

TPOLOGY OF POVERTY

by

Zenon Bryniawsky

Thomas De Vries

Ronald M. Hansen

Roy H. Jones

Darlene Marzari

Roy Odren

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Vancouver 8, Canada

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ABSTRACT

This study is an attempt to discover relationships between particular factors which we felt would be indicators of poverty. Of the many factors suggested by the literature of poverty, we investigated relationships between income level, employment status, health conditions, education level, and age. Using the Vancouver data collected by the Nu-life Study, we designed a program which would indicate the nature and strength of the relationship between these factors.

From a definition of our variables, a model was designed using as a basis income adequacy. The available data contained information on other variables which we used, such as - marital status, sex, and number of persons per household. From this the hypothetical construct was formulated around hypotheses relating to four groups which were configurations of the employment status and income adequacy variables. Our statistical analysis was based on the chi square method for measuring significance and consistency. The contingency co-efficient was employed to measure the relatedness of the variables.

We found that there were indeed positive links between the factors referred to. However, these links were not as strong as we had anticipated.

Although the project could not establish cause-effect relationships, the findings do help to establish some of the components in the poverty cycle. These components would not

seem to have equal strength in determining level of income. Further research might investigate why some of these factors had greater bearing on income level than others. For example, the level of education seemed to have a greater effect than did the health factor. Consequently, we see this study as a step in determining the characteristics of poverty.

TABLE OF CONTENTS

	Page No.
ABSTRACT	ii
INTRODUCTION	1
CHAPTER I. DEFINITION OF TERMS	3
A. Sample Area	3
B. Income Adequacy	5
C. Education	8
D. Health	8
E. Other Variables	9
CHAPTER II. HYPOTHESES	10
CHAPTER III. STUDY FINDINGS	16
A. STATISTICAL ANALYSIS	19
CHAPTER IV. CONCLUSIONS	21
BIBLIOGRAPHY	26
APPENDIX	

LIST OF FIGURES

	Page No.
FIGURE 1. Design of the Four Household types	11
FIGURE 2. General Characteristics of the Four Types in terms of Percentages	15a

LIST OF TABLES

	Page No.
TABLE 1. Income Adequacy level	8
TABLE 2. Initial findings	15
TABLE 3. Chi Square and Contingency Coefficient Values	20

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INTRODUCTION

By the poor, we mean those who are not now maintaining a decent standard of living . . . those whose basic needs exceed their means to satisfy them.¹

The above quotation, unexceptional though it may be, illustrates an all too prevalent feature of the literature dealing with poverty - its lack of precision. If one has not satisfactorily defined "decent standard of living," "basic needs," and "satisfaction" one simply does not know much about poverty, in either the general or the particular.

This research project is an attempt, on a very limited scale, to bring definite, quantifiable evidence to bear on the subject of poverty. Most writers agree that there exists a relationship between certain socio-economic factors and poverty. The factors most commonly named are unemployment, poor health, limited education and unfavorable age and family composition. Together they add up to an inability (in some cases an unwillingness) to earn money beyond a certain level - the level which authorities have agreed represent the threshold between poverty and adequate income. At the risk of leaving oneself open to the charge of generalization, the point is worth re-emphasizing once, lest it be lost in a morass of data later on; poverty means not enough money.

1 In Gordon, R.A. "An Economist's View of Poverty." Margaret S. Gordon. Poverty In America. Chandler Publishing Co., 1965. p.5.

If poverty means "not enough money," then it is reasonable to suggest that there are a number of factors militating against the acquisition of money. Martin Rein² claims that poor health and nutrition are components in the poverty cycle. Irelan³ speaks of the necessity for education in a society which places increasing emphasis on credentials and diplomas. We felt, too, that the age factor might have some bearing on income level. Perhaps the most obvious consideration in this analysis is the employment status of the individual. Therefore, we selected employment status and income adequacy as the two major variables against which other variables could be measured.

The sample unit was composed of economic households, randomly selected from low-income areas adjacent to Vancouver's urban core. The ecological characteristics of the areas suggest that the range of incomes would tend towards the lower end of the economic scale.

