

Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century

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SUMMARY

Health literacy is a relatively new concept in health promotion. It is a composite term to describe a range of outcomes to health education and communication activities. From this perspective, health education is directed towards improving health literacy. This paper identifies the failings of past educational programs to address social and economic determinants of health, and traces the subsequent reduction in the role of health education in contemporary health promotion. These perceived failings may have led to significant underestimation of the potential role of health education in addressing the social determinants of health. A 'health outcome model' is presented. This model highlights health literacy as a key outcome from health education. Examination of the concept of health literacy identifies

distinctions between functional health literacy, interactive health literacy and critical health literacy. Through this analysis, improving health literacy meant more than transmitting information, and developing skills to be able to read pamphlets and successfully make appointments. By improving people's access to health information and their capacity to use it effectively, it is argued that improved health literacy is critical to empowerment. The implications for the content and method of contemporary health education and communication are then considered. Emphasis is given to more personal forms of communication, and community-based educational outreach, as well as the political content of health education, focussed on better equipping people to overcome structural barriers to health.

Key words: empowerment; health education; health literacy; health outcomes

INTRODUCTION

Health literacy is a relatively new concept in health promotion. In this paper it is used as a composite term to describe a range of outcomes to health education and communication activities. From this perspective, health education is directed towards improving health literacy. This paper explores the place of health education in contemporary health promotion, before examining in greater detail the definition and usefulness of the concept of health literacy. In doing so, this paper attempts to promote renewed attention to the role of health education and communication

in health promotion and disease prevention, and advocates improvements in the sophistication of contemporary health education strategies.

HEALTH EDUCATION AND CONTEMPORARY HEALTH PROMOTION

Education has been an essential component of action to promote health and prevent disease throughout this century. Campaigns to promote maternal and child health, to prevent communicable disease, and to promote immunization

and other preventive health services have a long history. In developing countries, health education directed towards these goals remains a fundamental tool in the promotion of health and prevention of disease.

In developed countries, during the 1960s and 1970s this early experience in health campaigning was directed towards the prevention of non-communicable disease by promoting healthy lifestyles. Many of these early campaigns were characterized by their emphasis on the transmission of information, and were based upon a relatively simplistic understanding of the relationship between communication and behaviour change. Over time, it became apparent that campaigns which focussed only on the transmission of information and failed to take account of the social and economic circumstances of individuals were not achieving the results which had been expected in terms of their impact on health behaviour. Many health education programs emerging during the 1970s were found to be effective only among the most educated and economically advantaged in the community. It was assumed that these groups had higher levels of education and literacy, personal skills and economic means to receive and respond to health messages communicated through traditional media.

As a tool for disease prevention, health education was considerably strengthened by the development of a new generation of more sophisticated, theory-informed interventions during the 1980s. These programs focussed on the social context of behavioural decisions, and focussed on helping people to develop personal and social skills required to make positive health behaviour choices. This type of program was pioneered through school-based health education programs directed towards preventing teenage substance misuse, and subsequently has been applied in other settings (Glanz *et al.*, 1997).

Several theories of behaviour change were developed during this period to guide educational programs. Examples include Ajzen and Fishbein's theory of planned behaviour, and Bandura's social learning theory (Ajzen and Fishbein, 1980; Bandura, 1986). These theories have helped to identify and explain the complex relationships between knowledge, beliefs and perceived social norms, and provide practical guidance on the content of educational programs to promote behavioural change in a given set of circumstances.

During the same period, social marketing evolved as a technique for influencing social norms

and behaviours in populations (Andreasen, 1995). Social marketing has encouraged creative approaches to the analysis of issues and the development of programs, especially in relation to the communication of information. As a consequence, health education programs have evolved in their sophistication, reach and relevance to a wider range of groups in populations.

Despite this progress, interventions which have relied primarily on communication and education have mostly failed to achieve substantial and sustainable results in terms of behaviour change, and have made little impact in terms of closing the gap in health status between different social and economic groups in society.

