach-patient interactions at the
Vanderbilt Addiction Clinic

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Background

The homeless community is comprised of vulnerable individuals with unique health care needs, stemming from chronic exposure to environmental hazards, malnutrition, limited access to health care, and limited health literacy (Hibbs, 1994, p. 304, p. 307-308). The estimated mortality rate of homeless individuals is nearly four times higher than that of the general population (Hibbs, 1994, p. 307). In Nashville, an estimated 22,000 people were lacking permanent shelter in 2017 (Craig, 2018). My overall long-term objective is to improve the health outcomes in the Nashville homeless population through implementing community-based health education initiatives.

Preliminary literature review of published community health education initiatives revealed peer education as a method for engaging people who are experiencing homelessness. To design a peer health education program in Nashville, however, further investigation into what the peer-to-peer interaction looks like and how learning theories can be applied to optimize peer participation and learning was needed. Although articles have documented how the health professionals recruited and conducted education sessions with peer educators or community leaders, what the peer-to-peer interaction looked like has not been well described in peer health education literature. The problem of practice is that there is a gap in existing literature on theory-based elements of peer-to-peer health education interactions. What typically occurs in peer health education interactions and what *needs* to happen for meaningful learning should be investigated to inform future peer health education designs. My research question is *what are key*

components of peer (health) education interactions that can be used to design future community peer health education programs?

Peer health education

Peer education is defined as “people of similar social groupings who are not professional teachers helping each other to learn and learning themselves by teaching” (Tzu-Chieh et al., 2011). “Peer education” differs from “peer support” or “mutual help”. In the case of “mutual help”, all participants are giving and receiving support, such as the premise of 12-step organizations (Jack, 2018, p. 307). In contrast, peer education is more unidirectional (Jack, 2018, p. 307). Peer education has been applied to a range of topics and settings, including schools, colleges, youth centers, community settings, and informal networks (Turner and Shepherd, 1999, p. 236). Turner and Shepherd (1999, p. 236-237) conducted a review of peer education literature and found that commonly cited rationale for using peer education include (1) cost effectiveness compared to other methods, (2) credibility of peer educators in the eyes of peers, (3) empowerment for peer educators, (4) using an “already established” route of information sharing, (5) peers identifying with peer educators, (6) peer educators serve as positive role models, (7) information presented by peers is more acceptable, (8) peer education can educate those who are “hard to reach”, and (9) peers provide reinforcement through ongoing contact. In health promotion efforts, peer educators have had positive effects on peer health outcomes (Thom, 2013; Bassuk 2016) and have reported greater sense of empowerment in the process (Connor, 1999)

Peer education interactions at the Vanderbilt Addiction Clinic

To investigate the elements of peer health education interactions, I performed site visits to the Vanderbilt Addiction Clinic between Jan – March 2020. Hospital patients with substance

use disorder at the Vanderbilt University Medical Center may be referred to the Vanderbilt Addiction Clinic after discharge if the patients' existing disposition options are deemed non-optimal for recovery success. Vanderbilt's Addiction Clinic model was recently established in May 2019 and is one of the few multidisciplinary transitional programs for substance use disorder in the country. At their weekly visits, patients are seen by members of a multidisciplinary team, including a primary care physician, psychiatrist, social worker, and recovery coach. Recovery coaches are peers who have experienced addiction and recovery, trained to support addiction patients during their recovery process. I observed peer health education interactions between patients and their recovery coaches at the clinic over two months, in addition to conducting qualitative interviews with recovery coaches, to study key components of peer-education interactions that enable meaningful learning and behavior change.

Observations and interview findings

I conducted interviews with and observed the interactions of two of the three recovery coaches at the clinic. The interviews lasted approximately 20 minutes each. Interview questions included what motivated them to become recovery coaches, what their training consisted of, what their goals for patient interactions are, and what they believe are the key components of their interactions with patients. Both recovery coaches identified themselves as peer educators. They described that their primary goal for the patient interactions is to use their own experiences with addiction and recovery to help the patients in making their own goals and to support them in reaching their goals.

