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**LA THÈSE A ÉTÉ
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Women's Employment Status
and
Mental Health
by
Donna Duvall, B.A. (Hons.)

A thesis submitted to the Faculty of
Graduate Studies in partial fulfilment of
the requirements for the degree of
Master of Arts

Department of Sociology and Anthropology
Carleton University
Ottawa, Ontario.

April 14, 1980

The undersigned recommend to
the Faculty of Graduate Studies
acceptance of the thesis:

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and
Mental Health"

submitted by Donna Duvall, B.A. (Hons.),
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Abstract

This thesis examines the relationship between women's employment status and mental health. A review of previous research on this subject revealed conflicting findings. In approximately half of the studies employed wives had better mental health than housewives. In the remaining studies there was no difference in mental health according to employment status.

One possible explanation for the conflicting findings among the studies of employment status and mental health is that this relationship is dependent on the presence or absence of other factors. In this study the possibility that employment status is related to mental health through interaction with sex role orientation, marital stress and child rearing stress was explored. An interaction-effect was observed for two of these three factors: marital stress and child rearing stress. The difference in mental health according to employment status decreased when the women were not experiencing stress and increased when they were experiencing stress. In other words, employment was more important in improving mental health for women experiencing stressful conditions in their marital and family relationships.

Langner's measure of mental health was also analyzed in depth. The issues which were examined included the following:

- 1) validity of this scale as a measure of mental health;
- 2) response bias;
- 3) multidimensionality; and
- 4) whether physical illness is being identified.

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INTRODUCTION

"In terms of the number of people involved, the housewife syndrome might well be viewed as Public Health Problem Number One (Bernard, 1972:52)."

"For the middle aged women already socialized into traditional roles I would suggest an expansion of the Foster Grandparent Plan. It is surely an absurd situation when half the society is going crazy because no one needs them...(Bart, 1972:16)."

"It is wives who are driven mad, not by men but by the anachronistic way in which marriage is structured today - or, rather, the life style which accompanies marriage today and demands that all wives be housewives. In truth, being a housewife makes women sick (Bernard, 1972:53)."

In Canada, the major change in labor force participation from 1964 to 1978 has been among married women. The rate for married women rose from 24% in 1964 to 37% in 1974. By 1978 the rate had increased to 46 percent (Labour Canada, 1975, 1979). If Bernard's findings hold for Canada, the increase in the rate of labour force participation of married Canadian women should have been accompanied by a decrease in the rate of mental illness among married women.

In actual fact, do employed Canadian wives report less psychophysiological impairment and a lower rate of hospitalization for mental distress than housewives? What would an affirmative answer to this question mean? Lower rates of mental illness among employed women might simply indicate that mentally healthy women are more apt to enter the labour force than their less mentally healthy counterparts. On the other hand, a positive answer to this question might be interpreted as showing that labour force participation leads to a higher level of mental health than being a full-time homemaker does. If the latter was found to be the situation, should

the Canadian government adopt a policy of encouraging women to enter the labour force for the sake of their "sanity"?

The first step in examining the relationship between employment status and mental health involved an examination of the previous research into this issue. The numerous studies on this topic are critically reviewed in chapter one.

CHAPTER 1
EMPLOYMENT STATUS OF WOMEN AND MENTAL HEALTH:
A REVIEW OF THE LITERATURE

1.1 Introduction

A cursory examination of the research on the issue of whether labor force participation affects the mental health of women reveals conflicting findings. A number of researchers, such as Bernard (1972), have concluded that housewives are less healthy psychologically than employed women. Others, such as Weissman et al. (1971), have failed to find any significant difference in the mental health of women according to employment status.

In order to provide more insight into the question of whether employment of the wife is associated with level of mental health, a wide range of studies on this topic will be reviewed in detail. To reduce the possibility of cultural variation in mental health standards only studies conducted in the United States, England and Canada are included.

The studies are divided into three types. The first category is limited to studies of individuals

hospitalized for some type of mental disorder or attending an out-patient clinic for treatment of some form of mental illness. The second group includes any study of psychophysiological disorder which was conducted using a sample of non-institutionalized individuals. The third type consists of studies concerned with the general satisfaction of women with their life.

1.2 STUDIES OF INSTITUTIONALIZED WOMEN

1.2.1 American and British Studies

Briggs et al. (1965), studied an institutionalized sample of women. In this case 20 depressed women were matched with a control group of physically ill hospitalized women. A higher but not statistically significant percentage of the control group than of the depressed group had been employed prior to hospitalization. However, a higher percentage of the women in the depressed group than in the control group who were not employed felt that they should be working. At the conclusion of this study Briggs et al. state:

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"One area which deserves concern is the characteristics of each individual case. For example, in the depressed group one woman has a mentally retarded child, another has a blind mother, another has a mongoloid child, one is childless and one has a child with serious lung ailment. In almost all of these, one might postulate that vocational ties would provide a stabilizing environmental support, if not a more balanced life (1965:442)".

Briggs et al.'s recommendation is puzzling since they did not find a statistically significant difference between the depressed group of women and the control group according to employment status. The fact that out of a group of 20 women diagnosed as suffering from psychoneurotic depression one had a mentally retarded child and one a mongoloid child suggests a need to examine the relationship between giving birth to and caring for a retarded child and depression as well as examining the type of community services provided for such families. It is also puzzling that childless women are included in the above list since all of the other examples refer to family situations in which a member of the family other than the mother has a physical or mental handicap.

Briggs et al. (1965) also obtained information

regarding the employment status of 150 women between 40 and 49 years of age admitted to private mental hospitals with a diagnosis of psychoneurotic depression during the summer of 1963. The rate of employment among these women (28 percent) was considerably lower than in the general population (46 percent). It is questionable whether a comparison such as this between the percentage of women in mental hospitals who identify themselves as employed and the percentage of women in the general population who are employed is meaningful. Among the women who identify themselves as housewives are apt to be at least some women who were employed until their mental illness became so severe that it interfered with their ability to perform their job and/or to cope with the world outside their home.

Weissman et al. (1971) compared 40 depressed women between 25 and 60 years of age with a control group of non-symptomatic women. The depressed women were outpatients at a clinic. The variables on which the two groups were matched included age, social class, race and marital status. There was no significant difference according to employment status between the depressed women and the control group.

There are several possible explanations for the difference in findings between the Briggs et al. and the Weissman et al. studies regarding employment status and mental health. First, Briggs et al. compared the employment rate among their 150 depressed patients with that of the general population without controlling for demographic differences between the two groups in such areas as marital status and social class.¹ Second, these two studies had quite different sample populations. One group consisted of out-patients at a clinic while those in the other were institutionalized and one sample was limited to older women while the other included women of all ages.

Bart (1971, 1972) suggested that mothers who are not employed are more likely than employed mothers to become overly involved with and dependent on their children. She predicted that such women would experience depression due to role loss when their children leave the

-
1. It is surprising that Briggs et al. did not at least control for social class since their sample of mentally ill women was all from private mental hospitals. A disproportionately large number of patients in private hospitals are usually from the upper class.

parental home. In order to test these assertions Bart examined the records of 533 female first admissions to five hospitals. Only those women between the ages of 40 and 59 were included.

Bart divided the women into two groups according to whether or not they were diagnosed as suffering from depression. Then, she subdivided these two groups according to whether or not they were suffering maternal role loss, which was operationalized as at least one child not living at home. Fifty-six percent of the women who were employed or looking for work were suffering from maternal role loss while 69 percent of the depressed women who were housewives were experiencing maternal role loss. Although, Bart attached great significance to this difference she did not indicate whether it was a statistically significant difference.

Bart also cites figures indicating that 82 percent of the 44 housewives with maternal role loss who have overprotective or overinvolved relationships are depressed. A woman was coded as having an overprotective or overinvolved relationship if there were statements to

this effect on the woman's hospital records or if the woman entered hospital following a child's engagement or marriage. For some inexplicable reason Bart did not provide similar information for employed women.

Bart concluded that housewives are consistently more depressed than women in the labour force. However, there are several problems in her analysis. First, she suggested that housewives become overly involved with their children because of their lack of social contact. This explanation does not take into consideration the social contact available to housewives through interaction with other housewives during the day, contact with relatives residing in the home or living near by or involvement in volunteer organizations. As well, any discussion of social interaction according to employment status must also take into consideration possible differences due to factors such as social class, ethnic background and type of dwelling unit.

Secondly, to define role loss as the fact that one child is living away from home without knowing whether the mother's reaction to this situation is positive, negative or indifferent is almost completely

meaningless. In addition, other factors such as the number, age and sex of other children still living at home must be considered.

Thirdly, the fact that all the women in the sample are mental patients appears to have been over-looked. If, as Bart suggests, role loss drives women crazy, the form which their mental illness takes may not be the same for all women. Some women may become passive and/or depressed while others become aggressive and/or hostile. Sharp (1960) found that type of diagnosis varied according to employment status.