ADDRESSING SOCIAL DETERMINANTS OF HEALTH

In the 19th century public health action resulted from a need to address the devastating effects of the living and working conditions imposed on populations during the industrial revolution. The initial focus of public health action was, therefore, on the social and environmental determinants of the health of the population. By the late 20th century, however, there had been a shift in the emphasis of public health action toward modifying individual risk behaviours.

However, recent epidemiological analysis of health, disease and disability in the populations of most developed countries confirms the role of social, economic and environmental factors in determining increased risk of disease and adverse outcomes from disease (Townsend *et al.*, 1988; Harris *et al.*, 1999). Health status is influenced by individual characteristics and behavioural patterns (lifestyles) but continues to be significantly determined by the different social, economic and environmental circumstances of individuals and populations. The relationships between these social factors and health, although easy to observe, are less well understood and much more difficult to act upon. Consequently they have been given much less attention as a basis for public health intervention than have individual behaviours in the recent past.

As the effects on population health of economic, social and environmental policies adopted in developed nations in the late 20th century begin to emerge and are better understood, there has been renewed interest among public health practitioners in acting to influence these

determinants of health. This renewed interest was reflected through the Ottawa Charter for Health Promotion (World Health Organization, 1986) and more recently confirmed in the Jakarta Declaration (World Health Organization, 1997). Through the Charter, health promotion has come to be understood as public health action which is directed towards improving people's control over all modifiable determinants of health. This includes not only personal behaviours, but also the public policy, and living and working conditions which influence behaviour indirectly, and have an independent influence on health.

This more sophisticated approach to public health action is reinforced by accumulated evidence concerning the inadequacy of overly simplistic interventions of the past. To take a concrete example, efforts to communicate to people the benefits of not smoking, in the absence of a wider set of measures to reinforce and sustain this healthy lifestyle choice, are doomed to failure. A more comprehensive approach is required which explicitly acknowledges social and environmental influences on lifestyle choices and addresses such influences alongside efforts to communicate with people. Thus, more comprehensive approaches to tobacco control are now adopted around the world. Alongside efforts to communicate the risks to health of tobacco use, these also include strategies to reduce demand through restrictions on promotion and increases in price, to reduce supply by restrictions on access (especially to minors), and to reflect social unacceptability through environmental bans. This more comprehensive approach is not only addressing the individual behaviour, but also some of the underlying social and environmental determinants of that behaviour.

It is now well understood from experiences in addressing specific public health problems of tobacco control, injury prevention and prevention of illicit drug use, and the more general challenge of achieving greater equity in health, that education alone is generally insufficient to achieve major public health goals.

As a result of the failings of educational programs in the past, the role of health education as a tool in the 'new public health' promoted by the Ottawa Charter has been somewhat downplayed. Health education has often been considered in a rather limited way as contributing only to improvements in individual knowledge and beliefs about risk factors for disease, and as having only a limited role in promoting behaviour change in

relation to those risk factors. This may have had the unintended consequence of underestimating the role of health education, and fails to properly capture the potential of health education as a tool to support a full range of contemporary public health interventions. The failings identified above reflect both an oversimplistic analysis of the determinants of health, and of the use of inappropriate measures of outcome.

HEALTH LITERACY AS AN OUTCOME OF HEALTH PROMOTION

In the recent past, considerable attention has been given to analysing the determinants of health, and to the definition of outcomes associated with health promotion activity. This has led to the development hierarchies of 'outcomes' from health interventions, which illustrate and explain the linkages between health promotion actions, the determinants of health, and subsequent health outcomes. Figure 1 provides a summary outcome model for health promotion (Nutbeam, 1996).

These models generally distinguish between different levels of outcome. At the end-stage of interventions are 'health and social outcomes', usually expressed in terms of mortality, morbidity, disability, dysfunction, quality of life and functional independence.

