

A Review of the Research on the Health of Low-Income Canadian Women

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La diminution des iniquités sur le plan de la santé liées à la pauvreté constitue un rôle important pour la profession infirmière exercée dans le domaine de la santé publique. Cet article décrit l'étendue de la recherche sur la santé des Canadiennes à faibles revenus. Les recherches qui ont fait l'objet de cette étude ont été publiées dans des revues de langue anglaise dont les articles étaient révisés par des pairs, entre 1990 et 1997. Les 26 articles sélectionnés sont résumés selon l'objet de l'étude et la composition de l'échantillonnage. La plupart se penchaient sur les pratiques de santé personnelles et l'état de santé. Une seule étude d'intervention a été identifiée. Les études et les résultats de cette analyse font l'objet d'une discussion en fonction de trois recommandations portant sur la recherche et la santé des femmes : un accent sur le contexte social, y compris les conditions structurelles influant sur la santé des femmes; la participation active des femmes dans le processus de la recherche; et la reconnaissance de la diversité chez les femmes à faibles revenus. Les créneaux qui devraient faire l'objet d'une priorité pour la future recherche sont : les études portant sur l'intervention; les études se penchant sur le contexte structurel dans lequel vivent les femmes à faibles revenus; les stratégies de recherche qui favorisent la participation des femmes dans le processus de recherche; et une participation accrue de divers groupes de femmes, telles que les femmes sans abris et les femmes de divers antécédents ethniques, y compris les femmes des Premières nations.

Reducing health inequities associated with poverty is an important public health nursing role. This article describes the scope of research on the health of low-income Canadian women. The research included was published in English-language peer-reviewed journals between 1990 and 1997. The 26 articles retrieved are summarized according to the focus of the study and the composition of the sample. Most addressed personal health practices and health status. Only one intervention study was identified. The studies and the findings of this analysis are discussed in relation to three recommendations for research on women's health: an emphasis on social context, including the structural conditions affecting women's health; active participation of women in the research process; and recognition of diversity among low-income women. Suggested priority areas for future research are: intervention studies; studies addressing the structural context of the lives of low-income women; research strategies that enhance the participation of women in the research process; and increased involvement of diverse groups of women such as homeless women and women of varied ethnic backgrounds, including First Nations women.

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Reducing health inequities is increasingly viewed as an important nursing role (American Public Health Association, 1996; Canadian Public Health Association [CPHA], 1990), which requires a focus on social and political determinants of the health of populations and communities. One determinant that is a continuing source of poor health is income inadequacy, including income inequity. Public health nurses have been challenged not only to support individual families in poverty but also to advocate for structural changes that ameliorate poverty.

Public health nursing initiatives to address health issues among low-income Canadian women are influenced by trends in health policy and evolving perspectives on women's health. In Canada, policy-influencing bodies (e.g., Advisory Committee on Population Health [ACPH], 1994, 1996; CPHA, 1997a; National Forum on Health, 1997) and health sectors of government (e.g., Alberta Health, 1993; Epp, 1986; Office of the Provincial Health Officer, 1995; Régie régionale de la santé et des services sociaux de Montréal-Centre, 1998) have recently given priority to reducing health inequities related to socio-economic factors. The shift to an emphasis on health inequities is rooted in a socio-environmental view of health. This perspective on health, which places importance on social context, is also congruent with the recent discourse on women's health (Cohen & Sinding, 1996; Walters, Lenton, & McKeary, 1995). In particular, structures of social disadvantage are acknowledged as important determinants of women's health (Cohen & Sinding; Kaufert, 1996; National Forum on Health; Walters et al.). At the Fourth World Conference on Women, held in Beijing, women's health was defined as involving emotional, social, and physical well-being and as determined by the biological, social, political, and economic contexts of women's lives (Cohen & Sinding; Lefebvre, 1996).