The possibility that maternal role loss leads to mental illness among housewives should not be totally discounted until methodologically sound studies employing such techniques as multiple regression are conducted. At the same time, there is a need to explore other explanations as to why it is more traumatic for some mothers than others when their children leave home.

Brown et al. (1975) compared two groups of women between 18 and 65 years of age living in London, England. One group consisted of 114 patients at mental health

treatment centres whose diagnosis was one of primary depression. The second group was comprised of a random sample of 220 women from the general population.

They identified four factors which increased the chances of developing psychiatric disorder in the presence of a severe event or major chronic difficulty but which have no effect in their absence. The four factors were loss of mother in early childhood (under 11 years), three or more children under 14 years of age living at home, lack of an intimate confiding relationship with husband or boyfriend and lack of full or part-time employment.

Brown et al. speculate that employment might serve a protective function by improving economic circumstances, alleviating boredom, providing a greater variety of social contacts or an enhanced sense of personal worth. They suggest that the fact that none of the women who became employed a few weeks after the occurrence of a severe event developed a psychiatric disturbance indicates that a sense of achievement may be crucial. They conclude:

"Indeed, it may be the relevance of the circumstances implied by at least three of the vulnerability factors is in generating a sense of failure and dissatisfaction in meeting

internalized expectations of being a good mother and wife, and that this in turn leads to chronically low self-esteem (1975:244)."

There is at least one major question left unanswered by this study. Are Brown et al. correct in asserting that employment is one factor which leads to higher self-esteem and consequently less chance of breaking down when faced with a major problem? It can be argued that women who choose to participate in the labour force have different personality characteristics, including greater self-confidence, than housewives. In addition, factors such as the social class of the women who are employed compared to housewives need to be taken into consideration. For example, adjusting to the sudden death of her husband is apt to be particularly difficult for a housewife with young children who is left virtually penniless and who has no training so that she will unlikely be able to find a job which pays more than the minimum wage.

1.2.2 Canadian Studies

There is no current information available for Canada as a whole on the rate of hospitalization for

mental disorders according to employment status. Statistics Canada stopped collecting information on the employment status of adults being admitted to mental hospitals in 1967. The explanation given by the staff of the Mental Health Section of Statistics Canada was that the information regarding employment status was so unreliable that it was virtually useless.

The available information on first admissions and readmissions to mental hospitals in 1966 according to employment status was obtained although these figures must be interpreted with great caution due to their methodological shortcomings. Among the questions asked women when they were first admitted to a mental hospital was their employment status. One obvious problem with this practice is that there is no way of ascertaining whether an individual is telling the truth or the truth as they currently see it or wish to see it.²

Another problem, which was mentioned on page 7 in reference to the Briggs et al. study, arises from the fact

2. In 1966, among the first admissions were 403 women who stated that they were single (as opposed to married, widowed, divorced, separated or in a common law relationship) and at the same time gave their occupation as housewife. At least some of these women are likely to be unwed mothers who prefer to be identified as a housewife rather than as unemployed.

that some of the women were undoubtedly mentally ill prior to admission. Because of this, some of the employed women may have either given up their job because they recognized their own inability to perform adequately or have been fired by their employer.

One unexpected problem was encountered by the author. Information was available for 1966 on first admissions and readmissions by sex, marital status and employment status. However, neither Statistics Canada nor Labour Canada collected national figures on the marital status of persons aged 14 years and over by reason for non-participation in the labour force.

As table 1.1 indicates, the percentage of housewives in mental hospitals is only slightly higher than the percentage of housewives in the general population. However, the percentage of women in mental hospitals who identify themselves as unemployed is much higher than the percentage of women in the general population who are classified as unemployed. On the other hand, the percentage of women in mental hospitals who were employed is considerably lower than the percentage of women in the general population who are considered

TABLE 1.1

Percentage Distribution of Females Aged 14 years
and Over in Mental Hospitals and in the Total
Population of Canada in 1966.

	<u>First Admissions and Readmissions</u>	<u>Total Population</u>
	%	%
Employed	19	32
Unemployed	11	1
Housewife	57	54
Unable to Work	-	1
Going to School	3	9
Retired	5	3
Other	5	-
	<u>100</u>	<u>100</u>
	(36,942)	(6,797,000)

1. Includes not stated and not classifiable
Source: Statistics Canada, Unpublished Tables

employed.

The variation in the percentage of unemployed women is probably due, to at least some extent, to differences in the definition of unemployment and the way this information was collected. The figures for unemployment among women admitted to a mental hospital were obtained by simply asking them at the time of admission to state their occupational status prior to admission. The labour force survey includes in their unemployed category only those women who reported that they were actively looking for work.

One can speculate that included in the relatively high number of unemployed women in mental hospitals are some married women who classified themselves as unemployed rather than as a housewife because they perceive the role of housewife as a low status, devalued occupation which does not fulfill their personal needs. This would suggest that the role of housewife in itself does not lead to mental illness. Rather, it is the inability to change from the role of housewife to that of employee that leads to problems such as depression and/or mental illness. Unfortunately, tentative hypotheses such

as this will have to be explored at a micro level due to the lack of such information for Canada as a whole.

1.2.3 Summary

The review of the literature does not provide clear cut evidence that employment is associated with lower rates of mental illness among married women. In fact, the balance of the evidence presented indicates that there is no significant relationship between employment status and mental illness. The two studies, Briggs et al. (1965) and Bart (1971, 1972), which reached opposite conclusions are plagued by methodological problems.

There is some indication that employed wives and housewives have quite different characteristics and consequently experience different types of mental disorders. As well, there is some tentative evidence that mental illness rates might be higher among women who wish to but are unable to move from the role of housewife to that of employee than among women who are satisfied with their present occupational status.

New directions for research have been suggested by the work of Brown et al. (1975). Their findings

emphasize the importance of not considering one variable, such as employment status, in isolation from other factors. Their hypothesis that the cumulative effects of various factors, such as employment outside the home and a supportive spousal relationship, on self-esteem play an important role in alleviating depression when an individual is experiencing a chronic problem or experiences a sudden unavoidable traumatic event needs to be tested.

1.3 COMMUNITY STUDIES

1.3.1 American Studies

Feld (1963) analyzed data for a sample of 438 women who were white, currently married and had living children. Psychological disturbance was measured by a summation of 16 items which included questions on psychological anxiety, physical ill health, immobilization and physical anxiety.

There was no significant difference in psychological disturbance according to employment status. However, employed mothers and housewives differed significantly in four respects. Employed mothers showed

more self-acceptance, fewer symptoms of physical ill health, fewer indications of physical anxiety but more frequent doubts regarding their adequacy as mothers.

Feld points out that the results indicate maternal employment per se is not itself a major factor in overall psychological adjustment. She suggests that in specific areas of adjustment where differences were observed between employed women and housewives two alternative explanations must be considered.

"... that feelings of adjustment are selective or motivating factors in the decision to work or that the decision to work and its effects on the life situation influence feelings of adjustment. The distinction between these two types of interpretations were considered to be crucial to progress in research in this area (1963:351)."

Feld spells out three hypotheses that could be tested in order to determine whether psychological adjustment affects employment or employment affects adjustment:

- 1) psychological factors, such as differences in attitudes toward one's own strength, competence and differences in activity-passivity orientations, to life act as facilitating factors in the decision to work;

- 2) employment results in a mother changing her attitude towards herself;
- 3) physical ill health and anxiety symptoms are the result of the anxieties and frustrations inherent in the modern role of housewife (1965:348).

Sharp & Nye (1963) conducted an analysis of mothers of children in grades one to ten in three small Washington cities. They matched a sample of working and non-working mothers on the following variables: number of children in the family, presence of preschool children, socio-economic status, level of education of the wife and marital status. Mental health adjustment was measured by 9 items dealing with psychosomatic symptoms plus an additional item as to whether the respondent had consulted a psychiatrist in the preceeding five years. The 10 items were combined into one scale.

Sharp and Nye did not find a significant relationship between employment status and anxiety level. In fact, they reported almost identical proportions of full-time and non-employed mothers fell into the high, middle and low psychosomatic terciles (1963:312). They suggest that their failure to find differences in number

of psychosomatic symptoms according to employment status of the wife may indicate that "... if playing competing roles simultaneously produces anxiety then some aspect of the employee role also reduces anxiety (1963:318)".

Bernard (1972) cites a National Centre for Health Statistics table which reveals that on all except one of twelve indicators working women were psychologically healthier than housewives. The one symptom experienced by more employed women than housewives was the feeling of an impending nervous breakdown. Bernard reports:

"Far fewer than expected of the working women and far more than expected of the housewives ... had actually had a nervous breakdown. Fewer than expected of the working women and more than expected of the housewives suffered from nervousness, inertia, insomnia, trembling hands, nightmares, perspiring hand, fainting, headaches, dizziness and heart palpitations. The housewife syndrome is far from a figment of anyone's imagination (1972:52)."