2 Rein, Martin. "Social Research and the Elimination of Poverty." Journal of American Institute of Planners. Vol.33, No.3. May 1967.

3. Irelan, Lola M. Editor. Low Income Life Styles. U.S. Department of Health, Education, and Welfare. 1966.

CHAPTER I
DEFINITION OF TERMS

A. Sample Area

The nine hundred families studied by the Nulife Study in the Vancouver sample were residents in the areas covered by Census Tracts seven and fourteen in the 1961 census. The former (7) is bounded on the north by the Burrard Inlet, on the south by First Avenue, on the east by Victoria Drive and on the west by Clark Drive. These are the boundaries defined by the United Community Services' Planning Department for the Woodland Park area. Census tract 14 encompasses the area between False Creek and Broadway, Granville and Main Street. These are roughly the boundaries defined by the U. C. S. for the Fairview area.

According to a concentric zone theory of urban development, these two areas could best be described as part of the "Inner core" of Vancouver. Both are equidistant from the downtown center of the city, both are bounded by industrial waterways, and by main thoroughfares leading south from the waterfront. This information suggests that the areas have somewhat common characteristics; that they are partially industrialized, the rents or housing prices might be comparatively low and might attract people who were seeking cheaper accommodation, or people who want to be near city centre.

According to Bell's overview of Metropolitan Vancouver, "the inner core of the City of Vancouver . . . (is) characterized by low levels of income, occupation and education, and high

concentrations of aged, immigrants and single person households." ⁴

Using the breakdowns of the census tracts in this overview, one can outline the ecological characteristics of Woodland Park and Fairview under the headings of population characteristics, household and family characteristics, and labor force characteristics.

1. Population

Approximately one quarter of the residents living in these areas immigrated to Canada between 1941 and 1961. The Woodland Park Area ranked second highest in 120 Greater Vancouver census tracts for the percentage of immigrant population. In Woodland Park, Italians comprise 15 percent of the total population while the Chinese make up 12 percent (according to the 1961 census).

Both Fairview and Woodland Park have a high frequency of turnover, averaging about 28 percent in 1961. In both areas, the percentage of the population 65 years and over and the percentage of one-person households was well above the Greater Vancouver average.

2. Household Characteristics

Sixty-one percent and seventy-six percent of the housing stock of tracts 7 and 14 respectively were built before 1920, giving these areas the sixth and third oldest housing stocks

4 Bell, L.I., Metropolitan Vancouver An Overview for Social Planners, Vancouver, Community Chest and Councils of the Greater Vancouver Area, February, 1965.

in Vancouver. Of these homes, an average of about 7 percent need major repairs - once again, a high proportion in comparison with the rest of Vancouver. At the same time, relatively few of the homes are owner-occupied. Homes in the Fairview area were 20 percent owner-occupied in 1961.

3. Labor Force Characteristics

In 1961, a period of recession, tracts 7 and 14 were among the five hardest hit areas, with 13 percent of the male population in the former and 17 percent in the latter looking for work. The average family wages were among the lowest in the city, ranking 116 and 117 out of 120 tracts. Twenty one percent of families in tract 7 and 24 percent of families in tract 14 were earning less than 2,000 dollars. Over half the householders in these areas were primary craftsmen or laborers.

From this evidence, we postulated that the sample would be largely working class, that there would be a preponderance of household heads working, that there would be a high percentage of senior citizens, and that many household heads would be marginally employed and possibly receiving public assistance of some kind.

B. Income Adequacy

We assumed that a subsistence line can be drawn by totalling a variety of essential and inescapable costs - food, shelter, clothing. The data available and the prognostication of others afforded little help. The often

quoted figure of \$3,000 for a typical family unit could not be accepted because no typical family existed. Families come in a variety of numbers and age compositions.