Intermediate outcomes represent the determinants of these health and social outcomes. Personal behaviours, e.g. smoking or physical activity may increase or decrease the risk of ill health, and are summarized as 'healthy lifestyles'. 'Healthy environments' consist of the environmental, economic and social conditions that can both impact directly on health, as well as support healthy lifestyles, e.g. by making it more or less easy for an individual to smoke (as described above), or adopt a healthy diet. Access to, appropriate provision and appropriate use of health services are acknowledged as important determinants of health status, and are represented as 'effective health services' in this model.

Health promotion outcomes represent those personal, social and structural factors that can be modified in order to change the determinants of health (i.e. intermediate health outcomes). These outcomes also represent the most immediate target of planned health promotion activities. Within this level of the model, 'health literacy'

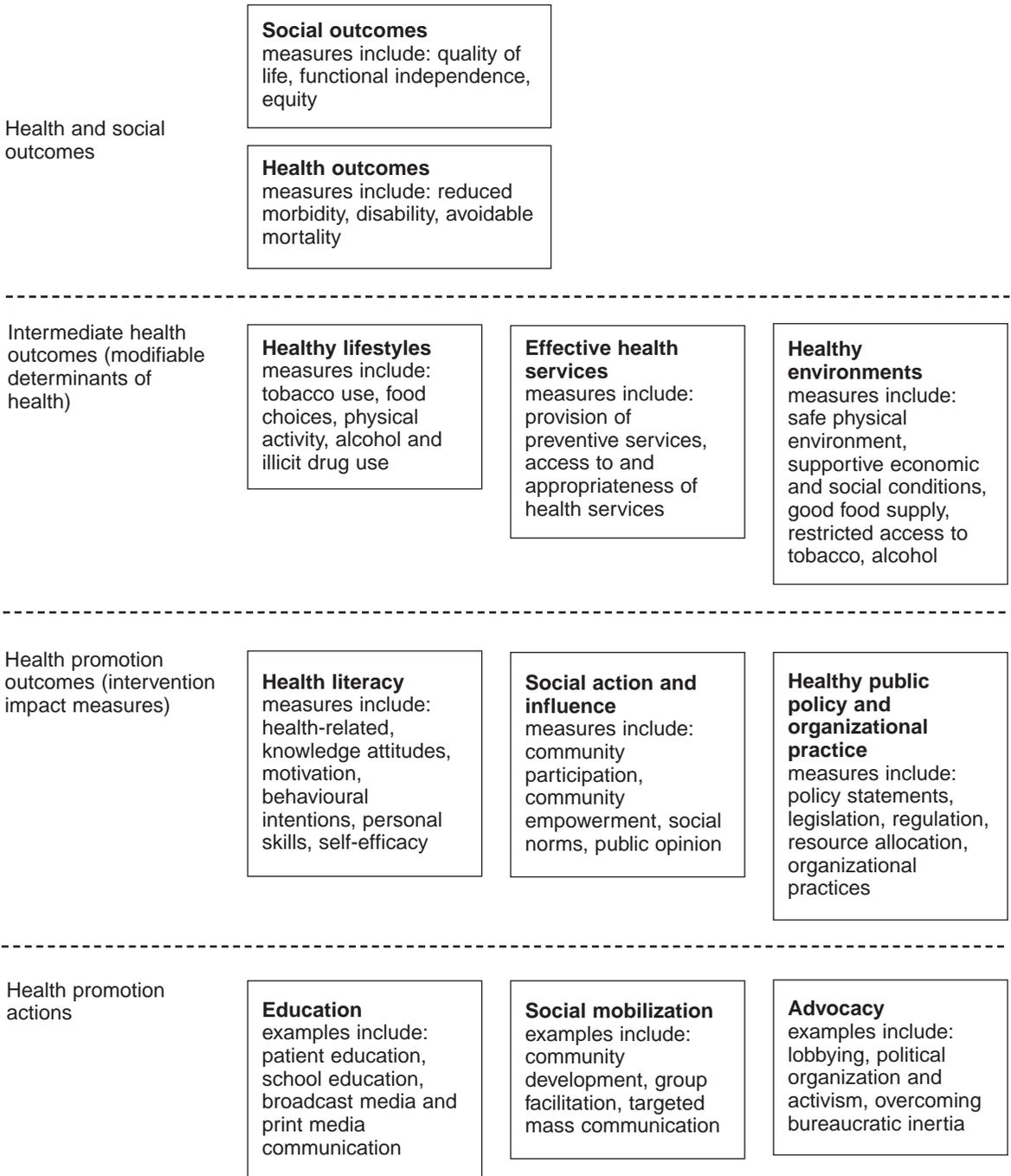


Fig. 1: An outcome model for health promotion.

refers to the personal, cognitive and social skills which determine the ability of individuals to gain access to, understand, and use information to promote and maintain good health. These include such outcomes as improved knowledge and understanding of health determinants, and changed attitudes and motivations in relation to health behaviour, as well as improved self-efficacy in relation to defined tasks. Typically these are outcomes related to health education activities.

The model also distinguishes two other types of health promotion outcome. 'Social action and influence' describes the results of efforts to enhance the actions and control of social groups over the determinants of health—illustrated by efforts to work effectively with to promote the health of marginalized groups. 'Healthy public policy and organizational practices' are the result of efforts to overcome structural barriers to health—typically the outcome of political advocacy and lobbying which may lead to legislative change. Success in the introduction of tobacco control legislation in many countries represents a contemporary example of an outcome from effective public health advocacy.

The health promotion actions in the model include education for health, efforts to mobilize people's collective energy, resources, skills towards the improvement of health, and advocacy for health. A typical health promotion program might consist of interventions targeted at all three of the factors identified as health promotion outcomes above. For example, a program to promote healthy eating might consist of efforts to educate people about basic food groups, to develop practical skills in food preparation and selection, and different actions to improve access to healthier food choices through supply-side intervention. These could include, e.g. efforts to improve the food choices available in school and worksite canteens, and interventions with food retailers to improve the supply and promotion of healthier food choices.