The purpose of this article is to describe the scope of research published between 1990 and 1997 on the health of low-income Canadian women. We will discuss the identified studies in relation to recommendations for research on women's health that have been given priority on Canadian and international agendas: an emphasis on social context, including structural conditions affecting women's health; the active participation of women in the research process; and recognition of diversity among low-income women. We will conclude with implications for public health nursing research.

Background

Increasing awareness of the broad range of psychosocial factors and socio-environmental conditions that influence health has led scholars to

articulate a public health nursing mandate that challenges social, economic, and political factors that determine health (Butterfield, 1990; Drevdahl, 1995; Kuss, Proulx-Girouard, Lovitt, Katz, & Kennelly, 1997; Reutter, 1995; Stevens & Hall, 1992; Sword, 1997). The CPHA (1990) statement on public health nursing roles describes the advocacy role of public health nursing as one of helping the socially disadvantaged to become aware of issues relevant to their health and promoting the development of resources that will result in "equal access to health and health-related services." Changing conceptualizations of health and health determinants as well as rising poverty rates (National Council of Welfare, 1998) have contributed to the renewed interest among policymakers and public health professionals in reducing health inequities related to socio-economic status. There has been a shift from an individualistic (behavioural) perspective on health to a social (socio-environmental) view that gives primacy to the influence of material and social conditions in which people live on a daily basis. A contextual approach to health places greater emphasis on the root causes of health and health behaviours (Link & Phelan, 1995) and provides an "upstream" approach to achieving health. Concern for health inequities rooted in social structures is based on a critical social theory perspective directed to developing knowledge that will free people from oppressive social conditions that, in turn, limit their health potential (Reutter, 1995; Reutter & Williamson, in press; Stevens & Hall, 1992).

In Canada, women face a significantly higher risk of poverty than men. In 1996, 19% of women, compared with 14% of men, were living in poverty (National Council of Welfare, 1998). The *circumstances* that lead to poverty may be different for men and women (Burt & Cohen, 1989; Montgomery, 1994). The gender differences can be explained in part by the increased poverty rate in three groups: unattached women under 65 years of age, unattached women over 65 (the age group with the greatest gender discrepancy), and single women with children, 61% of whom are poor (National Council of Welfare). Also, First Nations women and visible minority women are twice as likely to be living in poverty (Kaufert, 1996). In addition, the *effects* of poverty on health may be gender-sensitive because of the intersection of socio-economic status (SES) with work and family roles (Gijsbers van Wijk, Kolk, van den Bosch, & van den Hoogen, 1995).

The need to attend to women's health has been recognized in Canada. A Federal/Provincial/Territorial Working Group on Women's Health (1990) highlights women's health priorities in the paper *Working together for women's health: A framework for the development of policies and programs*. Subsequent initiatives include the creation of a Women's

Health Bureau, the establishment, in 1994, of the McMaster Research Centre for the Promotion of Women's Health, and the funding by Health Canada, in 1996, of five Centres of Excellence for Women's Health across the country. These initiatives indicate support for research on women's health and women's response to the determinants of health, such as SES. The establishment of these centres has also facilitated research with First Nations and immigrant women. Nevertheless, research on the health of low-income women continues to be a priority. It is important to conduct research within a Canadian context to determine the impact of Canadian social structures and Canadian economic, political, and social policies on health. This information could form a basis for determining how the health of low-income women in Canada compares with that of low-income women in other countries. Such comparative information contributes to our understanding of how social context influences health (Walters et al., 1995).