I observed three patient interactions with each recovery coach, for a total of six observations. These observations revealed three major themes: (1) use of personal experiences, (2) positive reinforcement, and (3) encouraging reflection. The recovery coaches used personal

experiences to introduce themselves and relate to the new patients, “I am a recovery coach, I have experience going through what you are going through”. They also used personal experiences before probing deeper into the patients’ motivations: “I’ve had a lot of experience with drugs, I want to hear what does it do for you? ... what does it do to you?”. One recovery coach also described difficulties in her own recovery process and that who she is now is “through the struggle”. Both recovery coaches also provided positive reinforcement messages for recovery efforts such as coming to the clinic or going to Alcohol Anonymous or Narcotic Anonymous meetings. Lastly, the recovery coaches encouraged the patients to reflect on their past recovery processes and identify potential factors that led to successes/failures, such as “how did you maintain sobriety when you were clean?”

Using theories for design

To better understand effective strategies for peer health education, I explored what is offered by the social interactions in *peer* education and examined how motivation of individuals may occur in this context.

Socially situated nature of cognition

Albert Bandura’s (1999) concepts of social cognitive theory is one of the most commonly cited behavior change theories in the health education literature. The social cognitive theory indicates that environmental factors, personal factors (cognitive, emotional, and biological), and behavior are constantly interacting. Bandura (1999) suggests that behavior is influenced by that person’s positive or negative reinforcements, self-control, perceived outcomes of behaviors and the values placed on those outcomes, and self-efficacy. Because these factors are modifiable, peer health educators can teach skills in goal-setting and self-monitoring (self-control), provide positive reinforcement (to influence perception about value/outcome of behavior), identify

potential challenges and build confidence in overcoming challenges (self-efficacy). The recovery coaches provide patients skills in self-control by helping patients set personal goals, provide positive reinforcement (“I’m really proud of you for going to the [NA] meeting”), identify potential barriers (“what will hold you back from going to [NA] meetings”?) and help patients think through how to overcome the barrier to build self-efficacy.

Related to Bandura’s proposal that behavior is influenced by the environment is Nasir & Cooks’ theory of practice-linked identity, where identity is defined as “one viewing participation in the practice as an integral part of who one is” (Nasir & Cooks, 2009, p.44). The identity resources, material (physical artifacts), relational (interpersonal connection to others), and ideational (“ideas about oneself and one’s relationship to and place in the practice and the world, as well as ideas about what is valued and what is good”), available in a community of practice affect newcomers’ trajectories of participation, identity, and learning (Nasir & Cooks, 2009, p.44). Providing material resources (workbooks, schedule of AA meetings, bus passes), relational resources (positive relationships between peer-educator and peers), and ideational resources (additional perspectives for understanding their health/disease or emotional skills) helps peers develop inbound trajectories for participating in the peer-health education interactions and in performing the health behavior.

Another resource provided by peer-health education is through cognitive apprenticeship (Collins and Kapur, 2014), which suggests that making both the teacher’s and the learner’s thinking visible can teach the thought processes that experts use to manage complex tasks or situations. Managing complex health behaviors, for example addiction recovery, can benefit from the recovery coach describing his/her internal processes when faced with a challenging scenario in the past. One of the recovery coaches demonstrated this process of “modeling”

(p.113) when she stated the difficulties she faced when maintaining sobriety and described how having faith in the recovery program helped her overcome these challenges. Peer educators may also encourage peers to examine their past/current internal processes when confronted with challenges, by practicing “reflection” (p.114).

Motivation of individuals

An important idea in motivation for individuals is the concept that actions are motivated by needs, which are hierarchically arranged from basic physiological needs to self-actualization needs (Maslow, 1981). According to Maslow, an unmet need leads to tension and a drive to fulfill the need. The 5-stage model of needs include physiological needs, safety needs, love and belongingness, esteem, and self-actualization. Understanding the hierarchy of needs and the motivation to achieve certain needs can help peer educators better promote health behavior changes, including framing health behaviors, especially substance use recovery, in terms of safety, and providing support to build a sense of belonging.

In addition, Deci & Ryan’s (1985, 2000) work on self-determination theory (SDT) emphasizes the importance of intrinsic motivation, which is inherent satisfaction or interest in the activity, over extrinsic motivation (doing an activity for a separate outcome), for persistence in an activity. Deci and Ryan (1985) also studied conditions that enable or undermine intrinsic motivation, and proposed the cognitive evaluation theory (CET), a subtheory within SDT, which focuses on the need for competence and autonomy. CET indicates that events that induce feelings of competence during an activity could enhance intrinsic motivation if it is also accompanied by a sense of autonomy (Deci and Ryan, 2000). Therefore, helping patients and peers with not only identifying potential sources of motivation but also with developing an

internal locus of control, could provide them with a sense of autonomy and competence to enhance intrinsic motivation.