The different intervention strategies also mean that a wide range of potential measures of health promotion outcomes can be considered as evidence of success in the short term. Some of these are listed in the model in Figure 1.

Figure 1 also provides the bridge between an intervention (described as health promotion actions) and the goal of an intervention (modification of the determinants of health). These health promotion outcomes are the bridge

between what we do and what we are trying to achieve in health promotion interventions.

Use of this model places health education and communication into the wider context of health promotion, and highlights health literacy as a key outcome from health education. In this context, how we define and measure health literacy is both dictated by and influential on the content and methods of health education.

WHAT IS HEALTH LITERACY?

The term health literacy has been used in the health literature for at least 30 years (Ad Hoc Committee on Health Literacy, 1999). In the United States in particular the term is used to describe and explain the relationship between patient literacy levels and their ability to comply with prescribed therapeutic regimens (Ad Hoc Committee on Health Literacy, 1999). This approach infers that 'adequate functional health literacy means being able to apply literacy skills to health related materials such as prescriptions, appointment cards, medicine labels, and directions for home health care' (Parker *et al.*, 1995). Research based on this definition has shown, e.g. that poor functional health literacy poses a major barrier to educating patients with chronic diseases (Williams *et al.*, 1998), and may represent a major cost to the health care industry through inadequate or inappropriate use of medicines (National Academy on an Aging Society/Center for Health Care Strategies, 1998).

However, this fundamental but somewhat narrow definition of health literacy misses much of the deeper meaning and purpose of literacy for people. The field of literacy studies is alive with debate about different 'types' of literacy and their practical application in everyday life. One approach to classification simply identifies types of literacy not as measures of achievement in reading and writing, but more in terms of what it is that literacy enables us to do (Freebody and Luke, 1990).