Method

We analyzed research articles published in peer-reviewed journals between 1990 and 1997 that addressed a Canadian population of women. We used MEDLINE, CINAHL, PSYCHLIT, and SOCIOFILE databases and did a manual search of key journals for the years 1993–97, including *Advances in Nursing Science*, *American Journal of Public Health*, *Canadian Journal of Nursing Research*, *Canadian Journal of Public Health*, *Gender and Society*, *Health Care for Women International*, *Health Promotion International*, *Health Reports*, *Journal of Advanced Nursing*, *Journal of Community Health Nursing*, *Journal of Women's Health*, *Nursing Research*, *Public Health Nursing*, *Qualitative Health Research*, *Research in Nursing and Health*, *Western Journal of Nursing Research*, *Women and Health*, and *Women's Health Issues*. Search terms included *poverty*, *female*, *health*, *women*, *socioeconomic status*, *health behavior*, and *low-income*. To ensure credibility of the research retrieved, we included only studies that employed acceptable research designs. To be selected for the review, an article had to report a research study using a Canadian sample, include a measure of SES, and address some aspect of women's health. We selected only English-language publications. We excluded studies in which the primary focus was child or infant health. We also excluded chapters of books, government documents not accessible through computerized databases, and studies that consisted of descriptions of programs for low-income women, without a research component.

Our literature search resulted in 26 articles that met the criteria. A summary of the articles is presented in Table 1. We classified the articles

according to the primary focus of the study (personal health practices, use of health-care services, and health status), criteria for SES, and sample characteristics. Our intent was to identify areas that have been addressed, as well as gaps, in the retrieved research. Because of the varied foci of the studies, no attempt is made to present an integrated summary of findings.

Criteria for SES

In studying the influence of SES on health it is important to consider the indicators that have been used to measure SES. Different indicators may result in inclusion of different subgroups of women. The SES indicators selected may also differentially influence outcome measures such as health practices or utilization of health-care services (Gazmararian, Adams, & Pamuk, 1996). We found that some studies included multiple indicators of SES while others relied on a single measure. The range of measures of SES included: family or household income, census tract income quintiles, receipt of social assistance or unemployment insurance, labour-force status, living in subsidized housing, index of possessions, life circumstances index, perceived purchasing ability, education, occupation, and social class (e.g., using the Hollingshead and Blishen indices). Of particular interest is the measure of life circumstances used by Locker, Jokovic, and Payne (1997), which incorporates material and social attributes of individuals as well as the environments in which they live. Increasingly, use of composite indices, which include both individual-level data and characteristics of the area of residence, is being advocated in Canada (Mustard & Frohlich, 1995).

Composition and Size of Samples

The samples varied in composition and size (see Table 1). Six studies focused exclusively on low-income women (Browne et al., 1997; O'Loughlin, Paradis, Renaud, Meshefedjian, & Bennett, 1997; Stewart et al., 1996; Tarasuk & Maclean, 1990; Travers, 1996). Three included participants from minority cultures: immigrant women (Anderson, Blue, Holbrook, & Ng, 1993; Franks & Faux, 1990) and Inuit men and women (Young, 1996). Only one study consisted of disabled as well as able-bodied individuals (Hammond & Grindstaff, 1992). We included one study in which the sample comprised only men (Lupri, Grandin, & Brinkerhoff, 1994), because it explored wife abuse from the perspective of the perpetrator. Other studies focused on specific age groups, including teenagers (Turner, Grindstaff, & Phillips, 1990) and older adults (Krause, 1993; Locker et al., 1997).

Table 1 *Summary of Canadian Studies on Health of Low-Income Women***PERSONAL HEALTH PRACTICES**

Authors	SES Criteria	Sample	Focus of Study
Anderson et al. (1993) ^a	Employment sector	EuroCanadian and Chinese employed women (N = 30)	Management of chronic illness
Campbell & Horton (1991)	Social assistance recipient Income decile	Urban households (N = 4,777) 23.5% female-headed	Nutrient intake
Ford-Gilboe (1997)	Family income	Female-headed Single parent (N = 68) 2-parent families (N = 70)	Health behaviours
Horton & Campbell (1990)	Per capita income	Urban households (N = 4,777)	Food expenditure
Krause (1993)	Perception of financial strain	Adults over 55 years (N = 640)	Social ties
Millar & Stevens (1993)	Education	Men and women (N = 11,000 [1985], 12,000 [1991]) 25 years and over	Smoking, physical activity, weight
Locker et al. (1997) ^b	Life-circumstances index	Men and women 53+ (N = 498)	Numerous health practices