On the surface Bernard appears to have some impressive evidence for her statement, which was quoted on page one, that being a housewife makes women sick (or at least that housewives are more psychologically distressed than employed women). However, the fact that this table compares all employed women with housewives raises a

serious problem. Bernard states:

"That it is being relegated to the role of housewife rather than marriage itself which contributes heavily to the poor mental and emotional health of married women can be demonstrated by comparing housewives, all of whom can be presumed to be married, with working women, three-fifths of whom are also married. Marriage per se is thus at least partially ruled out as an explanation of difference between them (1972:51)."

How Bernard can rule out marriage per se without comparing the psychological health of employed women who are married with that of these who are not is unclear. In an earlier section of the same book Bernard presented another table from the National Centre for Health Statistics in which never married white men and women were compared. In describing this table she stated:

"...by comparing married men and unmarried women ... the women are spectacularly better off so far as psychological distress symptoms are concerned, suggesting that women start out with an initial advantage which marriage reverses (1972:35)."

It would be interesting to hear Bernard explain why marriage is perceived on page 35 as leading to psychological distress but on page 52 marriage per se is not seen as a factor in the mental health of women.

Radloff (1975) analyzed data from a community health survey conducted in Kansas City and Washington County, Maryland. The analysis was limited to married, white residents. Depression was measured by 20 items selected from existing depression scales. There was no significant difference in the number of reported symptoms of depression for housewives compared to working wives. She concluded that working per se does not protect married women from depression.

Gove and Tudor (1973) suggested that married women are less mentally healthy than married men because men have two potential sources of satisfaction - their job and marriage. Women, on the other hand, have only one major role and consequently only one source of satisfaction. They argue that all married women should be considered together since even if a married woman is employed "...she is typically in a less satisfactory position than the married male ... Furthermore, working wives are typically viewed by themselves and by others as primarily supplementing the family income, which makes their career involvement "fairly tenuous (1973:53)."

In order to test Gove and Tudor's dual role for

married men hypothesis, Radloff (1975) subdivided the sample according to satisfaction with their job and marriage. When job and marriage happiness were held constant, housewives were significantly more depressed than working wives. However, even with job and marriage happiness held constant the employed married women still emerged as considerably more depressed than married men.

Powell and Reznikoff (1976) collected information from 290 women who had graduated from Wellesley College in 1948 or 1963. Mental health was measured by Langner's 22-item Index of psychiatric impairment. They did not find any significant differences in symptom scores between women employed full-time, part-time and housewives. As Powell and Reznikoff acknowledge the fact that they, unlike other researchers such as Bernard, did not find any difference in mental health according to employment status may be due to the high socioeconomic class of their sample.

Women with self or contemporary sex role orientations had significantly higher symptom scores than women with other or traditional sex role orientations. They suggest that the stress caused by "... conflict

between personal needs and cultural role expectations is ... a factor in the high rate of mental illness found in married women as compared to married men (1976:478)." It is disappointing that Powell and Reznikoff did not explore the possibility that there is a relationship between sex role norms and employment status.

Tavris (1976) cited a study by Fidell and Prather in which they interviewed a random sample of 465 women living in a Los Angeles suburb. They compared employed wives, unemployed wives who wanted to work and housewives. They found that the group of women which were most dissatisfied with their lives were housewives who were looking for work. "They had low self-esteem, feel they are pawns of fate and mask their loneliness and worry with drugs (1976:78)."

The above description is based on a brief report of the work of Fidell and Prather written by Carol Tavris for Psychology Today. Unfortunately Tavris did not provide a reference for this article. Tavris indicated that the areas covered by the questions which were asked included physical and mental health of the women, their use of drugs and their self-esteem. However, in her description

of the results no mention was made of the findings regarding physical and mental health of the women according to employment status. As well, no information was provided regarding the method of analysis and in particular whether the possibility that there were demographic differences among the three employment groups was taken into consideration.

Reference is made in several studies to an unpublished Ph.D. dissertation by Rivkin (1972) on the contextual effects of families on female responses to illness. One of the findings was that working women reported less illness, fewer disability days and less anxiety than housewives (Nathansen 1975:60).

The findings of Birnbaum (1971) are also frequently cited. She found that housewives had significantly poorer mental-emotional health than employed wives or single women. As well, housewives were significantly lower in self-esteem and in their rating of their social skills than employed wives or single women. Two limitations of this study were pointed out by Nye. The sample was small (81 women) and drawn from an elite group (1974:222).

1.3.2 Canadian Studies

Burke & Weir (1976) collected data on 189 married husband-wife pairs living in Ontario. Mental and physical well-being was measured by a 19 item scale. Housewives had a significantly poorer standing on the measure of mental and physical well-being than working wives. As well, a higher percentage of housewives than employed women reported the following: that they have had a complete physical check-up by a doctor recently, that they had an ulcer or thought they did, that they had poor health as indicated by a one item general description, that they perceived themselves as the worrying type, and that they described their spirit as generally low.

Housewives also reported less satisfaction with marriage and with life in general. The three items in the area of life pressures and worries on which housewives showed the greatest difference from working wives were: feeling in a rut; sickness in the family and increasing difficulty communicating with and showing affection for their husband.

The findings of this study while interesting must be viewed with caution for two reasons. First, the sample is not representative of the general population due to the fact that it was limited to families in which the husband was a member of one of the following three professional associations: professional engineers, industrial accountants or chartered accountants. Secondly, although the existence of demographic and situational differences between the one and two career families is acknowledged by the authors no attempt was made to control for the effects of these variables in their analyses. Differences between one and two career families included age of the husbands and wives, length of time married and income of the husbands.

Burke & Weir (1976) also investigated an area that has been overlooked by other researchers - the effect of employment status of the wife on the mental health of the husband. They found that husbands whose wives were employed had poorer psychological health than husbands of housewives. As well, husbands of working wives reported greater dissatisfaction with their job, their marriage and life in general than husbands of housewives.

Using Canadian data, Booth (1977) replicated Burke and Weir's analysis of the relationship between the wife's employment and the husband's stress. He did not find that husbands of employed women showed any more signs of marital discord and stress than did the spouses of housewives.

Welch and Booth (1977) examined the relationship between employment status and the mental and physical health of women. They based their analysis on the same data set as was utilized in this thesis. They divided employment status into five categories as follows:

- 1) Housewives who have never worked outside the home,
- 2) Housewives who had worked outside the home at some previous-time,
- 3) women employed part-time,
- 4) employed women who have worked full-time for less than a year, and
- 5) employed women who have worked full-time for more than one year.

One of their three indicators of mental-emotional health was score on Langner's (1962) 22-item Index.

Although they present data for three measures of mental-emotional health and three indicators of physical health, Welch and Booth discuss their results in terms of the general health and level of stress being experienced by these women. They concluded "...that wives in a period of transition - either by beginning full-time work or by having been employed in the recent past - are under more stress than other women (1977:391)."

There are several problems with Welch and Booth's analysis. First, the only employment history question asked housewives was whether they had ever worked for as long as a year. Having worked at some unspecified time in the past can hardly be described as being employed in the recent past. It is likely that at least some of the housewives were employed before they were married and have not worked since that time.

Second, the number of cases in the majority of the employment categories is relatively small. The only employment category with more than 80 cases was that for housewives with some work experience. The number of cases of women who had been employed full-time less than one year was only 28. When the five employment categories were compared for each of the six dependent measures there were

only three differences between employment categories which were significant at the .05 level.

Third, Welch and Booth discuss the findings in terms of the rank ordering of results for the six dependent measures. However, an examination of the results when the 22-item Index is employed as the dependent measure does not support their conclusions regarding women in transition. The rank ordering of the scores on the 22-item Index according to employment status was as follows:

<u>Score</u>	<u>Employment Status</u>
6.4	Employed full-time less than one year
6.2	Housewife with no work experience
6.0	Housewife with work experience
4.9	Employed part-time
4.7	Employed full-time more than one year

A difference of 0.2 between housewives with previous work-experience and housewives with no previous work experience does not support the contention that having worked previously leads to higher stress than never having worked. It is also noteworthy that the difference between the group which had the highest score (6.4), women employed full-time less than one year, and the group with the lowest score (4.7), women employed full-time more than one year, was significant only at the .10 level.

It would be interesting to see this study replicated with a larger sample and detailed employment history information. At the same time Fidell and Prather's finding that unemployed wives who want to work are under the most stress should be examined.