Basic/functional literacy—sufficient basic skills in reading and writing to be able to function effectively in everyday situations, broadly compatible with the narrow definition of 'health literacy' referred to above.

Communicative/interactive literacy—more advanced cognitive and literacy skills which, together with social skills, can be used to actively

participate in everyday activities, to extract information and derive meaning from different forms of communication, and to apply new information to changing circumstances.

Critical literacy—more advanced cognitive skills which, together with social skills, can be applied to critically analyse information, and to use this information to exert greater control over life events and situations.

Such a classification indicates that the different levels of literacy progressively allow for greater autonomy and personal empowerment. Progression between levels is not only dependent upon cognitive development, but also exposure to different information/messages (communication content and method). This, in turn, is influenced by variable personal responses to such communication—which is mediated by personal and social skills, and self-efficacy in relation to defined issues.

By contrast to the definition of functional health literacy above, WHO defines health literacy more broadly, as follows (Nutbeam, 1998).

Health literacy represents the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health.

Health literacy means more than being able to read pamphlets and successfully make appointments. By improving people's access to health information and their capacity to use it effectively, health literacy is critical to empowerment.

This definition reflects elements of the two other types of literacy described above—interactive and critical literacy. It also significantly broadens the scope of the content of health education and communication, indicates that health literacy may have both personal and social benefits, and has profound implications for education and communication methods.

In terms of 'content', efforts to improve people's knowledge, understanding and capacity to act, should not only be directed at changing personal lifestyle or the way in which people use the health services. Health education could also raise awareness of the social, economic and environmental determinants of health, and be directed towards the promotion of individual and collective actions which may lead to modification of these determinants.

In terms of 'health benefit', such a definition implies that health literacy is not only a personal resource which leads to personal benefits, e.g. healthier lifestyle choices and effective use of available health services. It also implies that the achievement of higher levels of health literacy among a greater proportion of the population will have social benefits, contributing, e.g. by enabling effective community action for health, and contributing to the development of social capital.

In terms of 'method of education' and communication, such a definition provides a challenge to communicate in ways that invite interaction, participation and critical analysis. This is very similar to the style of education for 'critical consciousness' advocated and popularized by the Brazilian educator, Paulo Freire (Freire, 1970).

Health literacy is clearly dependent upon levels of fundamental literacy and associated cognitive development. Individuals with undeveloped skills in reading and writing will not only have less exposure to traditional health education, but also less developed skills to act upon the information received. For these reasons, strategies to promote health literacy will remain inextricably tied to more general strategies to promote literacy. But beyond this fundamental link between literacy and health literacy, much of the richness of health literacy implied by the WHO definition is missed in approaches to the promotion of functional health literacy as described above.

Having emphasized this fundamental relationship, however, it is important to recognize that high literacy levels (assessed in terms of ability to read and write) are no guarantee that a person will respond in a desired way to health education and communication activities. By contrast, Freire, and those that have modelled their education programs on his methods (Wallerstein and Bernstein, 1988), have shown that working to raise the 'critical consciousness' of those with little or no skills in reading and writing can undertake activities and achieve outcomes which are closely aligned to the definition of critical literacy described above.

A MODEL OF HEALTH LITERACY

Notwithstanding the strong links between literacy and health literacy, it is essential to consider the challenges for health education and

communication programs which are inherent in the definition above. Table 1 summarizes some of the implications for health promotion action. It describes four different dimensions, i.e.: the educational goal; the content of a particular form of activity; the outcome expected; and the actions which could be taken by health workers.

Level 1, 'functional health literacy' reflects the outcome of traditional health education based on the communication of factual information on health risks, and on how to use the health system. Such action has limited goals directed towards improved knowledge of health risks and health services, and compliance with prescribed actions. Generally such activities will result in individual benefit, but may be directed towards population benefit (e.g. by promoting participation in immunization and screening programs). Typically such approaches do not invite interactive communication, nor do they foster skills development and autonomy. Examples of this form of action include the production of information leaflets, and traditional patient education.

