

# Popular education for health promotion and community empowerment: a review of the literature

NOELLE WIGGINS\*

Multnomah County Health Department, Community Capacitation Center, 10317 E Burnside St.,  
Portland, OR 97217, USA

\*Corresponding author. E-mail: ninanoelia@msn.com

---

## SUMMARY

While there is now general agreement that the most effective way to promote health and decrease health inequities is by creating more just economic, social and political conditions, there is much less agreement about concrete ways in which public health practitioners can work with communities to address inequities such as poverty, racism and powerlessness. Practical strategies are desperately needed. Popular education, also known as Freirian and empowerment education, has been used successfully to create more equitable conditions around the world for >50 years. Its use to improve health has been documented in the public health literature since the early 1980s. Nonetheless, it remains largely unknown and its potential unrealized in mainstream public health circles in the industrialized world. In

order to explore the potential of popular education as a tool to address inequities and improve health, a systematic review of the peer-reviewed international literature was conducted. Findings revealed that popular education is an effective method for enhancing empowerment and improving health. However, the existing literature does not provide empirical evidence that popular education is more effective than traditional education at increasing health knowledge and empowerment and changing health behavior. In order to fully understand the potential of popular education as a tool to eliminate health inequities and to advocate effectively for its use, further studies are needed that utilize mixed methods, participatory approaches and experimental or quasi-experimental designs.

**Key words:** determinants of health; empowerment; inequalities in health; health education; literature review

---

## INTRODUCTION

There is growing consensus that the most effective way to promote health and decrease health inequities is by creating more just economic, social and political conditions (WHO Commission on Social Determinants of Health, 2008; Frieden, 2010). The connections between health and social justice are increasingly apparent, whether in the form of relative income equality (Kennedy *et al.*, 1996), equitable workplace conditions (Zimmerman and Hartley, 1982; Karasek and Theorell, 1989) or racial/ethnic equity (Krieger, 1990; David and Collins,

1991; Krieger *et al.*, 1993). Much less clear, however, are concrete ways in which public health practitioners can work with communities to address inequities such as poverty, racism and powerlessness. Such strategies are desperately needed.

Popular education, also referred to as Freirian and empowerment education, has played a vital role in struggles for social justice in Latin America (Kane, 2001), the USA (Horton, 2003) and around the world (Walters and Manicom, 1996) for >50 years. With underpinnings in epistemology, political theory, ethics and pedagogy (Nuñez Hurtado, 2004),

popular education draws out and validates what participants already know and do, connects their personal experience to larger social realities and then supports participants to work collectively to change their reality. The use of popular education to improve health has been documented in the public health literature since the early 1980s. A well-developed theoretical framework posits that popular education can promote individual and community empowerment, an intermediate outcome in the pathway to improved health (Wallerstein, 1992b, 2002, 2006; Wallerstein and Bernstein, 1988).

Despite over 30 years of research suggesting that it may be a valuable mechanism for creating social justice and improving health, popular education remains largely unknown in mainstream public health circles in the industrialized world. One of the reasons for its relative obscurity has been the lack of a systematic review of the literature about popular education in a public health context. The purpose of the current review is to bring together the relevant public health scholarship about popular education in order to explore its potential as a tool to address inequities and improve health. In addition to discovering what is known and not known about the relationship between popular education and health, this review will provide direction as to what further research is needed in order to ensure that popular education can play an optimal role in health improvement.

## THEORETICAL BACKGROUND

### Popular education

While a full exposition of the history and current status of popular education is well beyond the scope of this review, a brief description is necessary before moving on to the methodology of the review. In the USA public health literature, ‘empowerment education’ has been conceptualized as synonymous with the theory and practice of the Brazilian educator Paulo Freire (Freire, 1973, 1978, 1985, 1993, 1997, 2003). While the importance of Freire to the diffusion and development of popular education can hardly be overstated, ‘popular education’ as used here is a broader movement that pre-dates Freire and has continued to develop since his death in 1997. This broader conceptualization of popular education potentially

overcomes some of the shortcomings that researchers have identified in a strictly Freirian conception (Minkler, 1985).

The name ‘popular education’ is derived from the Spanish *educación popular* (or *educação popular* in Portuguese). In Latin America, the definition of popular education has changed as the connotations of the word ‘popular’ have changed. In the early nineteenth century, consistent with the standard definition of *popular* in the Romance languages, ‘*educación popular*’ was used to refer to universal primary education (Bralich, 1994). By the early twentieth century, with Marxism influencing both Latin American society and language, students in several Latin American countries set up ‘popular universities’ that provided instruction in a wide variety of subjects and exposure to socialist practices to workers and farmers (Gómez and Puiggrós, 1986). The term ‘*educación popular*’ was also applied to efforts by military and political leaders such as Augusto Sandino and Lázaro Cárdenas to promote universal literacy and develop political consciousness among the dispossessed (Gómez and Puiggrós, 1986; Becker, 1995). This is the legacy that Freire inherited when he began his work in adult literacy in Northeastern Brazil in 1940s and 1950s (Wiggins, 2011).

In the USA, educator and organizer Myles Horton (Horton, 2003) eventually adopted the name ‘popular education’ to describe the work he had begun in the Cumberland Mountains of Tennessee in the 1920s. Horton’s Highlander Research and Education Center (formerly, the Highlander Folk School), founded in 1932, has helped to prepare generations of activists and organizers, among them, Dr Martin Luther King and Rosa Parks (Wiggins, 2011).

In recent years, popular education has exerted a strong influence on social movements, including the Zapatista National Liberation Front in Mexico, the immigrants’ rights movement in the USA and Brazil’s Landless Rural Workers Movement (Caldart, 2004; Cho *et al.*, 2004). As these movements use popular education, they develop and expand its definition further. Key proponents of popular education in a health context, such as Wallerstein (Wallerstein, 1992a,b, 2002, 2006), have also contributed significantly to the development of popular education.

Based on this historical understanding, popular education can be conceptualized as a

philosophy and methodology that aims to construct a just society by creating settings in which people who have historically lacked power can discover and expand their knowledge and use it to eliminate societal inequities (Wiggins, 2011). It is grounded in two equally fundamental beliefs—first, that the current distribution of power and resources in the world is unjust, and second, that change is possible. Values such as compassion, discipline and love for the cause of the people are at the heart of popular education (Caldart, 2004). Methods such as *dinámicas* (social learning games), *sociodramas* (social skits), brainstorming, simulations and problem-posing are important in popular education not only because they increase participation, but also because they embody the values of popular education and prefigure the type of society popular educators aim to create. A list of the principles of popular education is provided in Figure 1.

### Empowerment and health

In the public health literature from English-speaking countries, popular education has been presented almost exclusively within the context of empowerment. In the public health literature from Spanish- and Portuguese-speaking countries, the construct of conscientness-raising—*concientización* or *conscientização*—plays a similar role, although the two constructs are not the same and the word empowerment is increasingly used. Because the construct of empowerment is central to an understanding of the public health literature about popular education in many industrialized countries, I will provide a brief introduction.

The concept of empowerment has its origins in the work of community organizers such as Alinsky (Alinsky, 1989), who proposed that oppressed people needed to build ‘power coalitions’ to equalize conditions with other, more powerful groups (Wallerstein, 1992b). The first social science field to adopt the political philosophy of empowerment was community psychology, where advocates such as Rappaport (Rappaport, 1981, 1984) and Zimmerman (Zimmerman and Rappaport, 1988) proposed empowerment as an alternative to the paternalistic philosophy and practice that had guided social services since the nineteenth century (Swift, 1984). Subsequently, the concept has been applied to, and used within, occupational

and stress research and public health (Wallerstein, 1992a,b; Wallerstein and Bernstein, 1988). Empowerment is a key construct within progressive visions of health promotion. The World Health Organization’s Ottawa Charter for Health Promotion (World Health Organization, 1986) defines health promotion as ‘the process of enabling people to increase control over, and to improve their health,’ (n.p.) and identifies empowerment as the process through which increased control is achieved.