Since our population sample falls within the boundaries of a study prepared in November 1966 by the United Community Services we turned to it for guidance. The Adequacy of Social Assistance Allowances in Vancouver provides figures for expenditures in five areas; rent, utilities, food, clothing and "other" - understood to mean the cost of transportation, personal care, recreation, education and the like. The study based its figures for food costs on the Low Cost Food Plan prepared by the Nutrition Service of the Vancouver Metropolitan Health Service, which in 1966 established a range of weekly food costs for eleven age levels ranging from infant to adult. Adjustments were recommended for households of three people or less. The cost of utilities was derived from a similar study done in 1958 with the addition of telephone costs for households of two or more. B.C. Hydro's services have not become more expensive since 1958. Rent or shelter costs in the study were based on a 1966 sample of 50 families in the Area Development project; no other data was available. The cost of "other" was ascertained by adding 15% of the total of the previous four categories.

The above criteria were accepted with the following reservations:

1. Shelter - This figure is on the low side, but as the only current rental rates compiled are for purpose-designed apartments in various parts of the city, it appeared that the most reasonable way to reflect an increase would be through a cost-of-living adjustment.
2. Utilities - The costs of fuel, wood and oil (but not electricity) are probably greater than they were in 1958. This increase should also be considered on a cost-of-living index basis.
3. Food - These cost figures appear realistic and well-founded.
4. Clothing - We wondered about the arbitrary decision in the study to adjust downward all clothing costs by one-third on the grounds that clothes may be passed on or bought second hand. We were not certain that all families would behave that way.
5. "Other" - We realized the difficulty in determining realistic figures for this category. Fifteen percent was considered the very minimum which should be added to the budget.

To account for inflation in the period between the publication of the Adequacy Study and the collection of the Nulife data, we consulted the Consumer Price Index which revealed an increase of about two and one half percent. With these adjustments in mind, we established the following table, reflecting the monthly per capita incomes of households

ranging from single person units to units containing five or more people.

TABLE 1. INCOME ADEQUACY LEVEL

No. IN FAMILY	MONTHLY PER CAPITA INCOME	TOTAL
1	\$ 110	\$110
2	\$ 90	\$180
3	\$ 75	\$225
4	\$ 65	\$260
5+	\$ 60	\$300

C. Education

We arbitrarily chose a line between those people who left school after grade 11 and those who left before. Grade 10 is recognized as a minimum qualification for entrance to vocation and training programs. We will refer then to the terms "limited" and "adequate" education to define these two categories.

D. Health

The categories we chose to use for our design were those describing conditions of health as stated by the heads of households interviewed. We decided to group "fair health" and "good health" into one category and compare this category with that portion of the sample who claimed to be in "poor health." The health questions required a subjective response

on the part of the heads of households.

E. Other Variables

1. Employment Status - The two categories, working and non-working, were based upon the Nulife question regarding "primary activity." We chose to define anyone who was retired, at school, looking for work or not engaged in an earning role, as "non-working."
2. Age - We chose the age group of 20 - 59 for the reason that this is the group which is expected to be employed. The possibility of exclusion of a small group of heads of households over 59 and under 20 is recognized.
3. Marital Status - We grouped the eight responses in the Nulife Study into two categories; married and non-married.
4. Number in Family - Five categories were used, based on number in household. This is not a child - adult breakdown.
5. Income Satisfaction - This reflects the response of heads of households regarding their satisfaction with their existing income.

CHAPTER II

HYPOTHESES

We have stated that a typology of poverty will involve an analysis of a number of variables. We would go on to suggest that the variables themselves have differential effects on income adequacy -- that is to say, health, education, age or employment status influence level of income to varying degrees. Consequently, we placed them in a ranking order of magnitude which was suggested by the initial tabulations.

There is a prevalent cultural expectation that if a person is working, he is likely to have an income which meets his basic needs.⁵ In our estimation, then, the employment variable was a major determinant of income adequacy. We formulated a bivariate model correlating employment status of heads of households and adequacy of income.

The first of the four types involved a head of household who was working, but was shown, by our criteria, as having an inadequate income. The second type was unemployed and had an inadequate income. The third household type was employed but would have an adequate income while the fourth was not employed and would have an adequate income.

⁵ This is borne out by the fact that public assistance rates are no more than the minimum a person might earn in the labor market.