1.3.3 Summary

The studies reviewed can be divided into two groups. One group of four studies did not find any significant difference in the psychological well-being of wives according to their employment status. The other group of four studies concluded that housewives were less healthy psychologically than employed wives.

It is interesting to examine those studies which found that housewives were less mentally healthy than employed women. One study, Bernard (1972), did not control for marital status. Another study, Burke and Weir (1976), did not control for demographic and situational differences according to employment status. The other two studies, Birnbaum (1971) and Rivkin (1971) were unpublished theses for which the only information readily available was the authors' abstract.

On the other hand, at least one study which found no significant difference in mental health according to employment status, Sharp and Nye (1963), had carefully selected matched samples of employed wives and housewives. Unfortunately, this study is quite dated.

The two most recent of the four studies, which did not find any significant differences in mental health according to employment status, identified several areas which should be explored further. Radloff (1975) found that there was a difference in depression according to employment status when job and marital happiness were held constant. Powell and Rednikoff (1976) found that women with modern sex role norms were more psychologically distressed than women with more traditional values. Does

this finding still hold when employment status is controlled?

In the past, considerable time and resources have been devoted to resolving the issue of whether there is a direct relationship between employment status and mental health. It would appear that it might be fruitful to investigate the conditions under which differences in mental health according to employment status occur.

1.4 STUDIES OF GENERAL SATISFACTION WITH LIFE

Studies of general satisfaction tend to be taken as interchangeable with studies of psychophysiological distress. While general dissatisfaction may eventually result in psychological impairment for some women, it should not be confused with current psychophysiological disorder.

Two studies in this area will be reviewed briefly. One by Nye (1963) is frequently cited. The other by Ferree (1976) probably reached a fairly large audience as it was published in *Psychology Today* under the title "The Confused American Housewife".

Nye found that a statistically significant higher number of housewives than employed wives were generally dissatisfied with their lives. Of the employed mothers a slightly higher number of those employed part-time than those employed full-time were satisfied with all or all but one aspect of their life.

Similar findings are reported by Ferree (1976) from her interviews with 135 working class women. She found that twice as many working class housewives as employed wives were dissatisfied with their lives. Like Nye, she discovered that a higher percentage of part-time than full-time workers were satisfied with their lives.

The fact that wives employed full-time are slightly less satisfied with their lives than wives employed part-time is probably at least partially due to the difficulties faced by wives employed full-time in finding sufficient time and energy for both of their roles. Ferree reported that one out of three women employed full-time complained that they sometimes felt inadequate to meet the demands of their dual roles of employee and mother (wife). This is not surprising given recent Canadian studies which indicate that employed wives do not receive significantly more assistance from their

husbands with household chores than housewives. A recent study by this author ³ found that the total number of hours worked within and outside of the home on a week day by Toronto couples were as follows:

Employment Status of Wife	Hours Worked by Wife	Hours Worked by Husband
Full-Time	10.85	8.38
Part-Time	10.07	8.10
Housewife	8.65	7.58

It appears that wives employed part-time are the most content with their life, wives employed full-time are next, and housewives are by far the least satisfied. A longitudinal study would be necessary in order to determine whether this dissatisfaction eventually leads to mental disorder.

1.5 Conclusions

The review of the literature on employment status and mental health is divided into three parts: studies of patients of mental hospitals and clinics, community studies and studies of the general satisfaction of women with their lives.

3. This study "The Effect of Employment Status of the Wife on the Division of Labour Between the Spouses" has not been submitted to a professional journal. A study by Meissner et al. (1975), which reached similar conclusions, was published just as this study was completed.

In the case of the studies of hospitalization two studies, Briggs et al. (1965) and Bart (1971, 1972), concluded that housewives are more likely than employed wives to be hospitalized for depression. Weissman et al. (1971) found that there was not a significant difference according to employment status between female outpatients being treated for depression and a control group of non-symptomatic women.

In the case of studies of the mental health of non-institutionalized individuals the results again divide into two groups. Birnbaum(1971), Rivkin (1971), Bernard (1972), Tavis (1976) and Burke and Weir (1976) found that housewives were less mentally healthy than employed women. On the other hand, Sharp and Nye (1963), Feld (1963), Radloff (1976) and Powell and Rednikoff (1976) did not find any significant differences in mental health according to employment status.

The one area in which there was a consensus was in the studies of satisfaction with life according to employment status. The two major studies in this area Nye (1963) and Ferree (1976) both found that wives employed part-time were most satisfied with their lives. Housewives were the least satisfied and employed wives fell into the middle.

Two possible explanations for these conflicting findings emerge from the detailed review of the literature on employment status and mental health. The first possible explanation lies in the failure of a number of investigators to control for important variables. As noted earlier in the case of the studies of non-institutionalized women, there were four studies which found that housewives were less mentally healthy than employed wives and four that did not find any difference in mental health according to employment status.

Out of four studies which found that mental health varied according to employment status two were unpublished theses for which detailed information was not readily available. In the case of the other two studies, both failed to control for possible contaminating factors. Bernard (1972) did not control for marital status. Burke and Weir (1976) acknowledge that there are differences between employed wives and housewives in their sample according to age of the wife, length of time married and income of the husband. However, they did not control for these differences in their analyses.

The second possibility is that there is not a simple relationship between employment status and mental health. Instead, the relationship is a conditional one, dependent on the presence or absence of other individual or structural characteristics. Evidence that this may be the case comes primarily from two studies. Brown et al. (1975) found that the absence of employment increased the chances of developing psychiatric disorder in the presence of a severe event or major chronic difficulty but had no effect in their absence. Radloff (1975) did not find a statistically significant difference in the mental health of women according to employment status. However, when she held job and marriage happiness constant housewives emerged as significantly more depressed than working wives.

In the following chapter these two possible explanations for the conflicting results among the studies of employment status and mental health are examined in more detail. As well, these explanations are discussed in relation to the objectives of this study.

CHAPTER 2

A NEW DIRECTION FOR RESEARCH ON THE EMPLOYMENT STATUS OF
WOMEN AND MENTAL HEALTH

This thesis will re-examine the question of whether employment status is related to mental health. As noted earlier, if there is actually a straightforward relationship between employment status and mental health, this finding would be extremely important for policy makers. However, a review of the literature on this topic indicates that there are inconsistencies in the findings which need to be clarified before the conclusion can be drawn that an increase in the mental health of married women can be achieved by implementing policies which lead to an augmentation in the number of women in the labor force.

One possible explanation for the variation in findings is that the relationship between employment status and mental health is a conditional one, dependent on the presence or absence of other individual or structural factors; in other words that there is an interaction effect.

This paper will re-examine the relationship between labor force participation of married women and mental health. This study differs from most of the previous research in three ways:

- A) As a first, and frequently overlooked step, the mental health indicator will be critically examined. The mental health measure employed in this study is Langner's (1962) 22 item screening index of psychiatric impairment. Some of the researchers who have utilized this scale as a measure of mental health are Manis et al., 1963 and 1964; Dohrenwend, 1966; Phillips, 1966; Crandell and Dohrenwend, 1967; Meile and Haese, 1969; Phillips and Segal, 1969; Gaitz and Scott, 1972; Meile, 1972; Clancy and Gove, 1974; Gove and Clancy, 1976; Gove et al., 1976; Roberts et al., 1976; Wildman and Johnson, 1977 and Norland and Weirath, 1978.

Despite the popularity of Langner's scale as a measure of mental health there are a number of methodological issues surrounding its use which have not been resolved. The issues which will be examined

in this paper include the following: (1) the validity of the 22-item Index as a measure of mental health; (2) the occurrence of response bias; (3) whether the 22-item Index is unidimensional or multidimensional and (4) whether this scale is identifying physical or mental illness.

- B) The possibility that the relationship between employment status and mental health is conditioned by other factors will be explored for the following three variables:

1) Sex Role Orientation

Despite the fact that sex role values have been recognized as an influential factor in the life of modern women there has been virtually no research into the issue of whether sex role orientation is related to mental health. The one exception is Powell & Reznikoff (1976). From their research into this question they concluded that women with modern sex

role norms were less mentally healthy than women with a more traditional sex role orientation. They suggest that this is due to conflict between personal needs and cultural role expectations among women with modern sex role values.

Unfortunately, Powell and Rezniknoff did not control for the effect of employment status on the relationship between sex role orientation and mental health. Employment status may become a critical factor when it conflicts with a woman's sex role values. Role conflict leading to mental stress is apt to occur when a woman is employed but holds traditional sex role norms which result in her feeling guilty about being a full-time wife and mother. Similarly, a woman with modern sex

role norms who is unable to participate in the labour force is likely to experience mental stress due to being restricted to what she perceives as the devalued role of homemaker. On the other hand, housewives with traditional values and employed wives with a modern sex role orientation are less likely to experience stress since their sex role values and their actual behaviour are congruent.

