Public Perceptions of the Relationship between Poverty and Health

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In Canada, there is growing inequality in earned income at a time when the social safety net is in danger of being dismantled. The population health and health promotion perspectives have led to a renewed interest in health determinants related to social and economic living and working conditions. The challenge of addressing socioeconomic determinants of health, such as poverty, has been identified as an important health goal.

Increasingly, it is recognized that social determinants of health such as poverty are best addressed through public policies. Public opinion plays an important role in legislated social policy, and the public's view on how poverty and health are related will influence their support for different policies and programs. There is no published research that directly addresses public perceptions of the relationship between poverty and health. The purpose of this study was to examine these perceptions and to identify demographic variables that predict support for various explanations of the relationship between poverty and health.

Four mechanisms or "connections" that account for the influence of socioeconomic status (SES) on health have been postulated: artifact or measurement bias; natural or social selection - the drift hypothesis; behavioural/cultural explanation; and materialist/structural perspective. These explanations were first identified in the UK Black Report. The artifact explanation, often referred to as the myth explanation, maintains that the observed relationship between SES and health results from biases in measuring SES and health. It is generally agreed that the artifact explanation is inadequate to explain the observed relationship. The natural or social selection explanation, often referred to as the drift hypothesis, suggests that people suffer from ill health first and, due to resultant disability and reduced employment, drift down in social position or become poor. There is some evidence for this explanation of the relationship between poverty and health for some subpopulations, but the impact of ill health on downward mobility is considered to be limited.

According to the behavioural/cultural explanation, poor people are unhealthy because they engage in health-inhibiting behaviours, such as smoking, substance abuse, inadequate nutritional practices, or decreased exercise. This explanation implies that these behaviours are the result of individual free-choice decisions based on personal values and attitudes toward health. Recent research evidence indicates that structural conditions or resources provide a better explanation. The materialist/structural explanation emphasizes that poor health results from decreased access to the material conditions and resources that facilitate health. Those with less purchasing power are more likely to be exposed to the ill effects of inadequate housing, inadequate nutrition, unsafe neighbourhoods, and occupational hazards. Unhealthy behaviours are viewed within the context of living and working conditions.
conditions, and may be coping strategies to manage the stress induced by limited resources. Such an approach, which "contextualizes behavioural risk factors" and seeks to address "fundamental causes" of ill health, is currently espoused in the health promotion literature. Over and above its recognition of the effect on health of income inadequacy (absolute poverty or material deprivation), a structural explanation also is consistent with the growing body of evidence of the health effects of income inequality (relative poverty).

**METHOD**

This study was part of the annual Alberta Survey administered by the Population Research Laboratory, Department of Sociology, University of Alberta. A random-digit dialing approach was used. Within the household, one eligible person was selected on the basis of gender to ensure an equal selection of male and female respondents. The data were collected through telephone interviews between March and May 1996 (See Fong for a complete technical report). The final sample consisted of 1,216 individuals, ranging in age from 18-96 years. The overall response rate was 67%. The sample is considered representative of the larger population from which it was selected, based on postcensal data. Survey results for the province-wide sample are accurate within plus or minus 2.9 percentage points, 19 times out of 20.

Respondents were asked to indicate their agreement or disagreement (on a 7-point Likert scale, where 1=strongly disagree and 7=strongly agree) with statements about the relationship between poverty and health. (Questions are listed in Table 1). The questions were based on the four explanations of poverty presented in the Black Report. Respondents were then asked the following question: "Which of the following do you think provides the best explanation of the relationship between poverty and health? People drift into poverty because of poor health (drift); Poor people are unhealthy because of living circumstances (structural); Poor people are unhealthy because their behaviour makes..."
TABLE III
Regression of Poverty Explanations on Demographic Variables