FIGURE 1. Design of the Four

Household Types

EMPLOYMENT STATUS	INCOME	
	Inadequate	Adequate
Working	I	III
Non-working	II	IV

Contrary to the cultural expectation that a working man can expect to live at a reasonable standard, our initial tabulations and our understanding of the sample area pointed out that a number of employed persons were living below the subsistence line. Taking the employable age range (from 20 to 59), we hypothesize

Hypothesis I

A. The majority of heads of households in the sample area will have an inadequate income, but will be employed. We would claim, that the smallest proportion of the sample will fall into Type III and that the largest proportion will fall into Type I.

B. The other two Types, we suggest, will have small but relatively equal representation.

We suggest that education will be the most significant variable after employment status. Over the past two decades, access to the labor market has become increasingly dependent on higher academic qualifications.

Hypothesis II

- A. The lack of educational qualification reduces earning capacity.
- B. The majority of those with limited education in the sample will fall into Types I, II and IV, with a concentration in Type II.
- C. Those in Type III will have, on the whole, an adequate education.

The age factor, in our ordering of variables, would have the third greatest influence on income adequacy. This influence may be direct or indirect; by direct, we mean that retirement age brings with it a withdrawal (either voluntary or enforced) from the labor market. By indirect, we mean that age factor is closely tied to other variables. For example, the educational requirements of thirty years ago permitted individuals to leave school at an early age and still be assured of a job. These persons may now have difficulty competing in the present market and difficulty in entering

retraining programs. Moreover, if this assessment is correct, it particularly affects the sample areas, where, according to the 1961 Census Tracts, over 30% of the household heads were over age 55.

Hypothesis III

A. A majority in Types I and III will be younger (we set the range 20 to 59) because they are employed. Type III in particular would be the youngest segment because of its ability to compete for jobs which (1) pay an adequate income, and (2) require heavy manual labor.

The initial tabulation of data demonstrated that health was the least significant of our variables.

Hypothesis IV

Heads of households who have health problems will be contained in groups II and IV. We feel here that poor health would be reflected in lack of employment.

To provide a control variable to our study, we analyzed the data pertaining to income satisfaction. By doing so, we could measure our line of adequacy again and the felt need of the household heads.

Hypothesis V

A. The majority of persons in the groups with inadequate income will be dissatisfied with their income level.

B. At the same time, Type III, will be dissatisfied, possibly because the persons in the group are living in a low rent area in order to save for purchase of homes elsewhere.

TABLE 2 - INITIAL FINDINGS

	TYPE		TYPE		TYPE		TYPE	
	A* I B**		A II B		A III B		A IV B	
	%	No.	%	No.	%	No.	%	No.
Percent of Total N-845	46	386	16	140	6	47	32	272
Adequate Education	35	<u>130</u> 373	23	<u>32</u> 138	20	<u>9</u> 45	18	<u>46</u> 259
AGE (20-59)	87	<u>334</u> 382	43	<u>60</u> 138	89	<u>41</u> 46	60	<u>165</u> 272
HEALTH (GOOD)	98	<u>380</u> 386	86	<u>118</u> 137	100	<u>47</u> 47	83	<u>224</u> 267
SATISFACTORY INCOME	63	<u>232</u> 369	44	<u>60</u> 135	41	<u>19</u> 46	20	<u>52</u> 256
SEX MALE	66	<u>254</u> 382	53	<u>73</u> 137	65	<u>30</u> 46	35	<u>94</u> 268
NO. IN HOUSEHOLD over 2	66	<u>204</u> 383	25	<u>34</u> 138	77	<u>36</u> 47	36	<u>99</u> 272
MARRIED	66	<u>254</u> 382	53	<u>73</u> 137	65	<u>30</u> 46	35	<u>94</u> 268