2) Marital Stress

and

3) Child Rearing Stress

Two variables which appear to have been overlooked in much of the mental health literature on women are their perceptions of their performance in and their

satisfaction with their key roles of wives and mothers. Does the mother feel that she is doing a "good job" raising the children? Is she satisfied with the conjugal relationship?

If a mother feels under stress because of marital or child related problems it is predicted that this will affect her mental health. Some evidence that this is likely to be the case is provided by Cole and Lejeune (1972). They found that women who perceived their performance as wives or mothers as being less than adequate were more likely than those who were satisfied with their performance to define their health as poor.

As was noted earlier Brown et al. (1975) found that the absence of employment increased the chances of developing psychiatric disorder

in the presence of a severe event or major chronic difficulty but had no effect in their absence. If a women is experiencing difficulties in her role as mother or wife it is apt to be more traumatic for her if these are her major roles than if she is also employed full-time. Full-time employment outside the home is likely to provide her with a different arena in which to achieve, more self-confidence, and less need to be completely dependent on her family for economic and moral support. In this study the possibility that employment mediates to reduce the impact of marital stress and child rearing stress will be explored.

- C) In this study four of the variables which may have a confounding effect will be controlled for.

These include the following factors:

- 1) Age of Children

The possibility that age of children may be related to mental health was examined by Gove and Geerken (1977). They found that both housewives and employed women whose youngest child was age four or less reported more psychiatric symptoms than their counterparts whose youngest child was of elementary or high school age. As well, women without preschool age children are more likely than these with preschoolers to be employed. This may be due to the high cost and scarcity of child care services as well as social taboos against mothers not personally caring for their preschool age children.

2) Age of Respondent

The results obtained from examining the relationship between age and score on Langner's 22-item Index were reported in four studies. No consistent pattern was observed. Stratum and Favero (1973) and Srole et al. (1962) reported an increase with age in the score on this index. Gove et al. (1976) found that middle-aged respondents (35-44

years) had higher scores than younger or older respondents. Engelsman et al. (1972) did not find any consistent relationship between age and mental health as measured by the 22-item Index.

Younger women are more likely than older women to be employed. In 1977, the labor force participation rate was 61 percent for women 20-24 years of age while for women age 25-34 it was 50 percent and for those 35-44 it was 53 percent (Labour Canada, 1978).

3) Social Class

The relationship between social class and mental health has been the subject of considerable research. Dohrenwend and Dohrenwend (1965) reviewed 24 studies on this issue. They found that in 19 of these studies individuals in the lowest economic stratum had the highest rate of judged psychopathology. Similar results were observed by investigators examining the relationship between various indicators of

social class and the 22-item Index. Among the recent studies using Langner's scale was one by Markush and Favero (1973) which employed level of education as their measure of social class and one by Gove et al. (1976) which utilized both level of education and income.

In both Canada and the United States labour force participation of women is positively associated with their level of education. As well, there was a negative, although weaker, relationship between labour force participation of women and level of income of their husbands (Ostry, 1968). In this study education of the wife and occupational status of the husband are utilized as indicators of social class.

4) Ethnicity

The ethnic background of an individual plays a role in their perception and expression of mental and physical stress. Zborowski (1952) found that Italian hospital

patients tended to be more sensitive and expressive regarding their symptoms than were Irish and Old American patients. Graham (1956), studied the incidence of common symptoms, such as shortness of breath, headache, stomach upset, colds and recent weight loss, according to ethnic background. He found that persons of Irish and British ethnic origins reports the fewest number of symptoms while these of Southern European origin, namely Italians and Greeks, reported the greatest number. A similar pattern was noted by Zola (1966) in his examination of the preception and presentation of complaints by Irish and Italian immigrants.

Haberman (1970) found that the number of psychiatric symptoms reported in community surveys varied according to ethnic background. Italians had a high number of symptoms, although it was Puerto Ricans who had the highest number of symptoms. The Irish had the lowest rate.

In this study ethnicity is coded according to whether or not the respondent is an immigrant from a Southern European country. Immigrant women appear more likely than the native born women to be employed. In the data set utilized in this study, Southern European women made up 27 percent of the employed population but only 15 percent of the housewives were Southern European immigrants.

In the next chapter the following methodological information is provided:

- 1) a description of the data utilized in this study,
- 2) the way in which the control, independent and dependent variables are operationalized, and
- 3) the method of analysis employed in this study.

CHAPTER 3

DESCRIPTION OF THE DATA AND METHOD OF ANALYSIS

This study is based on secondary analysis of survey data collected by York University Survey Research Centre for the former Ministry of State for Urban Affairs. This data set is the only Canadian data set available which contains information on both employment status and mental health for a non-institutionalized sample of women.

Utilizing a data set which was collected by other researchers for a quite different type of analysis is frustrating. In some cases one is forced to "make do" with an indicator which is relatively weak, while in other instances either no or insufficient information has been collected. In both the methodology and the dependent variable chapters of this paper the weaknesses and limitations of the various measures are identified and discussed.

3.1 The Sample

These data came from a stratified multi-stage probability sample of Toronto families. Thirteen census

tracts were selected for this study and all the households in these tracts were enumerated and screened. The population sample was comprised of intact, white families of European or North American descent with one or more children, the wife-mother of which was under 45 years of age, residing at their present dwelling unit for a period of at least three months.

The sample was further stratified so that the number of families residing in dwellings which had one or more persons per room was nearly equal to the number which had fewer people than rooms. The number of people exceeded the number of rooms in 48 percent of the households. In all of the analyses which were carried out for the present study the data were weighted in order to compensate for the fact that the sample had been stratified according to number of people per room.

Nearly 17,000 screening interviews yielded 862 eligible households. In 560 of these it was possible to obtain interviews with one or both of the parents for a 65 percent completion rate. Of the 302 households in which interviews could not be obtained: 72 were too ill to be interviewed; 76 refused to be interviewed; and 214 did not

speak English well enough to complete the interview. A comparison of the characteristics of those from whom interviews were obtained with those from whom interviews were not obtained revealed that the two groups were similar with respect to crowding, occupational status, age of the head of the household and length of residence in their present dwelling units. The major difference was that many in the latter group had migrated from Western Europe.

The two hour structured interview was conducted separately with the husband and wife. The 560 households in which at least one interview was obtained were broken down as follows: 38 in which only the husband consented to be interviewed, 332 in which both the husband and wife were interviewed and 190 in which only the wife was interviewed. The present analysis is based on the data obtained from the 522 wives.

The sample can be characterized as follows: The majority of the household heads were employed in blue collar occupations. Only 23 percent of them had completed high school. However, more than half had completed grade eight. Thus, the sample was comprised largely but not exclusively of blue collar families.

3.2 Testing for Interaction Effects:
 The Independent Variables

3.2.1 Employment Status

Those wives employed outside the home for 35 hours or more per week are coded as employed full-time. Those wives not employed outside the home are classified as housewives. Wives employed part-time are excluded from the analysis. As well, those few women who described themselves as unemployed, laid off, looking for work or in school are not included.

3.2.2 Sex Role Orientation

Whether a woman is coded as holding modern or traditional sex role norms is based on her responses to two items:

- 1) "withholding money from wives is a poor way of controlling them", and
- 2) "a wife deserves a beating if she is caught having an affair with some man."

If the respondent either disagreed with the first or agreed with the second, she is coded as having traditional sex role values.

In interpreting the results of this study it should be kept in mind that only extremely conservative women were identified by this measure of sex role norms. Ideally, one should have several measures of sex role values in order to identify separately the different facets of sex role orientation. In a recent Canadian study, Lashuk and Kurian (1977) identified three different types of values from a factor analyses of a number of "traditionalist - feminist" items. These were egalitarianism - nonegalitarianism, rejection - acceptance of dominance of father in family and acceptance - rejection of a traditional view of woman's place in the broader social spectrum.

3.2.3 Child Rearing Stress

Whether the wife was experiencing stress in her role as a mother was ascertained from two items. Respondents were told: "Now I want you to compare your family with others you know about. For each statement I make, tell me whether you think your family is better than

most, about the same as most, or not as good as most." Each respondent was then asked to compare "the way you and your husband get along with the children" and "the way you and your husband help the children out". For each question respondents who rated themselves as above average were coded as one, those evaluating themselves as average were coded as two, and those rating themselves as below average were coded as three. The question regarding the way the women and their husband get along with the children was given the label "Way get along with children" and the question regarding the way the wives and their husband help the children was assigned the title "Way help children".

3.2.4 Marital Stress

Four variables have been selected as indicators of marital stress. The first two measures were obtained from questions asking the wife whether she agreed or disagreed with the following statements:

"My husband is just as loving as he used to be"

"My husband is more critical of me than he used to be"

The variable based on the first statement, was given the label "Husband just as loving" and the one based on the second statement was assigned the label "Husband more critical". In each case wives responding with a positive answer to these questions were coded as one (Yes) while those responding negatively were coded as two (No).