Table 1 (cont'd)**PERSONAL HEALTH PRACTICES (cont'd)**

Authors	SES Criteria	Sample	Focus of Study
Mustard & Roos (1994) ^b	Income quintile (geographic area)	Pregnant women (N = 12,646)	Smoking
O'Loughlin et al. (1997) ^c	Low-income geographic area	Women (N = 122)	Smoking
Stewart et al. (1996) ^a	Family income	Low-income rural women (N = 138)	Smoking
Tarasuk & Maclean (1990) ^a	Subsidized housing Family income	Sole-support mothers (N = 8 interviews, N = 54 participant observation)	Problems obtaining food
Travers (1996) ^a	Social assistance recipient Low-income geographic area	Mothers from low-income families (N = 33)	Food and nutrition practices
Young (1996)	Education Personal income	Inuit men and women (N = 434)	Obesity, smoking, physical activity

Table 1 (*cont'd*)**USE OF HEALTH-CARE SERVICES**

Authors	SES Criteria	Sample	Focus of Study
Browne et al. (1997) ^b	Social assistance	Sole-support mothers (<i>N</i> = 101)	Use of health and social services
Eyles et al. (1993)	Household income Employment status	Adult men and women (<i>N</i> = 13,000)	Nursing contacts
Katz & Hofer (1994)	Family income Education	Adult women 18 years and over (<i>N</i> = 23,521 Canada, <i>N</i> = 23,932 U.S.)	Clinical breast exam, mammogram, pap test
Lin et al. (1996)	Social assistance	Men and women 15–64 years (<i>N</i> = 8,116)	Use of mental health services
Lipman et al. (1997) ^b	Household income	Mothers with dependent children (<i>N</i> = 1,540)	Use of mental health services
Maxwell et al. (1997)	Household income	Women 40 years and over	Mammography screening
Mustard & Roos (1994) ^b	Income quintile (geographic area)	Pregnant women (<i>N</i> = 12,646)	Prenatal care

Table 1 (cont'd)**HEALTH STATUS**

Authors	SES Criteria	Sample	Focus of Study
Browne et al. (1997) ^b	Social assistance	Sole-support mothers (N = 101)	Depressive disorders
Frands & Faux (1990)	Family income Occupation Employment status	Immigrant Chinese, Vietnamese, Portuguese, and Latin-American women (N = 212)	Depression
Hammond & Grindstaff (1992)	Occupation Household income Employment status Education	Men and women 15-54 years (N = 1,692 disabled, N = 1,692 able-bodied)	Life satisfaction
Lipman et al. (1997) ^b	Household income	Mothers with dependent children (N = 1,540)	Chronic physical problem, physical disability; psychiatric disorders
Locker et al. (1997) ^b	Life circumstances index	Men and women 53+ (N = 498)	Oral health status
Lupri et al. (1994)	Income; Education; Occupation	Adult men (N = 471)	Wife physical and psychological abuse

Table 1 (cont'd)			
HEALTH STATUS (cont'd)			
Authors	SES Criteria	Sample	Focus of Study
Murphy et al. (1991)	Index of possessions	Rural adults (N = 593)	Depression, anxiety
Mustard & Roos (1994) ^b	Income quintile (geographic area)	Pregnant women (N = 12,646)	Pregnancy complications
Russell & Love (1992)	Median income (geographic area)	Women 14–50 years (N = 2,749)	Pelvic inflammatory disease
Smith (1990)	Family income Occupation Education Employment status	Adult women (N = 604)	Wife physical abuse
Turner et al. (1990)	Father or mother occupation	Pregnant teenagers (N = 268)	Depression
a = qualitative study b = study addressing multiple components c = intervention study			

With regard to sample size, 40% of the studies used large data sets from national or provincial surveys (Campbell & Horton, 1991; Eyles, Birch, & Newbold, 1993; Hammond & Grindstaff, 1992; Horton & Campbell, 1990; Katz & Hofer, 1994; Krause, 1993; Lin, Goering, Offord, Campbell, & Boyle, 1996; Maxwell, Kozak, Desjardins-Denault, & Parboosingh, 1997; Millar & Stevens, 1993; Young, 1996). All but two of these studies (Katz & Hofer; Maxwell et al.) included both men and women.