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myth Explanation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>0.18</td>
<td>0.05</td>
<td>0.18</td>
</tr>
<tr>
<td>Age</td>
<td>-0.00</td>
<td>-0.01</td>
<td>0.84</td>
</tr>
<tr>
<td>Health or Social Services Occupation</td>
<td>-0.14</td>
<td>-0.03</td>
<td>0.45</td>
</tr>
<tr>
<td>Education (years)</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.83</td>
</tr>
<tr>
<td>Household income</td>
<td>-0.01</td>
<td>-0.05</td>
<td>0.18</td>
</tr>
<tr>
<td>Residence</td>
<td>0.02</td>
<td>0.01</td>
<td>0.88</td>
</tr>
<tr>
<td>Conservatism</td>
<td>-0.23</td>
<td>-0.10</td>
<td>0.01</td>
</tr>
<tr>
<td>Adj R² = 0.01; F = 2.26; df = 7; p &lt; 0.05 n = 833</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Drift Explanation     |                            |                           |     |
| Sex                   | 0.06                       | 0.02                      | 0.64|
| Age                   | 0.01                       | 0.07                      | 0.05|
| Health or Social Services Occupation | 0.37                  | 0.08                      | 0.04|
| Education (years)     | -0.04                      | -0.07                     | 0.08|
| Household income      | -0.03                      | -0.12                     | 0.00|
| Residence             | -0.15                      | -0.04                     | 0.26|
| Conservatism          | -0.32                      | -0.15                     | 0.00|
| Adj R² = 0.06; F=8.19; df = 7; p<0.001 n = 832 |

| Behavioural Explanation Index |                            |                           |     |
| Sex                         | -0.77                      | -0.08                     | 0.03|
| Age                         | 0.06                       | 0.18                      | 0.00|
| Health or Social Services Occupation | -0.83                | -0.06                     | 0.10|
| Education (years)          | -0.02                      | -0.01                     | 0.27|
| Household income            | -0.03                      | -0.05                     | 0.20|
| Residence                   | 0.16                       | 0.02                      | 0.66|
| Conservatism                | -0.02                      | -0.00                     | 0.92|
| Adj R² = 0.04; F = 5.75; df = 7; p<0.001 n = 820 |

| Structural Explanation Index |                            |                           |     |
| Sex                         | 0.56                       | 0.06                      | 0.09|
| Age                         | -0.01                      | -0.02                     | 0.49|
| Health or Social Services Occupation | 0.39                  | 0.03                      | 0.41|
| Education (years)          | -0.07                      | -0.04                     | 0.25|
| Household income            | -0.08                      | -0.14                     | 0.00|
| Residence                   | -1.10                      | -0.11                     | 0.00|
| Conservatism                | -1.32                      | -0.23                     | 0.00|
| Adj R² = 0.10; F = 13.16; df = 7; p<0.001 n = 814 |

Sex (male=0; female=1)  
Health or Social Services Occupation (yes=1; no=0)  
Residence (rural=0; urban=1)  
Conservatism (PC or Reform=2; Don't know=1; Liberal or NDP=0)

There is no real link between poverty and health (artificially). All questions were tested in a pilot study and were submitted to a University Research Ethics Committee to ensure suitability for administration to the general public.

The following demographic data were collected: age, sex, education, occupation, household income, number of people in household, residence (rural/urban), and voting intentions in the next provincial election. Two new variables were created: Conservatism and Poverty. A contrast variable, Conservatism, was created from the voting preference variable and coded as follows: Progressive Conservative or Reform (2), Don't know (1), and Liberal or New Democrat (0). The Poverty variable was created using the two variables "number of people in the household" and "household income"; survey income categories were recoded based on the poverty line for a population of 30,000 to 99,999 (the middle population category of the 1995 Statistics Canada Low Income Cutoffs) and household size. Using the new Poverty variable, 13% of the sample were at or below the poverty line. In Alberta in 1995, 17% of people were living in poverty. This survey may exclude some individuals living in poverty who do not have a telephone.

The data were analyzed using the SPSS 7.0 Windows statistical package. First, the percentage distributions of responses to the likert questions addressing the explanations of poverty were tabulated (Table I). A correlation matrix of the items in Table I was calculated (Table II). Based on the correlations among individual items representing the structural explanation (r=0.40 to 0.51) and among the individual items representing the behavioural explanation (r=0.44 to 0.50), the relevant individual items were added to create a Structural Explanation Index (reliability alpha of 0.71) and a Behavioural Explanation Index (reliability alpha of 0.73), respectively. Using standard multiple regression, each of the four dependent variables representing the four explanations (myth, drift, behavioural, structural) was then regressed on the 7 predictor variables: sex, age, occupation, education, household income, residence, and conservatism (Table III). The same analyses were repeated with Poverty replacing household income. Missing cases were randomly distributed except that those who were older were more likely not to respond. Responses to the question asking for the best explanation are summarized in Figure 1.