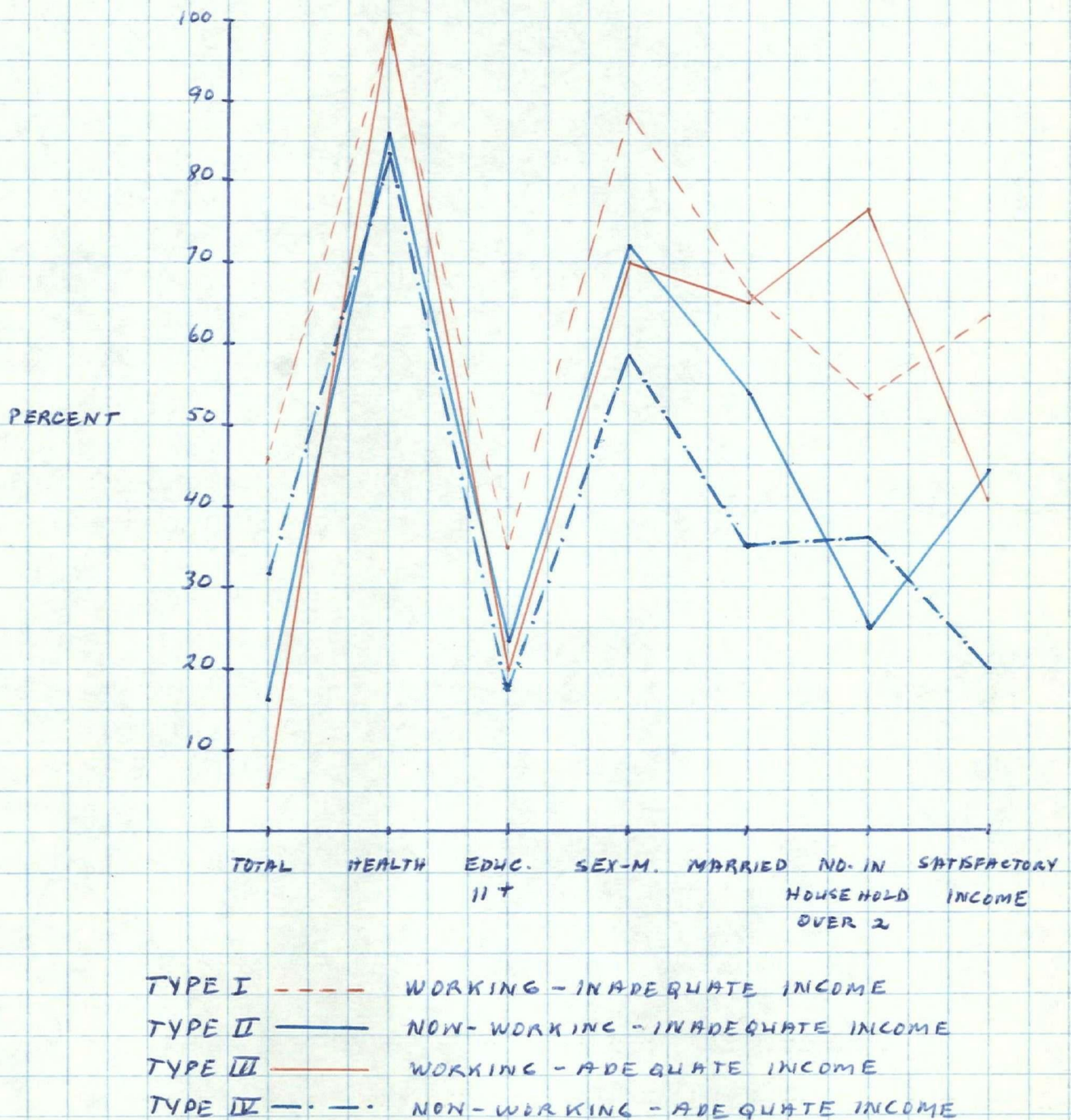
χ^2 P > .05

* Column A - Percentage of total for each variable.

**Column B - Number of responses for each variable over total number of responses, minus the no response.

FIGURE 2

GENERAL CHARACTERISTICS OF THE FOUR
TYPES IN TERMS OF PERCENTAGES



CHAPTER III

Study Findings

The data revealed that, in accordance with our first hypothesis, a high proportion of employed people did not have adequate incomes. Type I formed a surprisingly large proportion of the sample, numbering 386 households out of the total of 845. In comparison, the working group with an adequate income (Type III) numbered 47. Type IV, composed of individuals not working, but who had adequate incomes, formed the second largest segment, contradicting our hypothesis that it would be a relatively small portion. The most significant findings in this area showed that the number of household heads working in the total sample was 433, about half the total. However, the number living at a subsistence level was 526, about 62% of the total. Though these findings tend to negate the influence of employment status on income level, the statistical analysis proves otherwise.