Focus of Studies

All but one of the retrieved articles focused on understanding the links between SES and women's health. The remaining study (O'Loughlin et al., 1997) determined the effectiveness of an intervention program. Almost equal numbers of studies focused on personal health practices (13) and health status (11). Seven studies explored the use of health-care services. Only one study (Mustard & Roos, 1994) examined all three areas: personal health practices, use of health-care services, and health status.

Of the 13 studies addressing *personal health practices*, most addressed either smoking (5) or nutrition (4). One (Millar & Stevens, 1993) focused on smoking, physical activity, and weight control among adult women and men over time, while another (Young, 1996) explored these behaviours in a population of Inuit men and women. The only intervention study in our review evaluated the impact of a smoking cessation program on women in a low-income community (O'Loughlin et al., 1997). Other studies investigated smoking among low-income pregnant women (Mustard & Roos, 1994) and low-income rural women (Stewart et al., 1996).

Of the four studies that addressed nutrition, two examined food expenditure and nutrient intake (Campbell & Horton, 1991; Horton & Campbell, 1990), while two investigated the problems that low-income women encounter in obtaining food (Tarasuk & Maclean, 1990; Travers, 1996). The remaining studies that addressed personal health practices focused on patterns of social interaction (Krause, 1993), immigrant women's management of diabetes in the context of job insecurity (Anderson et al., 1993), and various health behaviours (Ford-Gilboe, 1997; Locker et al., 1997).

In the group of studies that identified predictors of the *use of health-care services*, two focused on preventive screening. Katz and Hofer (1994) employed large data sets to compare the association of SES and

preventive screening rates (clinical breast examination, mammogram, pap test) in Ontario and the United States, while Maxwell et al. (1997) utilized the 1994–95 National Population Health Survey data to explore correlates of mammography screening. Other studies focused more generally on health and social services. For example, one study explored the use of a variety of health and social services among social assistance sole-support mothers (Browne et al., 1997), and two others (Lin et al., 1996; Lipman, Offord, & Boyle, 1997) explored utilization of mental health services. Mustard and Roos (1994) examined the effect of SES on prenatal care in Winnipeg, Manitoba, using administrative health-care data such as physician reimbursement claims and hospital discharge abstracts. The final study in this group (Eyles et al., 1993) was based on the Aday and Andersen (1974) model of health-care utilization and explored nursing contacts in the previous 12 months using the 1985 Canada General Social Survey.

Eleven studies addressed the relationship between SES and *health status*, using a range of health status indicators. Mental health indicators included depression (Browne et al., 1997; Franks & Faux, 1990; Lipman et al., 1997; Murphy et al., 1991; Turner et al., 1990) and anxiety (Lipman et al.; Murphy et al.). Four studies addressed physical health status, including physical disabilities, pregnancy complications, pelvic inflammatory disease, and dental health (Lipman et al.; Locker et al., 1997; Mustard & Roos, 1994; Russell & Love, 1992). Social dimensions of health such as wife abuse (Lupri et al., 1994; Smith, 1990) and life satisfaction (Hammond & Grindstaff, 1992) were incorporated into the remaining three studies. Two studies tested theoretical issues related to the relationship between poverty and health status. Murphy et al. used a prospective design to explore competing explanations (social drift and social causation) of the relationship between mental health and SES, while Locker et al. explored the relative contributions of circumstances and lifestyle to the relationship between dental health status and SES.

Issues and Challenges in Research

We discuss the research retrieved in relation to three recommendations for research on women's health that have been given priority on both Canadian and international research agendas: emphasis on social context, including structural conditions affecting women's health; active participation of women in the research process; and recognition of diversity among low-income women. In our discussion we identify congruence with these recommendations as well as direction for future research. Throughout, the terms *contextual* and *structural* are used inter-

changeably to refer to the social, political, economic, and environmental conditions of women's lives.