The third indicator of marital stress was based on the wife's response when asked to rate the way she gets along with her spouse as better than in most other families, the same as most or not as good as most. Wives who rated themselves as above average were coded as one, those evaluating themselves as average were coded as two and those ranking themselves as below average were coded as three. The variable was labelled "Way get along with spouse".

The fourth indicator of marital stress was based on the wife's response when asked if she had even gotten so angry that she had threatened to leave home or had asked her husband to leave. Those respondents answering in the affirmative were coded as one (Yes) and those replying in the negative were coded as two (No).

3.3 Testing for Spuriousness: the Control Variables

3.3.1 Age of Children

In this study in order to control for the presence of preschool aged children those women with at least one child age five or less are coded as zero and all others coded as one. Age five was selected as the cut-off point since in Canada children begin elementary school at the age of six. This variable is referred to in the tables as "Preschoolers" with a value label of "Yes" indicating that there is at least one preschooler present in the home.

3.3.2 Age of the Respondent

For the current study age is collapsed into the following categories: 18-25, 26-30, 31-35, 36-40 and 41-44. As noted in the discussion of the sample, only women 44 years of age or younger were interviewed.

3.3.3 Social Class

The two indicators of social class employed in this study are level of education of the wife and

occupational status of the husband. The former provides a measure of social status for the wife as an individual while the latter provides an indication of the social class of the family as a whole. Occupations are coded according to the Blishen Occupation Scale (Blishen 1967). Level of education of the wife is divided into the following categories: completed some or all of elementary school (Grade 8 or less), completed one or two years of high school (Grade 9, 10), completed or more years of high school (Grades 11, 12 or 13) and completed at least one year of post-secondary school education.

3.3.4 Ethnicity

Although the screening procedures eliminated many ethnic categories by excluding non-white individuals it did permit recent European immigrants to be interviewed. For the present analysis those wives whose husbands were of Southern European (Spanish, Greek, Portuguese or Italian) origin were coded as one. All others were coded as two. The majority of these (90 percent) were of Canadian, American or British extraction. As was discussed in chapter two persons of Southern European ethnic origin report more physical and mental symptoms than persons of Irish, British or Old American origin. As well, employment status varies according to ethnic origin.

3.4 The Dependent Measure: Langner's 22 - item Index

Due to the number and complexity of the issues involved in an examination of Langner's 22-item index it was necessary to devote an entire chapter solely to the discussion of this measure. Chapter four is devoted to this matter.

3.5 Method of Analysis

The data were analyzed utilizing the SPSS program ANOVA ⁴. This is basically a stepwise multiple regression program with the added feature that dummy variables are created as required. Consequently it can handle unequal cell sizes and empty cells. From the options available within this program multiple classification analysis was selected. This technique enables researchers to derive the mean of the dependent variable for each category of the independent variables while adjusting for the effect of up to five control variables.

For purposes of this study, the criterion of statistical significance for particular effect parameters

4. This procedure is described in SPSS (Statistical Package for the Social Sciences) by Nie et al. (1975).

was not employed as a primary criterion for evaluating the question being addressed. This decision was made for several reasons. First of all the question of substantive significance can never be reduced to issues of statistical significance. The substantive importance of the questions addressed in this thesis can be determined more satisfactorily by simply observing the general pattern of results examined rather than in the magnitude and statistical significance of any specific parameter.

Secondly, the design effects of the sampling procedures used in this data set are unknown thus making the interpretation of the usual significance tests premised on the use of a simple random sample unclear at best. Accordingly, although such tests will be reported in the presentation of the tables, the discussion will focus on the direction and general pattern of results.

CHAPTER 4

THE MEASURE OF MENTAL HEALTH

4.1 Introduction

Mental health is measured using the 22-item Index of psychophysiological disorder which was developed by Langner (1962). The selection of a data set with an appropriate measure of mental health for non-institutionalized individuals is difficult since there is no universally accepted measure. However, as was noted in chapter two Langner's scale appears to be the most commonly used indicator of community mental health.

Since Langner first published his paper on the 22-item Index as a measure of mental health many researchers have critically examined his index. The methodological and theoretical issues which have been raised with respect to this measure are reviewed below.

4.2 The Validity of the Measure

4.2.1 Known Groups Technique

The question of the validity of the 22-item Index

or in other words whether it measures what it purports to measure has received much attention. The first comprehensive review of the problems involved in determining the validity of measures of mental disorder was carried out by Dohrenwend and Dohrenwend (1965)⁵. The technique of "known groups" has been employed as a means of determining the validity of this scale. Using this technique Manis et al. (1963) compared the score on the 22-item Index of receiving ward patients, college students, predischARGE ward patients⁶, community residents and county residents. They found that receiving ward patients had a much higher mean score (6.1) than any of the other groups (3.6 to 2.8). Their conclusion was that the 22-item Index provides a rough index of group mental health but does not accurately measure the mental health of individuals (1963:116).

The results of other studies using the "known groups" technique tend to provide only limited support for the validity of the 22-item Index as a measure of mental illness. For example, using this technique Dohrenwend and

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5. This article was later reprinted in *Social Psychology and Mental Health* which was edited by H. Wescler, L. Soloman, and B.M. Kramer in 1970.
 6. These were wards with "quiet" patients considered to be close to discharge.

Crandell (1970) found that Langner's scale did not differentiate between outpatients and inpatients but it differentiated sharply between patients and nonpatients.

A basic theoretical and methodological issue has been raised by several researchers who have questioned the practice of using the known groups procedure to establish the validity of community mental health measures such as Langner's scale. A comprehensive discussion of this issue can be found in Seiler (1973). The most recent article on this subject is by Norland and Weirath (1978). They question the practice of using patients of a mental hospital as the "known group" of mentally ill individuals.

As the basis of their first argument, Norland and Weirath cite evidence that nonmedical variables are related to admission of voluntary and involuntary patients. They write:

"Rigorous studies comparing the effects of psychiatric and social variables are rare, so the relative explanatory power of these variables cannot be established with certainty. However, the assumption that mental pathology is the primary differentia of hospital and community samples is not well supported by these data (1978:224)".

It would have been useful if the authors had suggested a means of conducting "rigorous studies" of the relative effects of psychiatric as opposed to social variables.

In a similar vein Norland and Weirath argue that pathological responses to the items on this scale might be a function of dissatisfaction, discontentment or the experience of problematic events in life. They go on to suggest that mental hospitalization may be one way poor and marginal members of society are dealt with. However, it can also be argued that individuals who have the fewest financial resources and who at the same time are undergoing a number of stressful experiences or who are discontent with their role in life are more apt to experience mental stress and eventually a complete mental break-down. Support for this position is provided by Myers et al. (1970) who concluded that the greater amount of psychiatric distress found in the lower class in community studies is due to the greater number of unpleasant life events or crises faced by lower class individuals.

Another of Norland and Weirath's criticisms of the "known groups" method of establishing the validity of Langner's scale is that the psychiatric perspective rests on definitions of illness which suggest that responses of

psychotics ~~and~~ neurotics cannot be taken at face value. In other words, mentally ill persons are individuals who reality and individuals in such a condition do not make competent respondents.

The validity of this last criticism cannot be denied. However, it would have been helpful if Norland and Weirath had suggested a positive direction for future research. If community mental health measures can not be validated using the known groups criteria how will their validity be determined? One can compare different scales which claim to measure community mental health. However, similar results would indicate only that both scales are measuring the same thing rather than that they are measuring mental health.

Another possibility is that the results of an independent psychiatric examination be compared with the results obtained utilizing the 22-item Index. Dohrenwend and Dohrenwend (1965) identified the major difficulty with this approach when they noted that there are no generally agreed upon criteria for psychological health or disorder. As evidence they site the fact that the mental health evaluators in the Stirling County study (D.C. Leighton et al., 1963) saw more disorder in the expatients than the

Midtown evaluators (Srole et al., 1962) saw in their current patients. In fact, Leighton et al. found that"..... at least half of the adults in Stirling County were currently suffering from some psychiatric disorder defined in the American Psychiatric Association Diagnostic and Statistical Manual 1963:356)."

The validity of other measures of community mental health such as those of MacMillan (1957) and Gurin et al. (1960) has not been proven either. Thus, there is nothing to be gained by attempting to locate a data set which has all the variables required for the present analysis as well as a different measure of community mental health. However, it must be kept in mind that the validity of Langner's index as a measure of mental health has been neither proven nor disproven.