RESULTS

Table I shows the percentage of respondents who indicated that they disagreed, were neutral, or agreed with each of the statements presented. Only a small minority (16%) supported the myth explanation that there is no relationship between poverty and health. In contrast, three quarters of Albertans surveyed believed that poverty leads to poor health, with 43% reporting strong agreement (7 on a 7-point scale). A majority of the sample (64%) agreed with the drift explanation that people become poor after they become ill, with 22% expressing strong agreement. The three items relating to the behavioural explanation were designed to address motivation, knowledge, and skills. Just over one third of respondents agreed that poor people are not motivated to look after their health, about one quarter agreed that poor people lack knowledge about behaviours that are harmful to health, and just under one third agreed that poor people lack skills to manage their money. In short, the behavioural explanation is supported by, at
most, about one third of respondents. 
With regard to the structural explanation, 
opinion is divided as to whether poor 
health is related to lack of opportunity for 
employment, with 44% agreeing and 40% 
agreeing, and another 16% being 
unsure. Just over half of respondents 
agreed that poor people are unhealthy 
because they live in more stressful 
conditions. About one third (35%) believed 
that the health status of the poor is accounted 
for by inadequate health care. In summary, 
only one of the structural explanation 
statements is supported by a majority of 
respondents. However, there was some-
what stronger disagreement with the three 
behavioural explanation statements (19%, 
29%, and 21% answered 1 on the 7-point 
scale) than with the three structural expla-
nation statements (14%, 10%, and 23%). 

Figure 1 depicts the respondents’ choice 
of the best explanation of the relationship 
between poverty and health. This question 
appeared to be difficult to answer as there 
were 92 missing cases (8%), with 63 of 
these volunteering “Don’t Know.” The 
most frequently chosen explanation was 
Structural (41%), followed by Myth 
(27%), Behavioural (20%), and Drift 
(5%).

Table III shows the predictors of 
endorsement for each of the four 
explanations in isolation. Responses to each of 
the four explanations were regressed on the 
demographic variables of sex, age, occupa-
tion, education, household income, resi-
dence, and conservatism. Regarding the 
myth explanation, the predictor variables 
explained virtually none of the variance 
(1%). Only 6% of the variance was 
explained for the drift explanation. Those 
who supported the drift explanation 
were more likely to be health care or social 
services workers, older, have lower incomes, 
and be less conservative in their political 
attitudes; the strongest predictor 
was the degree of conservatism. When 
poverty rather than income was used as a 
predictor, similar results were obtained, 
with education also exerting significant 
effects; those with less education and those 
at or below the poverty line were more likely 
to agree that ill health leads to poverty. 

Using the Behavioural Explanation 
Index, only 4% of the variance was 
explained by the predictors, with sex and 
and the only significant predictors. Males 
and older respondents were more likely to 
agree with this explanation. Separate 
regressions run for each of the three 
behavioural items gave similar results. The 
amount of variance explained by the pre-
dictors for the Structural Explanation 
Index was 10%. Income, residence, and 
conservatism were significant predictors. 
Those with lower incomes, living in rural 
areas, and less conservative in their political 
intentions were more likely to adhere to 
the structural explanation. Conservatism 
exerted the strongest effect. When Poverty 
rather than income was used as a predictor, 
similar results were obtained. Residence 
and conservatism remained significant pre-
dictors; in addition, females and those with 
income at or below the poverty line were 
more likely to favour this explanation. 
Separate regressions run for each of the 
three structural items revealed similar 
results.

**DISCUSSION**

Approximately three quarters of all 
Albertans acknowledge a relationship 
between poverty and health although they 
very in their perceptions of how it is that 
poverty influences health. A sizeable 
majority of respondents believe that poor 
health is a precursor to poverty. When 
comparing support for behavioural and 
structural explanations, it appears that 
more Albertans support a structural expla-
nation. When required to choose the 
“best” explanation, twice as many respon-
dents favoured the structural explanation 
over the behavioural one. When each 
explanation was asked separately, the 
structural explanation item, “Poor people are 
unhealthy because they live under more 
stressful conditions,” was supported by 
over half of respondents. In contrast, none 
of the behavioural explanation questions 
were supported by the majority of respon-
dents. Furthermore, there was stronger 
disagreement with the behavioural questions 
than with the structural questions. 
The demographic predictors were able to 
explain very little of the variance in each of 
the explanations, which suggests that the 
explanations are more or less evenly held 
by a cross-section of the population. 
Wilson also found that demographics do 
not exert as powerful an effect on public 
opinion as previously thought. In our 
study, degree of conservatism was the most 
consistent predictor, exerting significant 
effects in all but the behavioural explana-
tion. In other studies there is evidence that 
individualistic (behavioural) explanations 
for poverty are more likely to be supported 
by those with a conservative political orien-
tation and that those with a more liberal orientation are more likely to support societal causes for poverty. These studies, however, did not explore perceptions of the relationship between poverty and health, but focused on causes of poverty.