Structural Context of Women's Health

Public health nurses who understand the structural context of behaviour will be more sensitive to the sociopolitical issues that shape the life circumstances of low-income women (Reutter, 1995; Sword, 1997). Studies that incorporate a contextual approach to individual behaviours will help to dispel myths about low-income women. A popular myth is that the source of unhealthful behaviours is individual inadequacy; structural characteristics that limit individual options are ignored or unacknowledged. If research is to benefit public health nurses and, ultimately, low-income women, it must illuminate the context of personal health practices, use of health services, and health status. In our review, the studies varied in the manner and degree to which they reflected a contextual approach.

Several qualitative studies explored the structural context of personal health practices, utilization of health-care services, or health status. Four studies used ethnographic methods, in which the social circumstances that influence individual behaviour are elucidated by providing understanding of the meanings of these behaviours in the lives of low-income women. For example, pervasive financial insecurity and competing priorities for food often dictated the diet of sole-support low-income mothers and their families, rather than their knowledge of what constitutes an adequate diet (Tarasuk & Maclean, 1990). Information of this type leads us to question the appropriateness of individualistic nutrition education strategies, and to consider instead strategies that advocate for structural changes, such as increased social assistance allowance. These qualitative findings complement the quantitative work of Horton and Campbell (1990), which details the food expenditures and nutrient intake of low-income families.

Travers (1996) used institutional ethnography to identify the structural forces that influence the nutritional practices of low-income mothers. Institutional ethnography goes beyond an understanding of the individual's everyday experiences to an "analysis of social relations structuring those experiences" (Travers, p. 546). Such an approach makes explicit the social policies that influence health and health behaviours, and is the basis for advocating healthy public policy, an important public health nursing role. Travers found that social policies at a variety of levels influenced the ability (or, more accurately, inability) of women to meet the nutritional needs of themselves and their families.

For example, the women's ability to purchase low-cost groceries was limited by lack of access to inexpensive stores as well as by welfare policies that resulted in frequent lack of funds. The implication of this finding for public health nurses is the relative importance of advocating for changes in income-support policies and addressing inequities in food pricing, as opposed to providing women with knowledge and skills.

An institutional ethnography incorporating a critical feminist perspective (Anderson et al., 1993) identified the influence of race and class oppression in immigrant women's management of diabetes in the context of job insecurity. This study also offered insights into how life circumstances influence access to health care. Its findings can be used to sensitize nurses who provide health education to immigrant women to the fact that working conditions, such as inflexible scheduling, can influence the feasibility of recommended strategies for diabetes management.

Stewart et al. (1996) used a feminist analysis to elucidate the intersection of gender and class in understanding the social determinants of smoking behaviour. This study supports others conducted in the United Kingdom (Graham, 1994) and the United States (Lacey et al., 1993) that identified smoking as a coping mechanism for managing stress in the face of limited resources and decreased personal control. An appreciation of the reasons why women smoke and the barriers to quitting will enable nurses to use more effective approaches in setting up smoking cessation programs. For example, the women could be invited to help plan the programs, child care could be provided, and steps could be taken to ensure that programs are culturally, financially, and geographically accessible.

Studies using quantitative methods also contribute information about the context of women's health, complementing the insights gained from qualitative research. Krause (1993) used structural equation modelling to examine the structural correlates of social isolation among older people in a nationwide sample. The study explored how distrust of others (which leads to social isolation) is influenced by the interplay of socio-economic factors and neighbourhood characteristics. Neighbourhood characteristics comprised physical features such as housing, buildings, and streets, as well as environmental stressors such as noise level, air quality, and safety from crime. Findings indicated that distrust and social interaction were influenced by physical deterioration of the neighbourhood.