According to Dweck (2007), a growth mindset enables one to stick to difficult tasks and recover from failures. Helping patients develop growth mindsets can help sustain health behavior changes. Bergen’s hypothesis regarding mindset change plays a role here; Bergen (1992) found that people who read an article about growth mindset changed their mindset and persistence when faced with setbacks. Peer educators can introduce explicit growth mindset messages, such as the recovery coach describing sobriety “it’ll be hard, but that’s how you grow” to develop growth mindsets.

How individuals interpret prior failures and successes influences their motivation for learning (Weiner, 1979). Weiner (1979) suggests that the perceived stability, locus, and control of the cause influences future expectations and motivations. Peer educators need to consider what factors peers attribute prior successes and failures to, as this may impact how much control patients perceive they have over their actions and health outcomes. Additionally, Demetriou (2011) suggests that reflecting on controllable reasons could improve future performance. Discussing the controllable causes for prior outcomes, such as the recovery coach probing “how did *you* maintain sobriety when you were clean?”, may help peers develop a sense of control over their health outcomes.

Summary of key implications for design

Table 1. Peer Health Education Strategies Consistent with Theories

Concept	Peer education strategy
Social cognitive theory	Teach skills in goal-setting and self-monitoring, provide positive reinforcement for positive health efforts, identify potential barriers, build confidence in overcoming identified barriers.

Practice-linked identity	Provide material resources (workbooks, schedules of AA meetings, bus passes), relational resources (positive relationship) and ideational resources (additional perspectives for understanding their health/disease or emotional skills) for inbound trajectories of participating in the health behavior.
Cognitive apprenticeship	Describe own internal thought processes when faced with challenging scenario in the past (modeling), encourage peer to examine their past/current thought processes when confronted with challenges (reflection)
Hierarchy of needs	Frame certain health behaviors in terms of safety and provide support to build sense of belonging
Intrinsic vs extrinsic motivation	Help identify sources of motivation, discuss why the behavior change matters to them
Growth mindset	Introduce explicit growth mindset messages
Attribution theory	Consider what factors peers attribute prior successes and failures to, reflect on controllable reasons together

Reflection

My interest in community health and patient education led to the desire to develop a community health education program. A literature review into existing community health education programs revealed peer-health education as a commonly adopted methodology with many advantages, but there existed a gap on what the peer-peer health education interaction looks like. I decided to observe existing peer-health education interactions and examine relevant learning theories. The purpose of this capstone project was to develop a set of strategies for peer health education interactions that can be implemented in future community health education settings.

While community-based peer-education interactions likely look different than those in a clinical setting observed here, the theory-based approaches identified in this project may be broadly applied to other peer education situations, including non-health related programs. I hope to receive input from recovery coaches regarding this set of strategies, and to work with community partners and peer educators in the future to refine and apply these for specific settings and health behaviors.

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Annotated Bibliography

Bandura, A. (1999). Social cognitive theory: An agentic perspective. *Asian journal of social psychology*, 2(1), 21-41.

Bandura reviews the basic premises of his social cognitive theory. He presents a triangle of reciprocal interaction between cognitive, affective and biological events, behavioral patterns, and environmental factors. Human behavior is influenced by and influences social systems. The concepts for what drives behavior serve as strategies for motivating behavior.

Bergen, R. (1992). Beliefs about intelligence and achievement-related behaviors. Unpublished doctoral dissertation. University of Illinois, Champaign-Urbana.

Bergen gave college students two articles, one that described intelligence as fixed and innate, one that described abilities as a result of actions and environments. Which article the students read influenced the students' theories of intelligence and their persistence when faced with failure. This study suggests that explicit growth-mindset messages can influence people's mindset regarding growth and change.

Collins, A. & Kapur, M. (2014). Cognitive apprenticeship. In R.K. Sawyer (Ed.) *The Cambridge Handbook of the Learning Sciences*, (Second Edition, pp. 109-127). New York, NY: Cambridge University Press.