In public health, empowerment is conceptualized as a multi-level construct existing at the individual, organizational and community levels. Reacting against definitions of empowerment promulgated by the media and right-wing politicians, some theorists have questioned whether empowerment can reasonably be said to exist at the individual level. They have also contested the idea that one person or group can participate in or further the empowerment of another person or group (Bernstein *et al.*, 1994). Labonte has proposed a middle way, calling empowerment a ‘fascinating dynamic of power given and taken all at once, a dialectical dance...’ [(Bernstein *et al.*, 1994), p. 285]. Zimmerman has advanced the construct of *psychological empowerment* as an individual level variable that takes into account the social context (Zimmerman, 1990). Currently, empowerment in a public health context is conceptualized as including perceived control at the individual, organizational and community levels; sense of community; critical awareness of the social context (critical consciousness) and participation in change (Zimmerman, 2000; Romero *et al.*, 2006; Wallerstein, 2006).

Various definitions of empowerment have been proposed (Keiffer, 1984; Labonte, in Bernstein *et al.*, 1994; Rappaport, 1984; Wallerstein, 1992b). The active, multi-level conceptualization of empowerment is appropriately reflected in Wallerstein’s definition: ‘a social action process by which individuals, communities and organizations gain mastery over their lives in the context of changing their social and political environment to improve equity and quality of life’ (Wallerstein, 2002, p. 73). Following Wallerstein, I use the term ‘community empowerment’ in this review to distinguish it from an individual-level construct of empowerment.

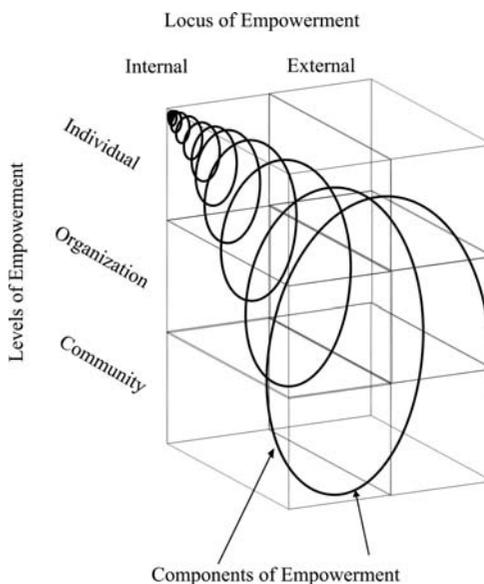
Despite the long time-frames generally required to document associations between

1. The current distribution of the world's resources is unjust and change is possible.
  2. It is important to create an atmosphere of trust so that people can share their ideas and experiences.
  3. We all know a great deal. As educators and organizers, we should always start with what people already know and/or do.
  4. The knowledge we gain through life experience is as important as the knowledge we gain through formal education.
  5. Education should progress from action to reflection to action (the cycle of praxis).
  6. Knowledge is constructed in the interaction between people.
  7. People should be active participants, rather than passive recipients, in their own learning process.
  8. Popular education is an inclusive movement that combines influences from many sources.
  9. In each situation in which we try to teach or organize, the conditions should reflect the conditions of the society we are trying to construct. This means equality between "teacher" and "student," and democratic decision-making.
  10. It is important that educators and organizers share the life experience of those they want to teach and/or organize.
  11. We learn with our heads, our hearts, and our bodies.
  12. The arts (music, drama, visual arts, etc.) are important tools for teaching and organizing.
  13. The purpose of developing critical consciousness is to be able to take action to change the world. (Critical thinking alone is not enough.)
  14. The goal of popular education is organized action to change the world.
- (Bralich, 1994; Caldart, 2004; Freire 1973, 1978, 1985, 1993, 1997, 2003; Gómez & Puiggrós, 1986; Horton, 2003)

**Fig. 1:** Principles of popular education.

health promotion outcomes and improved health (Wallerstein and Bernstein, 1988; Nutbeam, 1998), studies have supported the idea that increased empowerment is associated with improved health. A 2006 World Health Organization report (Wallerstein) that assesses the evidence about the effectiveness of empowerment to improve health found that components and strategies of empowerment are associated with a wide range of measures of improved health and independently predict better self-reported health and fewer depressive symptoms.

Building on the work of others, I envision a three-dimensional model of community empowerment (Figure 2). The first dimension encompasses the three *levels of empowerment*: the individual, the organization and the community. The second dimension encompasses the *locus of empowerment*, which can be either internal or external. At the individual level, internal empowerment consists of a belief in one's capacity, while external empowerment is defined by being able to use that capacity to bring about change for oneself or one's community. At the organizational and community levels, the two types of empowerment are



**Fig. 2:** Dimensions of empowerment.

analogous to Wallerstein's vertical and horizontal empowerment, e.g. democratic decision-making within the organization or community, and external power to address organizational or

community needs (Wallerstein, 2002). Spiraling through these two dimensions is the third dimension, the *components of empowerment*, which, like empowerment, are both processes and outcomes. This dimension draws on the empowerment holosphere developed by Labonte (Labonte, 1994) on the components of empowerment (critical consciousness, participation etc.) as identified earlier, and on developmental theories of empowerment (Keiffer, 1984; Serrano-García, 1984).

As shown in Figure 2, generally, the components of empowerment can be thought to develop from the most individual and internal level, to the most collective and external level. However, the process is not linear; it is unique to each person, each organization and each community. The components are also inter-linked, so that *gaining more control over life* might occur at any of the levels and either of the locations. The ultimate goal of empowerment in this model, congruent with popular education, is the creation of just and equitable social, economic and political relationships at every level of society and along every axis of diversity.

Philosophical and historical connections account for the fact that, in the English-speaking world, community empowerment has been the construct of choice when measuring the outcomes of popular education. A variety of other constructs (e.g. community capacity, community competence and social capital) share dimensions with community empowerment and could make competing claims to be considered as outcomes of popular education. However, a meaningful discussion of the validity of those claims is beyond the scope of this article.

## METHODOLOGY

In order to identify potential studies to include in this review, I used EBSCOhost to search Academic Search Complete, Academic Search Premier, E-Journals, Health Source: Nursing/Academic Edition, *Fuente Académica*, MasterFILE Premier, MedicLatina, Medline and Psychology and Behavioral Sciences Index. Separately, I searched UK PubMed Central. I used three sets of search terms—‘popular education’ and health, ‘empowerment education’ and health and Freire and health—and chose peer-reviewed articles about humans in

academic journals. (In the case of UK PubMed Central, I used ‘Paulo Freire’ and health to exclude articles with authors named Freire.) I also sought out other articles referenced in the articles I identified in my preliminary search. I did not specify a language. In the relatively few cases where citations were in languages I could not read, I used the English abstract that is provided for articles included in EBSCOhost. None of the articles fits my criteria (see later text). I identified a total of 29 articles that fit my criteria that described studies in Brazil, Canada, Mexico, Nicaragua, Norway, Puerto Rico, Senegal, Taiwan, the UK and the USA.