4.2.2 Other Techniques

Shader, Ebert and Harmatz (1971), in a study which appears to have been generally overlooked by the researchers who have examined the validity question, used correlation analysis in their examination of this issue. They found that there were high correlations between Langner's scale and other psychometric tests: namely, the

/Taylor Manifest Anxiety Scale, the Scheier-Cattell Anxiety Battery, the Eysenck Neuroticism Scale, the Eysenck Extroversion Scale, the depression scale from the MMPI and a shortened form of the MMPI depression scale. They concluded that Langner's scale does measure psychopathology.

Rather than supporting Langner's scale as a measure of mental illness, it would appear that high correlations between it and at least five of the six scales utilized by Shader et al. indicate that Langner's scale measures anxiety rather than mental illness. The only scale which appears, at least on the surface, to measure something other than anxiety is Eysenck's Neuroticism Scale.

The results of this study raise serious questions as to exactly what the 22-item Index measures. Is mental disorder being identified by this scale or only mental stress due to individuals being in one or more situations with which they have difficulty coping?

Seiler (1973) addressed the issue of what the 22-item Index is actually measuring. He found that this index has been described by mental health researchers as operationalizing the following constructs:

- 1) psychiatric symptoms or disorder
- 2) psychological symptoms, disturbance or disorder
- 3) psychophysiological symptoms, disturbance or disorder
- 4) emotional adjustment
- 5) emotional disturbance
- 6) mental health
- 7) mental illness
- 8) symptoms of stress (1972:257)

In the same article Seiler contented that it is possible to ascertain whether the 22-item Index lacks content validity for the construct mental illness. It is an understatement to state that there is a urgent need for researchers to determine whether the 22-item Index measures mental health.

4.3 Response Bias

The question of response bias in relation to the 22-item Index was first raised by Dohrenwend (1966). He identified two types of biases which his research indicated affected the way individuals scored on Langner's

scale. These were social desirability⁷ and acquiescence⁸

Phillips and Clancy (1970) studied acquiescence and response bias in terms of their possible confounding effect on the relationship between social class and score on the 22-item Index. They concluded that acquiescence did not constitute a response bias in this case but that social desirability did.

Phillips and Clancy (1972) broke social desirability into two measures in order to examine its different components. The first indicator, need for social approval, employs the definition of need for approval put forward by Crowne and Marlowe (1964:354) as the need for subjects to respond in culturally sanctioned ways. The second measure is based on the work of Edwards (1953). This component of social desirability focused on people's tendency to endorse statements on the basis of

7. Social desirability is described by Phillips and Clancy (1970) as the tendency of people to deny socially undesirable traits and to "admit" socially desirable ones.
8. Acquiescence is a tendency to agree or disagree with items irrespective of their content. Couch and Keniston (1960) labelled the tendency to agree with all items as "yeasaying" and the tendency to disagree as "naysaying".

what Phillips and Clancy (1972:924) describe as their implicit social desirability rather than on their actual explicit content.

Phillips and Clancy found that these two measures were generally unrelated to one another. Thus, they concluded that whether people see various traits as socially desirable is not determined by the personality characteristic of need for social approval. Clancy and Gove (1974) found respondents' perception of the undesirability of the Langner scale items, their need for social approval and their tendency to naysay were strongly related to the number of symptoms they perceived themselves as having. Klassen et al. (1975) came to a similar conclusion regarding the effect of social desirability. They found that social desirability as measured by the Marlowe-Crowne scale was related to score on the 22-item Index.

Gove et al. (1976) examined the effect on the results of a men's health survey of naysaying, perceived trait desirability and need for social approval. They found that these three types of response bias did not seriously distort the pattern of relationships between the various independent variables and mental health and

concluded that these factors act as random noise rather than as a systematic bias.

Another study published in the same year as that of Gove et al. came to different conclusions. Roberts et al. (1976) found that acquiescence influences the pattern of response to the 22-item Index. However, Roberts et al. did not address the question of whether this leads to a systematic bias.

Both the study by Gove et al. and the one by Robert et al. were based on data from restricted segments of the population. The former based their analysis on data obtained from 94 individuals in a largely black, lower income area and on the responses of 44 psychiatric patients at a community health centre. The latter group of researchers analyzed information obtained from 652 lower income black adults.

The most recent study of the question of response bias was conducted by Gove and Geerken (1977) using data from a national survey. After a comprehensive examination of the issue of naysaying, trait desirability and need for social approval in relation to surveys of community mental health they concluded:

"The results lead to an almost unequivocal conclusion: the response bias variables have very little impact on the relationships and it seems safe to conclude that these sources of response bias do not act in a systematic way to invalidate the pattern of observed relationships between mental health and common demographic variables (1977:1289)"

While the work of Gove and Geerken is quite impressive one note of caution must be added. In their analysis they did not use the 22-item Index or for that matter any of the other mental health scales. Instead they selected their own indicators of mental health and questioned each respondent as to whether they had experienced each symptom often, sometimes or never during the past few weeks.

4.4 Multidimensionality

An important aspect of the discussion of the validity of the 22-item Index is the issue of whether the index is multidimensional. This question has been explored in two steps in this study. First, a factor analysis of responses of subjects to the 22 symptom statements was conducted (See Appendix A). Six factors were identified. However, it is noteworthy that only the first of the six factors had an eigenvalue above 1.00 and more than one item with a factor score above .50.

Secondly, the results obtained by employing the 22-item Index as the dependent variable were compared with these obtained when Seiler and Summers' indices and Duvall's factors were utilized as dependent measures (See Appendix B). On the whole, neither Seiler and Summers' indices nor Duvall's factors yielded findings conflicting with those obtained when the entire 22-items were utilized. It was concluded that, in this case, it is appropriate to treat Langner's scale as a unidimensional index. (See Appendix C)

4.5. Physical Illness

4.5.1 Previous Research

The fact that a number of the questions on the 22-item Index have a strong physical component has been identified as a problem by a number of reserachers. Among the first to address the issue of exactly what the physical symptoms factors are measuring was Crandell and Dohrenwend (1967).

They broke the 22-item Index into four categories: psychological, psychophysiological, physiological and ambiguous. They found that for these

four categories, the strongest relationship was between level of education and the psychophysiological index and the weakest was between level of education and the psychological index. This led them to question whether the physical symptom factors are a physiological expression of psychological distress or whether they are physiological expressions of physical illness.

Meile (1972) came to quite different conclusions. He found that level of education did not affect the likelihood of an individual indicating psychological as opposed to psychophysiological symptomatology.

In his study of psychological distress and help-seeking Mechanic (1973) found that reports of physical illness were correlated with psychological stress as measured by Langner's scale. He also noted that simple counts of symptoms and problems resulted in findings very similar to those based on more complex weighted indices. He suggests that this is due to the fact that individuals who have more severe problems or symptoms also tend to report many other problems or symptoms as well.

It would appear that many so called "physical symptom factors" may indicate the presence of

psychological problems rather than physical problems. This position is supported by the following description given by Mechanic:

"The picture which emerges is one of underlying depression with many vague and diffuse symptoms. These include being bothered by all sorts of ailments, feeling weak all over, having undefined pains, lacking energy, feeling tense and nervous, feeling depressed, drowsiness, nervous stomach, having personal worries, being nervous, feeling blue and headaches. As in other studies, the dimension of interference with normal activities also is clear. (1973:90)".

Norland and Weirath (1978) in their critical review of the methodological research on the 22-item Index suggest that pathological responses to many of the items on Langner's scale may be related to conditions other than mental disorder. As an example they indicate that pathological responses to the psychological stress items may be a function of dissatisfaction, discontent and the experiencing of problematic events in life. They go on to state that these items are similar to those used to measure anomie and alienation "... which typically imply psychological normality (1978:227)." Is suicide as a response to anomie also psychologically normal?

Norland and Weirath also argue that the results of the 22-item Index are confounded by the fact that the

lower class report more organic illness than other classes. They cite the findings of Crandell and Dohrenwend in arguing for this position. However, they fail to mention the opposing findings of Meile.

4.5.2 Factor Analysis

In order to gain additional insight into this issue it was decided to take advantage of the physical health information available as part of this data set. The medical information which had been collected as part of a larger study included information on use of medical services, recent injuries, heart trouble, bowel problems, problems related to the functioning of the digestive system, menstrual problems, use of prescription drugs and alcohol use. A copy of the items included in the factor analysis is included in Appendix E.

A factor analysis was conducted utilizing the above information plus the 22 items making up Langner's scale. The technique of principal component factor analysis with varimax orthogonal rotation was utilized. In order to be included in a factor each item had to have a

factor loading of .30 or above.⁹ From factor 7 on only those variables containing at least one item from the 22-item Index are listed. The results are presented in Table 4.1.

Out of the 14 items in factor one 12 were from the 22-item Index. The two items which were not from Langner's scale were number 15, having a pain in one's chest when angry or excited, and number 103, within the past two weeks not being able to do the things you would normally do because of being sick. While the item dealing with not being able to do the things one normally does loaded on this factor a similar item regarding whether the respondent had to stay in bed all or part of any day within the last two weeks because of not feeling well failed to load on this factor.