Similarly, we found that education level is related to the other variables. Once again, however, the relationship was not as strong as anticipated when correlated with income adequacy. Type III, expected to have a comparatively high level of education, proved to have the second lowest. True

to our hypothesis, the bulk of those people with limited education fell into Type II, in which 77% had left school before grade 11.

In studying the findings on the age factor, we discovered that our hypothesis were confirmed. Of the 255 household heads in the sample over age 60, 71 fell into Type II, which had the highest percentage of any group. We should note that Type IV also contained a concentration of elderly persons (36% of the group). Type III, did contain a high proportion of younger people under 59.

The over-all health of all four types was good, affirming the results of the initial tabulations. Possible reasons for this might lie in relatively comprehensive insurance and hospitalization schemes.

Our hypothesis with regard to income satisfaction were only partially confirmed. The responses of two groups did not follow the pattern we had anticipated. Whereas we felt that groups with inadequate incomes would be dissatisfied, the majority of group Type I claimed it was satisfied. Conversely, a small majority of Type IV expressed dissatisfaction with an income which we defined as adequate.

In addition to the findings related to our hypothesis, we also obtained the following information as a guide in using the study findings.

Type I

The heads of households were predominantly male (88%) and married (67%). Slightly more than half the households consisted of more than two persons.

Type II

The heads of households were predominantly male (72%) and married (53%). One quarter (25%) of the households contained more than two persons, suggesting that a majority of the group lived in single person or two person households. The figures on unemployment showed that 45% of the segment was retired and that 24% were looking for work.

Type III

The household heads were largely male and married, 65%. Seventy-six percent of the households contained more than two persons.

Type IV

Slightly over one half of this group had male heads of household, but a smaller proportion of these heads were married. In Type IV, about one third had more than two persons per household. Thirty-one percent of the group was retired and 28% were looking for work.

A. Statistical Analysis

Table 2, provides the results of the statistical analysis -- utilizing the statistical measures of chi square and the contingency coefficient. Having only categorical (nominal scale) information about the variables, the chi square statistical test was used to determine the level of significance. To determine the strength of this relationship we employed the contingency coefficient (C).⁶

According to Siegel, "The upper limit for the contingency coefficient is a function of the number of categories ... the upper limit of C for a 2 x 2 table is $\sqrt{\frac{1}{2}} = .707$ ".⁷ It will be noted from our table that the highest relationship (C = .49) existed between employment status and adequacy of income.

6 Siegel, S. Nonparametric Statistics for the Behavioral Sciences. McGraw Hill Book ed Inc. New York, 1956. pp.196-202.

7 Siegel, S. Ibid, p.201.

TABLE 3

CHI SQUARE AND CONTINGENCY COEFFICIENT VALUES

VARIABLES	df	TABLED VALUE χ^2	OBTAINED χ^2	CONTINGENCY COEFFICIENT
Employment Status vs Adequacy of Income	1	3.84	273.6	.49
Health vs Employ- ment status	1	3.84	40.	.25
Health vs Adequacy	1	3.84	31.4	.22
Education vs Adequacy	1	3.84	14.2	.15
Education vs Employment	1	3.84	9.5	.13
Health vs Education	1	3.84	28.6	.11
Health vs Types I, II, III, IV	3	7.82	63.2	-
Education vs Types I, II, III, IV	3	7.82	15.3	-

χ^2 P > .05

CHAPTER IV

CONCLUSIONS

Concern about poverty is nothing new. The literature is substantial - but often deals with the poverty problem in either over-generalized terms, or loses perspective in attempting to study narrow segments of poverty pockets.

Our findings suggest that people living in low - income areas cannot be stereotyped. We expected to find that a large percentage of the sample would have an inadequate income. We did - 62% of the population were below our defined adequacy level. However, our investigation of the relationship between the socio-economic factors and unemployment, poor health and limited education showed a low level of correlation in some areas.