I included in this review, empirical research articles measuring the effectiveness of a health-focused intervention that referenced or was influenced by popular education as I have described it earlier. I defined empirical per *The New Oxford American Dictionary* as ‘based on, concerned with, or verifiable by observation or experience rather than theory or pure logic’ (McKean *et al.*, 2005), and thus included studies that utilized qualitative methods and case study designs, along with articles using quantitative methods and experimental or quasi-experimental designs. As I reviewed abstracts, I distinguished between ‘popular education’ defined as a distinct mode of teaching and learning, and ‘popular education’ used to refer to universal education, and excluded articles that used the latter definition. I also distinguished between articles that intentionally used popular or empowerment education as part of an intervention, and those that described programs influenced by the thought and work of Paulo Freire. I included the former and excluded the latter. I did not include articles that focused only on the development and/or use of educational materials, nor did I include articles that concerned the use of theater of the oppressed for health promotion. Given that a systematic review of the literature about the photovoice approach has already been conducted (Catalani and Minkler, 2009), I excluded articles that concerned photovoice. Finally, I excluded studies, common now in the field of diabetes education, based on a concept of empowerment that is not influenced by the work of Paulo Freire or popular education as described in this review.

I used an approach to qualitative coding that fell somewhere between the classic ‘grounded’ approach (Strauss and Corbin, 1990) and the

pre-structured approach described by Miles and Huberman (Miles and Huberman, 1994). While I allowed emic codes to arise from the data, I was influenced by the etic codes contained in my conception of empowerment as a multi-dimensional construct.

## FINDINGS

In this section, I will first share the findings from my review of the literature concerning the use of popular education in a public health context. Then, I will assess the quality of the evidence on which the findings are based. The use of popular education in a health context has been associated with a variety of desirable outcomes. These can be divided into *empowerment-related* and *health-related outcomes*. I will report first on the empowerment-related outcomes.

### Empowerment-related outcomes

The eight categories of empowerment-related outcomes I identified are organized according to the component dimension explained earlier and, per the model, move generally from the most individual and internal level, to the most collective and external level.

Empowerment often begins with individual-level *increases in self-esteem and self-confidence*. Serrano-García has asserted that these changes *must* occur before people can move on to develop critical consciousness or take community action (Serrano-García, 1984). The studies included in this review identified a number of changes at this level. Chang *et al.* reported that cancer patients in Taiwan experienced increased confidence after involvement in a dialogical interviewing intervention (Chang *et al.*, 2004). Arenas-Monreal *et al.* concluded that the success of women involved in a child nutrition program in Mexico 'has contributed to improving the self-confidence and self-esteem of the women, a basic principle for empowerment, and it has also awakened interest and respect on the part of the men of the locality' (Arenas-Monreal *et al.* 1999, p. 118). (Translations from the Spanish and Portuguese are by the author.) Rivera also found increases in self-esteem among homeless and formerly homeless women in Boston, Massachusetts, who participated in a GED preparation program (Rivera, 2003).

Interviews with Native American youth in New Mexico involved in the Alcohol and Substance Abuse Prevention Program (ASAP, subsequently known as the Adolescent Social Action Program) revealed that the youth felt more confident in talking about issues with their friends (Wallerstein and Bernstein, 1988).

Despite highly fluctuating attendance, formerly homeless men who developed skills as peer educators in a program in Atlanta, Georgia were able to share information and felt that they had become more capable in a variety of ways (Conner *et al.*, 1999). An informal evaluation of a clinic-based program designed to ameliorate health problems in Oslo, Norway found increased feelings of confidence among the Pakistani women who participated (Aambo, 1997). Latino youth in Los Angeles, California, who participated in a 2-week curriculum about workplace and community health expressed 'a sense of confidence and empowerment as a result of learning that they have rights' (Delp *et al.*, 2005), while *promotoras* (health promoters) who participated in a training program in San Antonio, Texas reported that they gained confidence to talk to their spouses about problems in their relationships, and to make presentations in the community (Kelly *et al.*, 2007). Interviews with the facilitators and staff of a peer-led intervention to reduce intimate partner violence among migrant farmworkers in Texas suggested that participants came to see themselves as capable of engaging in discussions and leading discussion groups with their peers (Nelson *et al.*, 2010). Finally, based on interviews and focus groups, Aubel *et al.* reported improvements in self-esteem among Senegalese grandmothers who participated in an intervention designed to improve maternal and child nutrition practices (Aubel *et al.*, 2004). Clearly, while all the changes reported in these studies involve individuals' perceptions of themselves, a few also involve changes in individuals' actions vis-à-vis the outside world and in at least one case (Arenas-Monreal *et al.*), a change in others' perceptions about them.

Popular education interventions have also been associated with *increases in multiple components of psychological empowerment*, measured both quantitatively and qualitatively. A randomized trial that compared 400 seventh-graders who participated in the ASAP Program to 400 who did not found statistically significant changes among the intervention youth in

response- and self-efficacies around protecting family and friends, and social influence-perceived control (Wallerstein *et al.*, 2005). (Response efficacy is defined as ‘the belief that one’s actions will make the desired difference’ [p. 221].)

In the context of an intervention to increase empowerment and prevent HIV among multicultural, at-risk women in New Mexico, Romero *et al.* measured domains of psychological empowerment including self- and collective-efficacy, sense of community and perceived control at the organizational and community levels (Romero *et al.*, 2006). Paired *t*-tests reflected significant changes on 21 (of 38) empowerment-based cognitive questions, 5 (of 10) perceived control items, 3 (of 4) self-efficacy items, all 6 collective efficacy items and all 7 factors identified in the factor analysis ( $p < 0.05$ ). A study by Chang *et al.* compared changes between an experimental group of nurses who participated in an empowerment intervention and members of a control group (Chang *et al.*, 2008). Analysis with ANCOVA revealed statistically significant improvements in psychological empowerment, job productivity and innovative behaviors among members of the experimental group.

In a qualitative study, Wiggins *et al.* conducted in-depth interviews with Community Health Workers (CHWs) involved in a health promotion program in Oregon (Wiggins *et al.*, 2009). According to the CHWs, their use of popular education as the primary strategy for identifying and addressing health issues contributed to increases in self-esteem, sense of personal potential, level of community involvement and participation, quantity and quality of leadership and sense of community solidarity. Working from a separate set of qualitative interviews with the same participants and one additional participant, Farquhar *et al.* reported increases in leadership skills, sense of efficacy and empowerment among the CHWs, and increases in sense of community and perceived control among community members (Farquhar *et al.*, 2008). Also based on qualitative interviews, McFarlane and Fehir reported that participants in a prenatal education and support program in Texas experienced improvements in participation, self-esteem, self-respect, sense of community, political awareness and participation, as well as concrete skills such as grant-writing and computer literacy (McFarlane and Fehir, 1994).

From the perspective of popular education, the *development of critical consciousness* is a ‘key prerequisite of action for social change’ (Delp *et al.*, 2005). While located within the individual, it provides the platform and motivation for both individual and collective action in the external world. A 1980 study by Minkler and Cox focused directly on the development of critical consciousness among members of a Housewives Club in a Honduran village. In the course of the intervention, the women began to question their inferior position relative to men. Other concrete outcomes of this intervention—increases in the number of women who boiled water, the building of a school, increased female participation in land reform and land recuperation—also attest to the development of critical consciousness among participants.

The study conducted by Delp *et al.* was unique in its systematic and thoughtful measurement of changes in critical consciousness (Delp *et al.* 2005). This study involved three levels of intervention: (i) a 2-week ‘Safe Jobs for Youth’ curriculum unit for 9th graders; (ii) a semester-long leadership class for high school juniors and seniors and (iii) community-based internships for students from the leadership classes. Participation in the 2-week curriculum was associated with statistically significant increases in critical consciousness of teen rights and knowledge of resources. Focus groups with participants identified increased consciousness of workplace rights and societal factors that can put girls and immigrants at particular risk of abuse. This is especially important as it indicates an awareness of the dynamics of oppression. Youth also indicated that they had shared the information they learned with families and friends. Interviews with participants in the leadership classes suggested that participants had developed greater awareness of injustice and differential treatment because of race and class. According to focus groups with youth and interviews with supervisors, participation in the internships further increased critical consciousness as the young people saw workplace abuses firsthand.