Level 2, 'interactive health literacy' reflects the outcomes to the approach to health education which have evolved during the past 20 years. This is focussed on the development of personal skills in a supportive environment. This approach to education is directed towards improving personal capacity to act independently on knowledge, specifically to improving motivation and self-confidence to act on advice received. Again, much of this activity will result in individual benefit, rather than population benefit. Examples of this form of action can be found in many contemporary school health education programs directed towards personal and social skill development and behavioural outcomes.

Level 3, 'critical health literacy' reflects the cognitive and skills development outcomes which are oriented towards supporting effective social and political action, as well as individual action. Within this paradigm, health education may involve the communication of information, and development of skills which investigate the political feasibility and organizational possibilities of various forms of action to address social, economic and environmental determinants of health. This type of health literacy can be more obviously linked to population benefit, alongside benefits to the individual. Health education in this case would be directed towards improving individual and community capacity to act on these social and economic determinants of health.

Relating this interpretation of the term 'health literacy' to the outcome model in Figure 1 illustrates both lateral and vertical relationships between education, health literacy and the other health promotion outcomes. For example, on a vertical plane, improved health literacy may enable healthy lifestyle choices, and support effective use of health services, including compliance with treatment regimes. Laterally, educational programs directed at achieving critical health literacy will improve capacity for social action which may in turn be directed towards changing public policy and organizational practices related to health. Examples of this form of action can be found in many community development programs. Through this route health education can be directed towards achieving change in the social, economic and environmental determinants of health which may benefit the health of whole populations, alongside more typical programs directed at individual lifestyles and health system use.

CONCLUDING REMARKS—NEW OIL INTO OLD LANTERNS

Health literacy is a concept that is both new and old. In essence it involves some repackaging of established ideas concerning the relationship between education and empowerment. Education for health directed towards interactive and critical health literacy is not new, and has formed part of social mobilization programs for many years. There are many contemporary examples of education being used as a powerful tool for social mobilization with disadvantaged groups in both developed and developing countries. Indeed those in developed countries may do well to retrace the roots of contemporary health education in community development programs, and learn from their current application in health development projects in developing countries.

Disappointingly, the potential of education as a tool for social change, and for political action has been somewhat lost in contemporary health promotion. Close attention to the impact of public policy decisions on health, and the need to create supportive environments for health may have had the unintended consequence of leading to structural interventions 'on behalf' of people—health promotion which is done 'on' or 'to' people, rather than 'by' or 'with' people. In turn,

Table 1: Levels of health literacy

Health literacy level and educational goal	Content	Outcome		
		Individual benefit	Community/social benefit	Examples of educational activity
Functional health literacy: communication of information	Transmission of factual information on health risks and health services utilization	Improved knowledge of risks and health services, compliance with prescribed actions	Increased participation in population health programs (screening immunization)	Transmit information through existing channels, opportunistic inter-personal contact, and available media
Interactive health literacy: development of personal skills	As above and opportunities to develop skills in a supportive environment	Improved capacity to act independently on knowledge, improved motivation and self-confidence	Improved capacity to influence social norms, interact with social groups	Tailor health communication to specific need; facilitation of community self-help and social support groups; combine different channels for communication
Critical health literacy: personal and community empowerment	As above and provision of information on social and economic determinants of health, and opportunities to achieve policy and/or organizational change	Improved individual resilience to social and economic adversity	Improved capacity to act on social and economic determinants of health, improved community empowerment	Provision of technical advice to support community action, advocacy communication to community leaders and politicians; facilitate community development

health education has been limited to interpersonal communication and media campaigns directed towards individual behavioural outcomes and health services use.

If achieving health literacy as defined by WHO is to be a goal, some rediscovery of the importance of health education needs to occur, together with a significant widening of the content and methods used. This poses a real challenge for contemporary health education and the type of information/education/communication programs which are widely supported by development and donor agencies—many of which are directed only towards achieving functional health literacy as described above.