Type IV, the second largest group in the sample, demonstrated that a high proportion of unemployed people have adequate incomes. Since we had placed our line of income adequacy above the rates offered by public welfare agencies, we must assume that these persons were receiving income from sources other than wages and salaries. We speculated that these sources were probably transfer payments, other than public welfare, or income from entrepreneurial activities.⁸

8 Entrepreneurial activity is suggested by the ecological study which shows that a high proportion of residents in the study areas rent accommodation, and that a number of owners are also landlords.

Type I, the largest group in the sample, was composed of individuals who were working, but who had an inadequate income. Indeed, their incomes fell beneath a line of adequacy only marginally above present welfare rates. This finding has some implications for present wage rates in businesses which employ a high proportion of primary craftsmen and labourers. The fact, that Type I was largely satisfied with its income level may have some significance here. Then too, the characteristics of both Types (I and IV) cast some doubt on the idea that employment status is a major determinant of adequate income level. Although the correlation between the two factors shows that there is a definite relationship, it was not as strong as we had anticipated.

One of the most striking findings was the head of households general good health. While we recognized the imprecise nature of the question, we were nevertheless impressed by the high proportion of positive responses. If indeed health is uniformly good in the sample areas as our findings suggest, then the health factor does not play as important a role in the typology of poverty as we had expected. This suggests that as health programs become more comprehensive and more effective, the factor of poor health has less bearing on individuals' access to employment. At the same time it is significant to note that of the 29 heads of households who claimed to be in poor health,

24 fell into Type IV. The findings can offer few explanations for this situation, except perhaps the statement that 36% of this type were over age 60. On the other hand, the elderly in Type II, who were living on inadequate incomes, claimed to be in better health.

For the largest proportion of the sample, the level of education had a significant relationship with employment status and adequacy of incomes. This finding was based on a school leaving level which could be assessed as high by some standards, but not by present day requirements for entrance to the labour market, vocational schools or other types of training. However, the majority of Type III, admittedly a very small part of the sample, was making an adequate income through employment without having an adequate education. Although this would tend to challenge the hypothesis that education is a crucial variable, we must note that our study did not take into account on-the-job training, or the fact that educational requirements have increased in the past two decades, since the older segment of the group entered the labour market. Nonetheless, it is appropriate to question here the accessibility of higher education to low-income groups.

The findings revealed that about 30% of the heads of households were over 59 years of age, with heavy concentrations of aged in Types II and IV. Although we focused on the 20 to 59 age range, it is significant to note that the 62 retired

heads of households in Type II were living at a subsistence level. This suggests that old age security payments and supplementary assistance grants do not cover the basic requirements for some of these people.

When we compared our line of income adequacy to the control variable of income satisfaction, we found that only Type I was satisfied living below our adequate income line. This suggests that individuals in this group had adjusted their life patterns around a low income level, or felt that the fact that they were working fulfilled the normative role expectations of society. We were not surprised to find that the other three groups felt they needed higher incomes; our adequacy line was very low.

Present welfare programs, designed to alleviate poverty, often consider only one facet in the network of variables we have outlined. The Manpower program, if administered in the spirit of the Act which established it, is one attempt to attack a number of components in the poverty cycle by providing jobs and the necessary training to meet job requirements. However, a job does not guarantee an adequate income. The need for a more comprehensive effort to establish minimum wage guarantees, or a minimum standard of living would seem to be one major implication of our findings. However, our study was

not extensive enough to enable us to draw a detailed list of recommendations for social policy makers. Rather, our findings are only one step in establishing the component units and their relative importance in the poverty cycle. Each Household Type we have outlined, and the significance of the variables we have used must be left open to further study before a comprehensive typology of poverty can be determined. At the same time, we realize we are dealing with a dynamic element - with a group which cannot be stereotyped and with variables which might change with fluctuations in the economic and social systems. We hope this study will provide a frame of reference for future research which might enhance the understanding of poverty, for both the social legislators, and their electors.

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