Low-income women involved in a participatory research project about nutritional inequities in Nova Scotia, Canada realized that others shared their problems and therefore they must not be solely responsible (Travers, 1997). They also became aware that welfare food allowances were too low to support a family. According to

the author, they 'came to recognize the common and political roots of their oppression' (p. 349). Authors of a study of nutritional education in Jalisco, México, attribute changes in participants' behavior to 'awareness of the social, economic, and political constraints of their lives' [(Figueroa *et al.*, 2000), p. 1]. Participants in a small nutrition education study 'began to realize that others had similar problems and that the problems had both a personal level and a societal level' [(Rusness, 1993), p. 2]. Kelly *et al.* reported that the *promotoras* involved in their study became more aware of illiteracy and poverty in their own community, a first step toward critical consciousness (Kelly *et al.*, 2007). Changes in critical consciousness in the studies ranged from greater awareness of problems, to awareness of the roots of those problems in racist, sexist or classist structures.

Like critical consciousness, sense of community is a component of psychological empowerment that sets the stage for organizational and community empowerment. Depending on how it is measured, it can be either an individual or a collective variable. A variety of studies included in this review documented *increases in sense of community*. These included the study by Figueroa *et al.* (Figueroa *et al.*, 2000), in which women supported one another when family members were ill or injured, and the study by McFarlane and Fehir (McFarlane and Fehir, 1994), in which participants expressed that the program brought community members closer together and increased the level of caring among them, and a study by Lugo (Lugo, 1996), where members visited one another in homes and hospitals, attended each others' labors and shared baby clothes. Travers reports that women involved in the participatory study in Canada evolved 'from a collection of individuals to a group with a common sense of purpose' (Travers, 1997, p. 349). A project that aimed to empower gay men in the northwest of England in order to decrease STIs succeeded in increasing social support, a construct that is closely related to sense of community (Crossley, 2001).

Participation in change has been described by Wallerstein as 'the link between the individual and organizational level' of empowerment (Wallerstein, 2002, p. 74). Popular education interventions have been associated with *increased participation* in Taiwan, where cancer patients became more involved in their care

planning (Chang *et al.*, 2004). Participants in the Florida Healthy Start Program attended and spoke at community meetings (Lugo, 1996), while grandmothers in the Senegalese intervention became more involved in maternal/child health activities (Aubel *et al.*, 2004). Students who participated in the study in Los Angeles reported becoming more involved in block or community clubs (Delp *et al.*, 2005).

Perhaps the most significant example of increased participation came from Honduras, where the women involved in the Housewives Club began to participate more in land reform and land recuperations initiated by the formerly all-male Campesino Leagues (Minkler and Cox, 1980). By taking actions such as marching on the Capitol, Campesino League members were able to force the Honduran government to follow its own stated policy of land reform and allow squatters to keep the land they had occupied. In this case, initiators of a popular education intervention were able to take advantage of a supportive context for their work, and contribute to actual structural change.

The process of *people and communities gaining greater control over their lives* represents a further step toward collective action, in that formerly uninvolved community members now begin not only to participate, but to take leadership roles. Several studies have linked popular education interventions to this outcome across a variety of levels. For example, participants in peer support groups in Florida took ownership/leadership of the groups, assigning tasks among themselves (Lugo, 1996), while formerly homeless men in Georgia who participated in training became actively involved in setting the agenda, identifying the topics, deciding what methods would be used and sharing leadership (Conner *et al.*, 1999). Immigrant women in the intervention in Norway took responsibility to form their own health education groups and did the planning with some support from staff. Two years after the project began, 80 women were participating in health education groups, many of them facilitated by the original participants (Aambo, 1997). In the study in Jalisco, México, which introduced an alfalfa concentrate into the diets of the rural participants, female participants assumed responsibility for preparing the alfalfa (Figueroa *et al.*, 2000). More significantly, women involved in the child nutrition intervention in Mexico took over responsibility for conducting an epidemiological surveillance

program (Arenas-Monreal *et al.*, 1999). Volunteer mothers participating in the prenatal program in Texas were deeply involved in the development of the program from the start, writing the mission statement and developing program activities (McFarlane and Fehir, 1994). By Year 3, 'volunteer mothers were mainstreamed into all program decisions' (p. 387), and by Year 5, participants took over the program completely, becoming the only paid staff. Many of these outcomes represent valid examples of internal organizational empowerment, as programs moved from hierarchical control by outsiders to more democratic control by participants.

Contemplating *actions of solidarity to improve the community, help fellow community members and achieve community goals* is an important step in the process of individual empowerment; taking such actions represents internal organizational and community empowerment. Developments at both these levels were found in the articles reviewed. Women involved in the GED program in Boston became motivated to help one another with schoolwork, parenting and instrumental support (Rivera, 2003), while the Taiwanese cancer patients developed more desire and strength to help others in similar situations (Chang *et al.*, 2004). Participants in the educational sessions conducted by *promotoras* in Texas reported increased desire to work to help their communities by sharing information and becoming *promotoras* themselves (Kelly *et al.*, 2007). Follow-up interviews from the intimate partner violence intervention in Texas suggested that participants used the skills they had learned to intervene with other men in their community, discouraging them from committing acts of violence (Nelson *et al.*, 2010). Members of the Housewives Club in the Honduran village motivated the village men to begin to build a school. When the men stopped working on the school at harvest time, the women completed the school themselves (Minkler and Cox, 1980). Likewise, the Mexican women in the child nutrition project initiated a series of community actions, such as organizing to obtain needed supplies and then administering them (Arenas-Monreal *et al.*, 1999). In the study by Delp *et al.*, students who participated in community internships reported taking individual actions to address problems as well as fostering community solidarity and organizing health

fairs and presentations about environmental hazards (Delp *et al.*, 2005).

Like the outcome described earlier, the outcome of *increased motivation to bring about change through advocacy* represents a change in individual empowerment if it remains only aspirational. If community members act on that motivation, it can signify external organizational and community empowerment. Both levels of this outcome have been associated with popular education interventions. For example, at the individual level, women who were involved in the GED program in Boston developed a desire to address the root causes of health and advocate for their rights (Rivera, 2003). At the community level, a multi-site, transnational popular education program among farm workers was associated with an increase in farm worker activity to bring about change, including testifying at hearings, filing complaints to enforcement agencies and using the media to put pesticide problems on the public agenda (Weinger and Lyons, 1992). As a result of the complaints, farmers were fined and forced to take corrective action. Similarly, women involved in the nutritional inequities project in Canada used a letter writing campaign to get welfare allowances increased and successfully prevented the closure of the Parent Center where the participatory project was based (Travers, 1997). Youth involved in community internships as part of the environmental health project in California organized community meetings and forced school officials to install a vapor extraction system to remove toxic vapors from a school being built across the street from a Superfund site (Delp *et al.*, 2005). After documenting abuses, other students filed a complaint with the labor commissioner's office against companies who hire teenagers to sell products door-to-door, securing the enforcement of existing child labor laws. As successful attempts to secure the change or enforcement of a policy, the four latter cases mentioned here all represent valid examples of external community empowerment associated with popular education interventions. They also represent actual changes in unjust structures that maintained oppression.

In sum, the popular education interventions documented in the studies included in this review were associated with eight empowerment-related outcomes: *increases in self-esteem and self-confidence; increases in multiple components of psychological empowerment;*

*development of critical consciousness; increases in sense of community; increased participation; increases in personal and collective control; actions of solidarity to improve the community, help fellow community members and achieve community goals; and increased motivation to bring about change through advocacy.* Many of these outcomes extended across several levels and both locations of empowerment.