Collins and Kapur applies the traditional apprenticeship model to complex cognitive tasks. The premise of cognitive apprenticeship is that making both the teacher's and the learner's thinking visible can teach the thought processes experts use to manage complex tasks or situations. Four domains are described: content, method, sequence, and sociology. The method domain describes the teaching methods that can be used in cognitive apprenticeship: modeling, coaching, scaffolding, articulation, reflection, and exploration. These teaching methods may be used to practice cognitive apprenticeship for complex health behaviors, such as substance use recovery.

Connor, A., Ling, C. G., Tuttle, J., & Brown-Tezera, B. (1999). Peer education project with persons who have experienced homelessness. *Public Health Nursing*, 16(5), 367-373.

Nurse practitioners identified barriers to providing health education to homeless patients and designed the Peer Health Education Project to overcome some of these challenges. The project's purpose is to increase health knowledge and empowerment of people who have experienced homelessness, who then served as peer health educators with others experiencing homelessness. The project increased empowerment and community participation of the peer educators, in addition to increasing health knowledge. What the education sessions between peer educators and community peers looked like was not described.

Demetriou, C. (2011). The attribution theory of learning and advising students on academic probation. *NACADA journal*, 31(2), 16-21.

Demetriou provides an overview of attribution theory of learning and a review of applications of the attribution theory to college student performance and advising. The article discusses recommendations for student advisors based on recent research, including reflecting on controllable reasons for prior academic performances leads to improved academic standing.

These potential applications of attribution theory may be very useful in health education settings, including peer health education.

Dweck, C. S. (2007). Self-theories: The mindset of a champion. In Morris, T., Terry, P., & Gordon, S. (Eds.), *Sport and exercise psychology: International perspectives*. Morgantown, WV: Fitness Information Technology.

Dweck reviews two theories of ability: entity theory, where people believe their abilities are fixed and incremental theory, where people believe their abilities grow and develop through effort and learning. While people with fixed mindset may reject learning opportunities if it may uncover their shortcoming, people with growth mindset seeks to set “learning goals” to develop their abilities. Since people in the growth mindset understand that effort is needed to grow ability, they are more likely to cope to difficulties and react productively to setbacks. Developing a growth mindset may play an important role in sustaining motivations for health behaviors.

Jack, H. E., Oller, D., Kelly, J., Magidson, J. F., & Wakeman, S. E. (2018). Addressing substance use disorder in primary care: the role, integration, and impact of recovery coaches. *Substance abuse*, 39(3), 307-314.

This study describes applications of peer education in health care and the role recovery coaches play in primary care management of substance use disorder patients. Through semi-structured interviews with recovery coaches and their patients, the researchers identified four core recovery coach roles: system navigation, supporting behavior change, harm reduction, and relationship building. Benefits and challenges of the recovery coach model were also described. This study helped me better understand the role and impact of recovery coaches from both the patients and the recovery coaches’ perspective.

Nasir, N. I. S., & Cooks, J. (2009). Becoming a hurdler: How learning settings afford identities. *Anthropology & Education Quarterly*, 40(1), 41-61.

Nasir and Cooks study an African American high school track and field team and provides examples of identity resources available to the student-athletes. Three types of resources for developing practice-linked identity are described. The material resources (physical artifacts), relational resources (interpersonal connections) and ideational resources (ideas about oneself and one’s relationship to the practice and the world, ideas about what’s good and valued) available in a community of practice impact one’s trajectories of participation, identity, and learning. Availability of these resources in a peer health education interaction or program could impact the extent to which peers take on the identity of practicing the health behavior or engaging in the interaction/program.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68-78.

The article reviews self-determination theory, which is a method for investigating people’s innate growth tendencies and psychological needs that lead to self-motivation, and the conditions that lead to them. It addresses that intrinsic motivation leads to greater performance and persistence than extrinsic motivation. Cognitive evaluation theory (CET) further examines the specific factors that lead to intrinsic motivation. CET proposes that both autonomy and competence support intrinsic motivation. Intrinsic motivation and CET may be applied health

education, where educators could help patients develop sense of autonomy and competence to enhance intrinsic motivation and sustain behavior change.

Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology*, 71(1), 3-25.

Weiner proposes that one's motivation is based on how one attributes past successes and failures. Three causal dimensions are identified: stability, locus, and control. Stability refers to whether the causal factor is perceived to change over time; locus is either internal or external, and control is whether the individual can control the causal factor. For promoting health behaviors, it is important to consider how the individual perceive the cause of prior outcomes in these three domains, since it shapes individuals' motivations and goal expectancies.