In summary, the above studies help us to understand the experiences of low-income women in the context of their daily lives and, to a lesser extent, the social and political structures that inhibit health. Studies that focus on the contextual aspects of individual behaviours help to dispel the myths that perpetuate an individualistic approach to what are really structural influences requiring change. Such studies point to the need for nursing strategies that go beyond helping individual women in poverty to advocating for public policy that challenges social structures. Researchers with a critical social perspective (Anderson et al., 1993; Stewart et al., 1996; Tarasuk & Maclean, 1990; Travers, 1996) emphasize the need to change health-inhibiting conditions. Anderson et al. express this perspective eloquently:

Once we recognize that health and illness are socially produced, it is obvious that the boundaries of nursing should expand to identify and address social and political issues. We should not accept social injustice as a given; instead, we should accept the challenge to work toward social justice for all people. (p. 120)

Several of the studies highlighted the resiliency and innovative coping strategies of low-income women. These studies found that, contrary to popular belief, women possess adequate knowledge, skills, and motivation to engage in health-enhancing behaviours, and that their health-inhibiting behaviours result from struggles to meet conflicting health priorities in the face of decreased resources. A focus on strengths and capacity-building is an inherent principle of health promotion and an important emphasis in feminist perspectives on women's health (Reutter, Neufeld, & Harrison, 1995).

Participation of Women in the Research Process

Participation is a key concept on women's health agendas and in health promotion and feminist literature (Lefebvre, 1996). In research with vulnerable populations, it is particularly important that participants' voices are heard and that action results in improved conditions for health. This principle requires an empowering form of research that acknowledges and explores the experiences of low-income women and enables them to use the research process to effect change. Although women's health-research agendas call for a mix of qualitative and quantitative methodologies, recently there has been a call for more qualitative methodologies that allow women's own voices to be heard. Researchers should enter into dialogue with women concerning not only their perceived needs but also the structural changes they believe will lead to improved health (Sword, 1997). Qualitative methods such as ethnography give

participants a voice (Anderson et al., 1993; Stewart et al., 1996; Tarasuk & Maclean, 1990). Moreover, by directly asking women to identify, for example, the types of smoking cessation programs that would be helpful to them, Stewart et al. acknowledge the need for changes at the system level that might foster a more supportive environment for low-income women who wish to stop smoking. Although several studies ascertained women's views in relation to researcher-identified topics such as smoking or nutrition, no study elicited women's opinions on their priority health issues.

Travers (1996) employed a participatory research approach, which allowed participants to voice their concerns, served to increase participants' awareness of social constraints to access to food, and empowered participants to change barriers to health. This method is most congruent with a socio-environmental view of health and health promotion, as it is based on a critical social theory perspective that links understanding with action. The women in her study critiqued the corporate control of food and initiated a campaign to reduce pricing inequities between inner city and suburban supermarkets; critiqued welfare policies and lobbied the government for improvements in food allowances; and critiqued public and professional perceptions of low-income people and media portrayal of stereotypes.

Obtaining the participation of vulnerable populations such as low-income women is not without its problems. Walters et al. (1995) discuss the difficulty of accessing the "authentic" voice of women. Recruiting and retaining low-income research participants requires considerable effort. Interviews can be conducted at sites accessible (and preferably known) to the women, and child care and transportation can be provided (Stewart et al., 1996; Travers, 1996). Other means of encouraging participation include maintaining cultural sensitivity by employing interviewers of the same background, providing monetary return in exchange for participation, and being alert to cues that women may be responding from a sense of coercion rather than participating freely (Demi & Warren, 1995). The use of focus groups as a means of data collection has been advocated for vulnerable populations, as group participation facilitates consciousness-raising, acknowledges participants' expertise, and encourages participants to view their issues as shared (Stevens, 1996; Sword, 1997). Stewart et al. (1996) used focus groups to elicit recommendations for potential programming; Travers (1996) involved women in developing and carrying out recommendations.