### Health-related outcomes

Use of popular education has also been associated with positive change on a number of *health-related factors*, including *health promoting behavior change*. For example, more rural residents in Honduras boiled their water after participating in the consciousness-raising program in which rural women were trained as *promotores de salud* (health promoters). This outcome was particularly notable, since a series of programs had been trying, unsuccessfully, to achieve this outcome for >25 years (Minkler and Cox, 1980). While no control group was used, this outcome suggests that popular education may be more effective than other methods of education at achieving behavior change.

Results of the one-group pre- and post-questionnaire used by Romero *et al.* showed that participants became significantly more likely to use a condom or latex barrier when having sex (mean change from 2.97 to 3.17;  $p < 0.000$ ), and significantly less likely to have unprotected sex (mean change from 0.67 to 0.62, a reduction in risk,  $p = 0.041$ ) (Romero *et al.*, 2006). In an HIV prevention and education program in Ciudad Juarez, Mexico, quantitative results were non-significant (see below, Ferreira-Pinto and Ramos, 1995). Nonetheless, in-depth interviews suggested that participants did make substantive changes in the behaviors that put them at risk. The researchers hypothesize that these changes were the result of changes in women's self-esteem, self-efficacy and awareness of the social, political and economic context.

In the nutrition education study in Senegal, verbal pre-post questionnaires conducted with grandmothers in the intervention communities suggested that the quality of advice and the level of support grandmothers provided improved following the intervention, while post-intervention interviews with women of

reproductive age (WRA) in control and experimental communities revealed that nutrition-related practices of WRAs in the intervention villages were 'significantly different' on six parameters from practices in the control villages (Aubel *et al.*, 2004).

Based on an external evaluation, Aambo reported positive behavior change, especially regarding nutrition, among the immigrant women involved in the intervention in Norway (Aambo, 1997). A majority (67%) of clients interviewed by Crossley reported they were more likely to practice safe sex as a result of participating in the project intended to increase empowerment among gay men (Crossley, 2001). After participating in the intervention in Jalisco, México, community members introduced the alfalfa concentrate into their diets (Figuroa *et al.*, 2000). The authors do not report how long this behavior was sustained. Finally, clinical team members and patients involved in a US program to improve medication adherence among people living with HIV reported anecdotal improvements in adherence, but the study was too preliminary to report quantitative outcomes (Williams *et al.*, 2005).

Study results also suggest that popular education is an effective method for *increasing health knowledge*. Using a McNemar test, Romero *et al.* found statistically significant changes on the majority of knowledge questions about HIV transmission and prevention among the women who participated in the intervention (Romero *et al.*, 2006). For instance, the women better understood how HIV can be contracted and prevented. Similarly, a pre-test, post-test evaluation revealed statistically significant improvements in knowledge and attitudes about violence among peer leaders in two of three groups involved in the study by Nelson *et al.* (Nelson *et al.* 2010). Likewise, Kelly *et al.* reported that health promoters in their study increased their awareness of the 'broad nature of the problem' of family violence (Kelly *et al.*, 2007). Based on the focus groups conducted after the grandmother intervention, Aubel *et al.* concluded that knowledge of key maternal/child nutrition topics had increased among grandmothers and community leaders (Aubel *et al.* 2004).

Popular education has also been seen to further *health literacy*. Based on a review of programs that used popular education methods to

integrate English and literacy skills into health and safety education, Wallerstein concluded that popular education is particularly appropriate for addressing the barriers that low literacy and limited English proficiency pose to workers' understanding of health and safety education materials (Wallerstein, 1992a).

Other programs that used popular education to increase worker safety have been associated with *improvements in physical markers of health risk factors*. In Nicaragua, a statistically significant correlation was found between having participated in an educational program that used popular education and having reduced exposure to pesticides (95% CI: 0.30, 1.36) (Weinger and Lyons, 1992). Causation cannot be imputed because the popular education intervention was only one part of a larger campaign. However, the researchers did eliminate a variety of competing explanations for the outcome by controlling for confounders.

Due in part to the extended periods of time required to change the underlying social, economic and political conditions that affect health, few studies of popular education interventions have been able to demonstrate *actual physical changes in health*. Those studies that do demonstrate physical changes suffer from methodological limitations. Arenas-Monreal *et al.* reported a very slight improvement in child malnutrition associated with the training of *promotores de salud* in Morelos, Mexico (Arenas-Monreal *et al.*, 1999). Between September 1994 and February 1995, the percentage of children aged under 5 with mild to moderate malnutrition went from 64 to 62% ( $n = 108$ ). However, no statistical tests on this change or attempts to control for other possible explanatory variables are reported. Although they could not attribute outcomes to the intervention due to the lack of a control group, the authors of the study about the prenatal education and support program in Texas reported that since the program began, no low-birth-weight babies had been born to program participants. In addition, the infant mortality rate in the neighborhood where the program was active decreased from 16.5 per 1000 live births in 1989 to 11.4 per 1000 in 1993; no tests of statistical significance are reported (McFarlane and Fehir, 1994). The Oregon CHW program was associated with statistically significant increases in social support and self-rated

health and significant decreases in depression among randomly chosen members of the participating communities. However, no comparison or control group was used (Michael *et al.*, 2008).

Although *improved food security* was reported in only one of the studies included in this review, this outcome is sufficiently important to merit mention. According to Travers, women involved in the project in Canada successfully petitioned local grocery stores to correct price inequities between their stores and stores in a higher-income suburb (Travers, 1997). One store also created a bulk food section. Ultimately, a cooperative grocery store was organized at the Parent Center the women attended. Given the mechanism through which these changes came about, this is also an example of external empowerment at the community level.

The studies included in this review provide support for the idea that use of popular education can be associated with improvements in six health-related categories: *health promoting behavior change, health knowledge, health literacy, physical markers of health risk factors, actual physical changes in health and improved food security*.

### **Facilitating and limiting conditions for popular education interventions**

The literature included in this review reveals a variety of *structural conditions* that can either facilitate or limit the success of popular education interventions. These conditions may exercise an effect that is independent of the quality of the intervention itself, or they may directly influence the nature of the intervention and thus its effectiveness. In an example of the former, based on her participatory study in Nova Scotia, Canada, Travers mentions a number of practical constraints on women's participation in change (Travers, 1997). 'I wanted to go out and change the world,' she quotes a local welfare activist and single mother as saying, 'but I couldn't find a babysitter' (Thompson, 1990, p. 28, quoted in Travers, 1997, p. 353). Travers also identifies fear of losing government benefits as an effective barrier to empowerment among the women in her study. Citing statements by women who were repeatedly 'voted down' when they tried to share their concerns in public meetings,

Travers comments that ‘the “majority rules” philosophy of a democratic society can be a barrier to minority-driven social change efforts’ (p. 354).

A similar set of barriers faced the women involved in the GED program in Boston (Rivera, 2003). These included health problems, learning disabilities, lack of transportation, lack of child care, domestic violence, substance abuse and the practical need to get the GED credential. An even greater barrier arose with the 1995 passage of the Massachusetts Welfare Reform Act, which mandated welfare recipients to find work as soon as possible. By 1999, only one woman out of the 50 originally included in the study was still participating in the program.

Factors implicit in the broader social, political and economic context are also mentioned by Minkler and Cox (Minkler and Cox, 1980) and Weinger and Lyons (Weinger and Lyons, 1992). Based on their experience of applying Freire’s approach among peasant farmers in Honduras and elderly residents of the Tenderloin District of San Francisco, Minkler and Cox concluded that stable kinship networks and placement within a broader context of radical social change efforts facilitated the success of the first effort, while isolation and lack of a sense of community contributed to the (initial) failure of the second effort. Reflecting on their own tri-national study, Weinger and Lyons concluded that popular education interventions were more successful when embedded in a supportive context like that provided by Nicaragua under the Sandinistas.