Pursuing the goal of improved health literacy will also require more overt alliances between health and education sectors in pursuing the goal of improved literacy levels in the population. This applies at local, national and international levels—emphasizing, e.g. the need for improved alliances between WHO and UNESCO, at an international level, and clearer understanding between agencies at the most local level (St Leger and Nutbeam, 2000).

Improving health literacy in a population involves more than the transmission of health information, although that remains a fundamental task. Helping people to develop confidence to act on that knowledge and the ability to work with and support others will best be achieved through more personal forms of communication, and through community-based educational outreach. If we are to achieve the ultimate goal that is reflected in that definition of health literacy—trying to promote greater independence and empowerment among the individuals and communities we work with—we will need to acknowledge and understand the political aspects to education, focused on overcoming structural barriers to health.

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REFERENCES

- Ad Hoc Committee on Health Literacy for the American Council on Scientific Affairs, American Medical Association (1999) Health Literacy: Report of the Council on Scientific Affairs. *Journal of the American Medical Association*, **281**, 552–557.
- Ajzen, I. and Fishbein, M. (1980) *Understanding Attitudes and Predicting Social Behaviour*. Prentice-Hall, Englewood Cliffs, NJ.
- Andreasen, A. R. (1995) *Marketing Social Change: Changing Behaviour to Promote Health, Social Development, and the Environment*. Jossey-Bass, San Francisco, CA.
- Bandura, A. (1986) *Social Foundations of Thought and Action: A Social Cognitive Theory*. Prentice-Hall, Englewood Cliffs, NJ.
- Freebody, P. and Luke, A. (1990) 'Literacies' programs: debates and demands in cultural context. *Prospect*, **5**, 7–16.
- Freire, P. (1970) *Pedagogy of the Oppressed*. Continuum/Seabody, New York.
- Glanz, K., Lewis, F. M. and Rimer, B. K. (1997) *Health Behaviour and Health Education: Theory, Research and Practice*. Jossey-Bass, San Francisco, CA.
- Harris, E., Sainsbury, P. and Nutbeam, D. (eds) (1999) *Perspectives on Health Inequity*. Australian Centre for Health Promotion, Sydney.
- National Academy on an Aging Society/Center for Health Care Strategies (1998) Low health literacy skills increase annual health care expenditures by \$73 billion. Center for Health Care Strategies Fact Sheet, Washington DC.
- Nutbeam, D. (1996) Health outcomes and health promotion: defining success in health promotion. *Health Promotion Journal of Australia*, **6**, 58–60.
- Nutbeam, D. (1998) Health promotion glossary. *Health Promotion International*, **13**, 349–364.
- Parker, R. M., Baker, D. W., Williams, M. V. and Nurss, J. R. (1995) The test of functional health literacy in adults: a new instrument for measuring patient's literacy skills. *Journal of General Internal Medicine*, **10**, 537–541.
- St Leger, L. and Nutbeam, D. (2000) Finding common ground between health and education agencies to improve school health: mapping goals, objectives, strategies, and inputs. *Journal of School Health*, **70.2**, 45–50.
- Townsend, P., Davidson, N. and Whitehead, M. (1988) *Inequalities in Health (The Black Report and the Health Divide)*. Pelican, London.
- Wallerstein, N. and Bernstein, E. (1988) Empowerment education: Freire's ideas adapted to health education. *Health Education Quarterly*, **15**, 379–394.
- Williams, M. V., Baker, D. W., Parker, R. M. and Nurss, J. R. (1998) Relationship of functional health literacy to patient's knowledge of their chronic disease: a study of patients with hypertension and diabetes. *Archives of Internal Medicine*, **158**, 166–172.
- World Health Organization (1986) *Ottawa Charter for Health Promotion*. World Health Organization, Geneva.
- World Health Organization (1997) *Jakarta Declaration on Leading Health Promotion into the 21st Century*. World Health Organization, Geneva.