Regarding other predictors, income was a significant predictor in both the drift and structural explanations. Those with lower incomes were more likely to support the drift explanation and the structural explanation. Greater support for the structural explanation by those with lower incomes is consistent with several studies about the relationship between income and attitudes toward poverty. However, one study found that those with higher incomes are more likely to have a structural view of what determines health.

Only a small amount of variance was explained. Other sources of unexplained variance should be considered. Two potential variables not included in this work are the respondents' knowledge of health determinants and their exposure to poverty. These variables may exert independent effects, over and above the variables included in this study. Perceptions about poverty may be influenced and modified through exposure to the poor, particularly from knowing someone who is poor and hearing about poverty from experts in the area. This type of exposure may also influence respondents' perceptions of health inequalities.

There is incongruence between the responses to the question asking for the best explanation and the questions eliciting agreement with statements representing each of the explanations. For example, very few respondents chose the drift hypothesis as the best explanation, although over two thirds supported this explanation when asked as an individual likert question. These divergent results may be accounted for by variations in respondents' conceptualizations of the relationship between poverty and health and by methodological limitations.

Individuals may simultaneously conceptualize several explanations of the relationship between poverty and health. Bobo in a study of attitudes toward the poor, found that individuals may concurrently hold different beliefs to some degree, but differ as to which is most central. It is also possible that individuals apply explanations differentially; for example, assigning a structural explanation under some conditions and a behavioural explanation in others. Our questionnaire is based on the assumption that people have an undifferentiated concept of poverty (which is self-defined) and a generalized view of health. Wilson found that the public has different causal beliefs for different types of poverty, such as homelessness or receipt of social assistance. The same phenomenon may exist for different health conditions. For example, respondents may support the drift explanation in relation to mental illness if inadequate supports exist in the community for those discharged from mental institutions.

Methodological limitations may also account for the discrepancy observed in responses to the likert questions and to the best explanation question. Differences in the way the questions were worded may have contributed to incongruent responses. For example, in the question asking respondents to indicate their agreement with the drift hypothesis, the phrase "unable to work" adds a somewhat different aspect that is not explicit in the best choice question, which states that people drift into poverty because of poor health. An alternative explanation for the discrepancy may be that after being exposed to questions that address each of the four explanations, respondents when answering the question as to the best explanation may conclude that some explanations are more salient than others.

Implications for further research and policy development

To date, there are no studies that directly address public perceptions of the relationship between poverty and health. Although this study makes a beginning contribution in this area, further studies are needed to ascertain the influence of beliefs about the relationship between poverty and health on the individual's support for existing and potential policies related to health inequalities. This study examined only beliefs about the relationship between poverty and health; additional studies are needed to determine how such beliefs influence support for specific policies. Such studies will need to address the conceptual and measurement issues identified in the current study. There is a need to explore what degree, and under what conditions, individuals simultaneously hold more than one explanation. There is also a need to explore whether individuals hold a single, but more complex, view that integrates structural and behavioural explanations, where behavioural factors are seen as intervening variables between structural conditions and health outcomes. Qualitative methods that explore in more depth how the public perceives the relationship between poverty and health may help to refine our understanding of the complexity of this issue. Finally, there is a need to reflect more clearly both the relative and absolute dimensions of poverty.

The literature suggests that the structural explanation holds the greatest potential for ameliorating the negative effects of poverty on health; however, actions based on structural beliefs are difficult to implement and require public support. Examples of policies that reflect a structural approach are those resulting in improved welfare benefits, prevention of further cuts to the social safety net, an increase in the minimum wage, employment and job creation, education and training programs to prevent poverty, progressive taxation aimed at equitable income distribution, and adequate affordable housing. The findings of this study reveal that there is public support in Alberta for a structural explanation, but that there are also considerable numbers of respondents who are undecided or who hold beliefs that may favour policies that reflect behavioural explanations. The public's view of how poverty and health are related will influence their support for different policies at both provincial and national levels.

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REFERENCES