An example of how structural factors can directly influence the effectiveness of a popular education intervention is provided by Lugo (Lugo, 1996). In the Florida Healthy Start Program, funders’ goals to improve pregnancy outcomes conflicted with investigators’ goals to increase empowerment and promote community development. The funding structure required case management for eligible women, pushing the peer leaders toward one-on-one home visits and away from leading support groups. Likewise, the need to equip peer educators with case management skills meant that empowerment skills were given short shrift. It also appears that program staff lacked the skills needed to facilitate empowerment among the peer educators. Lugo succinctly concludes that ‘community empowerment cannot be a side dish to a medical model of services’ (p. 288).

### Limitations of the literature on popular education and health

The literature regarding popular education and health possesses a number of gaps and limitations. Some of these are related to flaws in how popular education was conceptualized and used. Two of the studies conducted in clinical settings (Chang, 2004; Williams *et al.*, 2005) completely overlooked the communal aspect of popular education, with the minor exception that Chang did introduce the participants in her dialogical interviewing intervention to one another (Chang, 2004). Similarly, in the study by McFarlane and Fehir (McFarlane and Fehir, 1994), activities of the volunteer mothers appear to have consisted mostly of one-on-one visits with pregnant women; no groups appear to have been conducted. Generally, popular education interventions were very short: 1 month in the case of Rusness (Rusness, 1993), and as short as one educational session in the case of Weinger and Lyons (Weinger and Lyons, 1992). The Norwegian clinic-based intervention focused on empowerment of Pakistani immigrant women within their own community; thus, the women became critical about their own knowledge, not about their place in the broader Norwegian society (Aambo, 1997). The study by Crossley lacked many of the crucial components of a typical popular education intervention, such as an attempt to draw out and build on what people know, and an analysis of power relationships (Crossley, 2001). Even in the study by Romero *et al.*, which was firmly grounded in empowerment theory, recommendations for changes in the curriculum after the Year 1 evaluation all seem to deal with individual level change (e.g. adding a behavior change contract) (Romero *et al.*, 2006). In addition, few projects provided actual opportunities for participants to experience making collective change in their communities. An exception was the study by Delp *et al.*, which was supported by a strong community–university–school partnership that focused explicitly on the three levels of empowerment and made it possible for students to engage in community internships (Delp *et al.* 2005).

Additional limitations are the result of study design and data collection, analysis and reporting. For example, in the study by Arenas-Monreal *et al.*, while the qualitative changes reported are impressive and mixed methods were used, no

attempt was made to show whether the quantitative improvement in child nutrition rates could have occurred by chance (Arenas-Monreal *et al.*, 1999). As the authors of the New Mexico HIV study acknowledge, there was almost certainly selection bias among women who chose to participate, and there was no long-term follow-up (Romero *et al.*, 2006). The study by Rivera provides too little information about the specifics of the program (Rivera, 2003). Additionally, while the author concludes that ‘popular education can best address the academic, personal and community goals of very poor women,’ she does not say what she is comparing popular education to and provides no evidence to support her claim. Aubel *et al.* asserted that the Senegalese grandmothers’ empowerment increased, but did not define or operationalize empowerment (Aubel *et al.* 2004). The author of the article about the Florida Healthy Start Program reported that the participants experienced an increased sense of empowerment and community, but research methods are not well-described and data appear mostly anecdotal (Lugo, 1996). Likewise, Rusness (Rusness, 1993) reported that participants in a small ( $n = 9$ ) study experienced improvements in self-esteem, sense of community and personal power, but the only data cited are ‘written evaluations.’ In the study by Figueroa *et al.* (Figueroa *et al.*, 2000), no formal research methods are delineated.

More complex limitations are related to the long time-frames needed, both to show a clear relationship between empowerment interventions and improved health, and to move from increased empowerment at the individual level to increases at the organizational and community levels (Lugo, 1996; Delp *et al.*, 2005). Only the sustained work over many years by Wallerstein *et al.* (Wallerstein, 1992b, 2002; Wallerstein and Bernstein, 1988; Wallerstein *et al.*, 2005) in the ASAP Program in New Mexico has facilitated the latter process. An additional limitation is that popular education interventions seldom (if ever) occur in isolation. More commonly, they are part of a combination of approaches to improving health and empowerment. Indeed, there is some evidence that popular education interventions work best when this is the case (Minkler and Cox, 1980). But this makes it difficult to attribute change solely to popular education.

A final limitation of the literature on popular education and health is the lack of longitudinal, experimental or quasi-experimental studies that

compare the outcomes of popular education interventions with the outcomes of other types of educational interventions and with temporal changes through use of a control group. In the absence of such studies, we cannot infer a causal link between popular education and changes that have taken place in the past, nor can we predict that popular education will produce such changes in the future.

## DISCUSSION

This review of the literature identified eight categories of empowerment-related outcomes and six categories of health-related outcomes that have been associated with the use of popular education. While clustered at the individual level, these outcomes span the gamut from individual to community and include both internal and external changes. In addition, this review identified a number of structural conditions that can facilitate or limit the success of popular education interventions, as well as a variety of gaps and limitations implicit in the literature and in the interventions themselves.

The general conclusion of the literature I reviewed is that popular education is an effective method to increase empowerment and improve health. However, neither the effectiveness of the interventions described nor the influence of the studies reviewed can be taken for granted. If practitioners and researchers want both interventions and studies to be optimally effective, the literature reveals a number of steps they need to take.

### Recommendations for practice

As regards interventions, first, it is necessary to take the social, political and economic context into account. When the pre-existing level of sense of community is very low, or the structural barriers are very great, it may be unreasonable to expect that a popular education intervention can lead to improvements in community-level empowerment, at least in the short or medium term. But popular education can still be used to support community members to develop the faith in their own wisdom and the community solidarity, which are essential pre-requisites to group action to address basic inequities. Second, interventions need to be longer. Making interventions longer

provides time for participants to move through the developmental stages of empowerment (Keiffer, 1984), and to move empowerment from the individual to the community level. Finally, and perhaps most importantly, interventions need to be carefully constructed and maintain strict fidelity to popular education philosophy and methodology. They must be grounded in a thorough understanding of popular education as not just a methodology but also a philosophy with deep historical roots. Based on this understanding, they must keep ever present the ultimate goal of popular education, which is the redistribution of power from privileged groups to oppressed groups. In their everyday practice, they must consistently and relentlessly prefigure the kind of values and power relationships of the society they are attempting to create. Well-designed, long-term popular education interventions can contribute to developing the 'new forms of community activism' on which the elimination of health inequities depend (Hofrichter, 2003).

### Recommendations for research

This review suggests that research designs must be carefully and astutely constructed, paying attention to both epistemological and political considerations. Epistemologically, popular education bears its greatest resonance with the participatory, naturalistic/interpretive and critical theoretical paradigms in research. Results from studies by Ferreira-Pinto and Ramos (Ferreira-Pinto and Ramos, 1995) and Arenas-Monreal *et al.* (Arenas-Monreal *et al.*, 1999) included in this review reaffirm the importance of using qualitative methods to capture the full effects of popular education interventions. However, the positivist paradigm and quantitative methods cannot be left aside in studies of popular education, for several crucial reasons. Practically, combining qualitative and quantitative methods can reveal multiple facets of the ever-changing crystal of truth, as described by Richardson (Richardson, 1997). But perhaps the most important reasons for using quantitative methods are political. The discipline of public health, though liberatory at its heart, depends heavily on the positivist methods of medicine. To gain greater credibility for popular education in public health, we need more studies that can speak to mainstream public health practitioners in their own language, the language of statistics

and best practices. Increases in health knowledge are not the subtlest or most important indicators of health improvement. But they are compelling for countless decision-makers in public health authorities worldwide. Equipping health promotion practitioners around the world with empirical evidence that popular education is more effective than traditional education at achieving outcomes of interest can help to shift public health practice—and ultimately, even public education practice. Emerging paradigms such as community-based participatory research, which shares historical roots with popular education, demonstrate that it is not necessary to choose between community-driven, critically oriented research that aims to bring about concrete changes in communities, and research that uses quantitative methods. If, inspired by Thomas Kuhn (Kuhn, 1996), we want the popular education paradigm to triumph, it behooves us to marshal the hard-headed arguments that will be compelling for public health decision-makers, while never, ever losing sight of our ultimate goal, which is a society of justice and equality. We can do both, and we must.