Recognition of Diversity

An important principle inherent in women's health research agendas is the need to recognize and address diversity among women. Low-income women are not a homogeneous group. Nevertheless, we found limited evidence of the inclusion of women of diverse backgrounds in studies.

Although Canada's cultural composition is rapidly becoming more diverse, only three studies directly addressed ethnic diversity (Anderson et al., 1993; Franks & Faux, 1990; Young, 1996). Franks and Faux found that immigrant women are at high risk for depression but that different variables predict depression in different ethnic groups. Anderson et al. compared workplace and health-service factors that influenced management of diabetes, and found variation among different ethnic groups. Young's findings on determinants of obesity in an Inuit population can be used to provide more meaningful programs for addressing obesity among a group that is frequently overlooked in research. In Canada, women from First Nations communities have an average life expectancy 7 years lower than women in the general population (ACPH, 1996), and 33% live in poverty (Kaufert, 1996). Only one study (Young) included First Nations women. The reasons for limited research with minority cultures are unknown, but may relate to barriers such as researchers' inability to be sensitive to cultural variations or lack of fluency in the language of the minority culture.

In addition to cultural diversity, another indication of the degree to which diversity has been addressed is the omission of groups of women who vary on other characteristics. While several studies included women on social assistance, there were no studies with the homeless, despite the rapid growth in the number of homeless women and children in Canada (CPHA, 1997b). There were few studies with older women or adolescent girls. Both of these groups have age-specific health issues. Moreover, these groups are particularly vulnerable to the effects of poverty (National Council of Welfare, 1998). Variation in family makeup was addressed by several studies with sole-support mothers.

Establishing research teams that include women of diverse backgrounds may facilitate development of pertinent research questions and bring sensitivity to interpretation of data. Such research is complex and will require extensive human and financial resources.

Limitations

There are challenges in conducting a review of published research. The small number of studies reviewed is likely due in part to our inability to locate all the relevant literature. Not all relevant published research includes, in the title, keywords, or abstract, the search terms that we used. For example, research that addresses the health of low-income immigrant or First Nations women may not include the terms *low-income* or *poverty* and therefore would not be captured in our search. In addition, our review was limited to English-language publications. Although some of the studies retrieved included francophone women, studies published in French were not included, hence issues important to francophone women may have been inadvertently omitted.

To address these limitations, we carried out some manual searches of relevant journals, used a variety of search terms, searched specifically for populations poorly represented (e.g., age), and referred to related discussion papers to inform the search. The difficulties we experienced were not unique (Lefebvre, 1996). Adequate retrieval methods should be used to identify research on Canadian low-income women. For example, researchers should include determinants of health, such as low income, in their lists of keywords, and research teams should include a member able to review research published in French.

Implications for Public Health Nursing Research

Given the limited number of studies retrieved, it is difficult to discuss "gaps" in the research literature. Clearly, more studies are needed in each of the three focus areas: health status, health practices, and health-care utilization. Nevertheless, some omissions, alluded to in the previous sections, are particularly obvious. A glaring omission is the lack of studies on homelessness. Homelessness is becoming an important public health issue, of concern to public health nurses, and in some jurisdictions is reaching crisis proportions. Another obvious omission is the lack of intervention studies. We retrieved only one intervention study (O'Loughlin et al., 1997), and this study measured the effects of a smoking cessation program. More studies are needed that evaluate the effectiveness of programs that are directed towards improving the health of low-income women, particularly evaluation studies of population-focused approaches such as community development and public policy initiatives (Dookhan-Khan, 1996; Ploeg et al., 1995). Future research should include women from diverse groups such as older women, First Nations women, and immigrant women.

Only one study incorporated policy analysis and structural change affecting women's health (Travers, 1996). Research on the *structural context* of women's health provides direction for policy change to modify the social, economic, and political structures that create ill health. Change in these structures may be difficult, as they are sustained by powerful economic interests (Walters et al., 1995). Nevertheless, because advocating healthy public policy is the most effective strategy for reducing health inequities, there is an urgent need for research to inform this initiative.

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