### REFERENCES

- Aambo, A. (1997) Tasteful solutions: solution-focused work with groups of immigrants. *Contemporary Family Therapy*, **19**, 63–79.
- Alinsky, S. (1989) *Reveille for Radicals*. Vintage Books, New York.
- Arenas-Monreal, L., Paulo-Maya, A. and López-González, H. E. (1999) Educación popular y nutrición infantil: experiencia de trabajo con mujeres en una zona rural de México. (Popular education and child nutrition: experience of work with women in a rural area of Mexico.) *Revista de Saúde Pública (Journal of Public Health)*, **33**, 113–121.
- Aubel, J., Touré, I. and Diagne, M. (2004) Senegalese grandmothers promote improved maternal and child nutrition practices: the guardians of tradition are not averse to change. *Social Science and Medicine*, **59**, 945–959.
- Becker, M. (1995) *Setting the Virgin on Fire: Lázaro Cardenas, Michoacán Peasants, and the Redemption of the Mexican Revolution*. University of California Press, Berkeley/Los Angeles/London.
- Bernstein, E., Wallerstein, N., Braithwaite, R., Gutierrez, L., Labonte, R. and Zimmerman, M. (1994) Empowerment forum: a dialogue between guest editorial board members. *Health Education Quarterly*, **21**, 281–294.
- Bralich, J. (1994) *Educación popular: Historia y conceptualización*. Ediciones Populares para América Latina (EPPAL), Montevideo, Uruguay.

- Caldart, R. S. (2004) *Pedagogia do Movimento Sem Terra (Pedagogy of the Landless Movement)*. Editora Expressão Popular, São Paulo.
- Catalani, C. and Minkler, M. (2009) Photovoice: a review of the literature in health and public health. *Health Education and Behavior*, **37**, 424–457.
- Chang, L., Li, I. and Liu, C. (2004) A study of the empowerment process for cancer patients using Freire's dialogical interviewing. *Journal of Nursing Research*, **12**, 41–49.
- Chang, L., Liu, C. and Yen, E. (2008) Effects of an empowerment-based education program for public health nurses in Taiwan. *Journal of Clinical Nursing*, **17**, 2782–2790.
- Cho, E. H., Paz y Puente, F. A., Louie, M. C. Y. and Khokha, S. (2004) *Building a Race and Immigration Dialogue in the Global Economy: A Popular Education Resource for Immigrant and Refugee Community Organizers*. National Network for Immigrant and Refugee Rights, Oakland, CA.
- Conner, A., Ling, C. G., Tuttle, J. and Brown-Tezera, B. B. (1999) Peer education project with persons who have experienced homelessness. *Public Health Nursing*, **16**, 367–373.
- Crossley, M. L. (2001) The Armistead project: an exploration of gay men, sexual practices, community health promotion and issues of empowerment. *Journal of Community and Applied Social Psychology*, **11**, 111–123.
- David, R. J. and Collins, J. W., Jr. (1991) Bad outcomes in black babies: race or racism? *Ethnicity and Disease*, **1**, 236–244.
- Delp, L., Brown, M. and Domenzain, A. (2005) Fostering youth leadership to address workplace and community environmental health issues: a university-school-community partnership. *Health Promotion Practice*, **6**, 270–285.
- Farquhar, S. A., Wiggins, N., Michael, Y. L., Luhr, G., Jordan, J. and Lopez, A. (2008) 'Sitting in different chairs': roles of the community health workers in the Poder es Salud/Power for Health project. *Education for Health*, **21**, 1–8.
- Ferreira-Pinto, J. and Ramos, R. (1995) HIV/AIDS prevention among female sexual partners of injection drug users in Ciudad Juarez, Mexico. *AIDS Care*, **7**, 477–488.
- Figuerola, I. V., Alfaro, N. A., Guerra, J. F., Rodriguez, G. A. and Roaf, P. M. (2000) Una experiencia de educación popular en salud nutricional en dos comunidades del Estado de Jalisco, México. (An experience of popular education in nutritional health in two communities in the State of Jalisco, Mexico.) *Caderno de Saúde Pública*, **16**, 823–829.
- Freire, P. (1973) *Education for Critical Consciousness*. Continuum, New York.
- Freire, P. (1978) *Pedagogy in Process: The Letters to Guinea-Bissau*. Seabury Press, New York.
- Freire, P. (1985) *The Politics of Education*. Bergin and Garvey, South Hadley, MA.
- Freire, P. (1993) *Pedagogía de la esperanza (Pedagogy of hope)*. Siglo Veintiuno Editores, México, DF.
- Freire, P. (1997) *Pedagogy of the Heart*. Continuum, New York.
- Freire, P. (2003) *Pedagogy of the Oppressed*. Continuum, New York.
- Frieden, T. (2010) A framework for public health action: the health impact pyramid. *American Journal of Public Health*, **100**, 590–595.
- Gómez, M. and Puiggrós, A. (1986) *La educación popular en América Latina I*. Secretaria de Educación Pública, Mexico, DF.
- Hofrichter, R. (2003) The politics of health inequities: contested terrain. In Hofrichter, R. (ed.), *Health and Social Justice: Politics, Ideology, and Inequity in the Distribution of Disease*. Jossey-Bass, San Francisco, pp. 1–56.
- Horton, M. (2003) In Jacobs, D. (ed.), *The Miles Horton Reader: Education for Social Change*. The University of Tennessee Press, Knoxville.
- Kane, L. (2001) *Popular Education and Social Change in Latin America*. Latin America Bureau, London.
- Karasek, R. and Theorell, T. (1989) *Healthy Work*. Basic Books, New York.
- Keiffer, C. (1984) Citizen empowerment: a developmental perspective. In Rappaport, J., Swift, C. and Hess, R. (eds), *Studies in Empowerment: Steps Toward Understanding and Action*. The Haworth Press, New York, pp. 9–36.
- Kelly, P. J., Lesser, J., Peralez-Dieckmann, E. and Castilla, M. (2007) Community-based violence awareness. *Issues in Mental Health Nursing*, **28**, 241–253.
- Kennedy, B., Kawachi, I. and Prothrow-Stith, D. (1996) Income distribution and mortality: cross sectional ecological study of the Robin Hood index in the United States. *BMJ (Clinical Research Ed.)*, **312**, 1004–1007.
- Krieger, N. (1990) Racial and gender discrimination: risk factors for high blood pressure? *Social Science and Medicine*, **30**, 1273–1281.
- Krieger, N., Rowley, D. L., Herman, A. A., Avery, B. and Phillips, M. T. (1993) Racism, sexism, and social class: implications for studies of health, disease, and well-being. *American Journal of Preventive Medicine*, **9**(Suppl.), 82–122.
- Kuhn, Thomas (1996) *The Structure of Scientific Revolutions*. The University of Chicago Press, Chicago.
- Labonte, R. (1994) Health promotion and empowerment: reflections on professional practice. *Health Education Quarterly*, **21**, 253–268.
- Lugo, N. R. (1996) Empowerment education: a case study of the resource sisters/Compañeras program. *Health Education Quarterly*, **23**, 281–289.
- McFarlane, J. and Fehir, J. (1994) De madres a madres: a community, primary health care program based on empowerment. *Health Education Quarterly*, **21**, 381–394.
- McKean, E., Baboukis, C., Lindberg, C.A., Hartley, A., Barnhart, C., Braham, C. et al. (2005) *The New Oxford American Dictionary*. Oxford University Press, Oxford.
- Michael, Y. L., Farquhar, S. A., Wiggins, N. and Green, M. K. (2008) Findings from a community-based participatory prevention research intervention designed to increase social capital in Latino and African American communities. *Journal of Immigrant and Minority Health*, **10**, 281–289.
- Miles, M. B. and Huberman, A. M. (1994) *Qualitative data analysis: an expanded sourcebook*. SAGE Publications, Thousand Oaks, CA.
- Minkler, M. (1985) Building supportive ties and sense of community among the inner-city elderly: the Tenderloin Senior Outreach Project. *Health Education and Behavior*, **12**, 303–314.
- Minkler, M. and Cox, K. (1980) Creating critical consciousness in health: applications of Freire's philosophy

- and methods to the health care setting. *International Journal of Health Services*, **10**, 311–322.
- Nelson, A., Lewy, R., Ricardo, F., Dovydaitis, T., Hunter, A., Mitchell, A. *et al.* (2010) Eliciting behavior change in a US sexual violence and intimate partner violence prevention program through utilization of Freire and discussion facilitation. *Health Promotion International*, **25**, 299–308.
- Núñez Hurtado, C. (2004) Aportes para el debate latinoamericano sobre la vigencia y proyección de la educación popular. In Consejo de Educación de Adultos de América Latina, *Debate Latinoamericano Sobre Educación Popular II: Vigencia de la Educación Popular: Reflexiones de educadores y educadoras de América Latina*. CEAAL, México, DF, pp. 13–20.
- Nutbeam, D. (1998) Evaluating health promotion—progress, problems and solutions. *Health Promotion International*, **13**, 27–44.
- Rappaport, J. (1981) In praise of paradox: a social policy of empowerment over prevention. *American Journal of Community Psychology*, **9**, 1–25.
- Rappaport, J. (1984) Studies in empowerment: introduction to the issue. In Rappaport, J., Swift, C. and Hess, R. (eds), *Studies in Empowerment: Steps Toward Understanding and Action*. The Haworth Press, New York, pp. 1–7.
- Richardson, L. (1997) *Fields of Play: Constructing an Academic Life*. Rutgers University Press, New Brunswick, New Jersey.
- Rivera, L. (2003) Changing women: an ethnographic study of homeless mother and popular education. *Journal of Sociology and Social Welfare*, **30**, 31–51.
- Romero, L., Wallerstein, N., Lucero, J., Fredine, H. G., Keefe, J. and O'Connell, J. (2006) Woman to woman: coming together for positive change—using empowerment and popular education to prevent HIV in women. *AIDS Education and Prevention*, **18**, 390–405.
- Rusness, B. (1993) Striving for empowerment through nutrition education. *Journal of the American Dietetic Association*, **93**, n1. p. 78 (2). Retrieved 27 June 2010, from Health Reference Center Academic via Gale: <http://find.galegroup.com.proxy.lib.pdx.edu/gtx/start.do?prodId=HRC&userGroupName=s1185784>.
- Serrano-García, I. (1984) The illusion of empowerment: community development within a colonial context. In Rappaport, J., Swift, C. and Hess, R. (eds), *Studies in Empowerment: Steps Toward Understanding and Action*. The Haworth Press, New York, pp. 173–200.
- Strauss, A. and Corbin, J. (1990) *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Sage Publications, Newbury Park, CA.
- Swift, C. (1984) Foreword. Empowerment: an antidote for folly. In Rappaport, J., Swift, C. and Hess, R. (eds), *Studies in Empowerment: Steps Toward Understanding and Action*. The Haworth Press, New York, pp. xi–xv.
- Thompson, B. (1990) *Single mothers' survival guide: resources for low-income single moms*. Pandora, Halifax, NS.
- Travers, K. D. (1997) Reducing inequities through participatory research and community empowerment. *Health Education and Behavior*, **24**, 344–356.
- Wallerstein, N. (1992a) Health and safety education for workers with low-literacy or limited-English skills. *American Journal of Industrial Medicine*, **22**, 751–765.
- Wallerstein, N. (1992b) Powerlessness, empowerment, and health: Implications for health promotion programs. *American Journal of Health Promotion*, **6**, 197–205.
- Wallerstein, N. (2002) Empowerment to reduce health disparities. *Scandinavian Journal of Public Health*, **30**(Suppl. 59), 72–77.
- Wallerstein, N. (2006) *What is the Evidence on Effectiveness of Empowerment to Improve Health?* Copenhagen, WHO Regional Office for Europe (Health Evidence Network Report: <http://www.euro.who.int/Document/E88086.pdf>, accessed 01 February 2006).
- Wallerstein, N. and Bernstein, E. (1988) Empowerment education: Freire's ideas adapted to health education. *Health Education Quarterly*, **15**, 379–394.
- Wallerstein, N., Sanchez, V. and Velarde, L. (2005) Freirian praxis in health education and community organizing: a case study of an adolescent prevention program. In Minkler, M. (ed), *Community Organizing and Community Building for Health*. Rutgers University Press, New Brunswick, NJ, pp. 218–236.
- Walters, S. and Manicom, L. (eds) (1996) *Gender in Popular Education: Methods for Empowerment*. Zed Books, London.
- Weinger, M. and Lyons, M. (1992) Problem-solving in the field: an action-oriented approach to farmworker education about pesticides. *American Journal of Industrial Medicine*, **22**, 677–690.
- Wiggins, N. (2011) Critical pedagogy and popular education: towards a unity of theory and practice. *Studies in the Education of Adults*, **43**, 34–49.
- Wiggins, N., Johnson, D., Avila, M., Farquhar, S. A., Michael, Y. L., Rios, T. *et al.* (2009) Using popular education for community empowerment: perspectives of Community Health Workers in the Poder es Salud/Power for Health program. *Critical Public Health*, **19**, 11–22.
- Williams, A. B., Burgess, J. D., Danvers, K., Malone, J., Winfield, S. D. and Saunders, L. (2005) Kitchen table wisdom: a Freirian approach to medication adherence. *Journal of the Association of Nurses in AIDS Care*, **16**, 3–12.
- World Health Organization. (1986) *The Ottawa Charter for Health Promotion*. Author, Ottawa, Canada. (WHO/HPR/HEP/95.1) Retrieved 27 June 2010 from [http://www.who.int/hpr/NPH/docs/ottawa\\_charter\\_hp.pdf](http://www.who.int/hpr/NPH/docs/ottawa_charter_hp.pdf).
- World Health Organization. (2008) Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health. Final Report of the Commission on Social Determinants of Health. Author, Geneva, Switzerland. Retrieved 26 June 2010 from [http://whqlibdoc.who.int/publications/2008/9789241563703\\_eng.pdf](http://whqlibdoc.who.int/publications/2008/9789241563703_eng.pdf).
- Zimmerman, M. A. (1990) Taking aim on empowerment research: on the distinction between individual and psychological control. *American Journal of Community Psychology*, **18**, 169–177.
- Zimmerman, M. A. (2000) Empowerment theory: psychological, organizational and community levels of analysis. In Rappaport, J. and Seidman, E. (eds), *Handbook of Community Psychology*. Kluwer Academic/Plenum Publishers, New York, pp. 43–63.
- Zimmerman, M. K. and Hartley, W. S. (1982) High blood pressure among employed women: a multifactor discriminant analysis. *Journal of Health and Social Behavior*, **23**, 205–220.
- Zimmerman, M. A. and Rappaport, J. (1988) Citizen participation, perceived control, and psychological empowerment. *American Journal of Community Psychology*, **16**, 725–750.