It is noteworthy that all the items with the factor score above .40 were from Seiler and Summers' psychological stress category. As well, there were four items from Seiler and Summers' physiological malaise

9. Researchers employ cut-off points as low as .25 for an item to be considered as loading on a factor (Denton and Taylor, 1955). The relatively low cut-off of .30 was selected in this case in order to ensure that all items which made sense theoretically were included in each factor.

TABLE 4.1

FACTOR ANALYSIS
N(388)

<u>Factor 1</u>		N(372)		<u>Eigenvalue</u>
101	* Nothing Worthwhile	.62		
92	* Can't Get Going	.57	9.40	
100	* Nothing Turns Out	.56		
98	* Worries	.53		
95	* Nervous	.50		
99	* Isolated Going	.47		
91	* Restless	.45		
96	* Worrier	.42		
15	Pain in Chest When Angry	.37		
103	Could not Work Normally (Last 2 weeks)	.36		
86	* Hot Flashes	.34		
90	* Trouble Sleeping	.33		
83	* Headache	.31		
87	* Weak Spells	.30		
<u>Factor 2</u>				
21	Antiacids	.81	2.83	
109L	Stomach or Digestion Medicine	.72		
19	Discomfort Above Navel	.60		
81	* Acid Stomach	.55		
23	Heartburn (immediate)	.50		
24	Heartburn (1-2 hrs. later)	.36		
25	Stomach Ache Awakened You	.32		
<u>Factor 3</u>				
85	* Short of Breath (when not exercising)	.69	2.55	
84	* Heart Beats Hard	.65		
7	Short of Breath (after 10 step climb)	.49		
8	Shortness of Breath awakened you	.31		
<u>Factor 4</u>				
89	* Fainting	.77	2.24	
5	Convulsions	.56		
33	Bowel Movements - bloody	.42		
97	Hands Tremble	.40		
* Items from Langner's 22-item Index				

Factor 5

12	Coughed Up Blood	.62	2.08
11	Coughed Up Phlegm	.52	
18	Vomiting Blood	.52	
102	Confined to Bed (In last 2 weeks)	.41	
30	Bowel Movements mixed with mucus	.41	

Factor 6

108B	Bleeding Between Periods	.61	1.87
108C	Heavy Bleeding	.55	
108A	Irregular Periods	.51	
108D	Painful Bleeding	.49	

Factor 7

39	Rheumatoid Arthritis	.62	1.76
109H	Allergy Medicine	.56	
101	* Nothing Worthwhile	.32	
103	Could Not Work Normally (Last 2 weeks)	.31	

Factor 11

109M	Tranquilizers	.51	1.33
109K	Sleeping Pills	.46	
94	* Low Spirits	.38	
20	Indigestion Below Navel	.38	

* Item from Langner's 22-item Index

category in this first factor. The physiological aspects covered included having frequent headaches, experiencing hot flashes, feeling weak and having trouble sleeping.

The second factor consists of a series of items related to minor stomach upset. Question 81, having an acid or sour stomach several times a week loaded with these items. It should be noted that items indicating more serious digestive tract problems did not load on this item. An example of this type of question is number 20, vomiting blood. From this it would appear that question 81 from Langner's scale is tapping vague stomach problems, possibly of psychological origin, rather than a definite organic problem.

The third factor is composed of four items related to being short of breath or having one's heart beat rapidly. Two of these three items, number 84, having the heart beat hard, and number 85, being short of breath when not exercising, were from Langner's 22-item Index. None of the items indicating more serious breathing or heart problems loaded on this factor. An example of this type of item is number 9 - shortness of breath that awakened you from sleep or with wheezing. This factor appears to be similar to factor two in that it is tapping

vague psychosomatic complaints rather than a definite physical problem.

The fourth factor appears to revolve around definite physical symptoms. It would appear that at least some of the individuals who indicated that they had fainted or lost consciousness more than a few times had become unconscious because of going into a convulsion. Having bowel movements which are bloody would also appear to indicate a physical health problem.

Factor five appears to revolve around recent physical illness. In the case of the sixth factor the focus is on menstrual problems. Neither factor contains any items from the 22-item Index.

Factor seven is difficult to interpret. Having rheumatoid arthritis and taking allergy medicine both had factor scores above .50. One item from the 22-item Index, number 101 - wondering if anything is worthwhile, loaded weakly with these other items. This questioning of the meaningfulness of life is likely due to the pain and limitations on activities which is common among individuals with arthritis.

Three of the four items in factor eleven clearly revolve around feelings of depression and attempts to alleviate these feelings through the use of tranquilizers or sleeping pills. The fourth item, indigestion below the navel may be one way the feeling of depression and mental stress is manifesting itself.

There were four variables from the 22-item Index which did not load in a meaningful manner. These were number 80 - having a poor appetite, number 82 - having a clogged nose or head, number 88 - experiencing cold spells and number 93 - feeling that one's memory is not all right. One explanation for this is that in some cases these four measures were indicative of a physical problem while in others they reflected a psychological problem and as a result these items did not appear as significant elements in any one factor.

In summary, virtually no evidence was found to support the contention that "physical symptom variables" are measuring organic rather than psychological problems. More than half of the items from Langner's scale loaded together. These included a number of the so called "physical symptom variables." Other variables from the index loaded with other health measures to form factors

centered around psychosomatic types of problems. In only one factor was there a combination of items from the Langner index and specific physical ailments.

CHAPTER 5

ANALYZING THE RELATIONSHIP BETWEEN EMPLOYMENT STATUS AND MENTAL HEALTH

5.1 Introduction

As was discussed in the second chapter one possible explanation for the variation in findings among researchers who have examined the relationship between employment status and mental health is that there is not a simple relationship between these factors. It is conceivable that the relationship between employment status and mental health is a conditional one, dependent on the presence or absence of other individual or structural characteristics. The possibility that employment status is related to mental health through interaction with other factors will be explored for the following three sets of variables: (1) sex role orientation, (2) marital stress, (3) child rearing stress.

5.2 Adjusted Means by Employment Status

The mean scores on the 22-item Index according to employment status for each category of each variable

As discussed earlier during the process of examining the question of multidimensionality the 22-item Index has been analyzed by a number of researchers. The major studies are as follows:

<u>Name of Investigators</u>	<u>Method of Analysis</u>	<u>Number of Items Included In final Results</u>	<u>Finding</u>
Crandell and Dohrenwend (1967)	rating of items by mental health professionals	22	4 categories
Dohrenwend (1971-unpublished)	factor analysis	6	2 factors
Seiler and Summers (1974)	authors decision	22	2 scales
Roberts et al. (1976)	cluster analysis	18	6 clusters
Duvall	factor analysis	22	6 factors

The results of those studies for which information is available will be compared with results of the factor analysis of the 22-item Index which was conducted for this study. The one study for which no detailed information is available was Dohrenwend's factor analysis.

Table A.2 presents a comparison of the results of the factor analysis carried out for this paper with those obtained by Crandell and Dohrenwend. Factors one, two and

22

OF / DE

A

within the three sets of independent measures are presented in table 5.1. These scores were adjusted to control for level of education of the wife, age of the wife, ethnicity, presence of preschool aged children and occupational status of the husband. The findings are briefly summarized here. Detailed discussion is reserved for the last part of this chapter.

5.2.1 Sex Role Orientation

There were similar differences according to employment status between wives with liberal and those with traditional sex role values. Those housewives with traditional sex role values had a score which was 1.37 points higher than that for employed wives with similar sex role values while housewives with liberal sex role values had a score which was 1.26 points higher than that for their more liberal counterparts. It is also noteworthy that for both employed women and housewives those women with traditional sex role values had slightly poorer mental health than these women with a more modern sex role orientation.

TABLE 5.1
Adjusted Scores on the 22-Item Index by Employment Status +

	Overall Mean	Employed		Housewife		Difference of Means
		Mean	Number	Mean	Number	
<u>Employment</u>	5.94	5.24	(91)	6.12	(360)	.88*
<u>Sex Role Norms</u>	6.00	4.89	(37)	6.26	(157)	1.37*
Liberal	6.17	5.17	(46)	6.43	(164)	1.26*
Traditional						
<u>Marital Stress</u>						
Husband just as loving	5.58	5.05	(75)	5.71	(310)	.66
Yes	8.10	5.94	(15)	8.82	(44)	2.88*
No						
Husband more critical	6.85	6.08	(27)	7.05	(103)	.97
Yes	5.59	4.89	(63)	5.77	(248)	.88*
No						
Way get along with spouse	6.07	5.97	(40)	6.09	(159)	.12
Above Average	5.73	4.24	(43)	6.07	(186)	1.83*
Average	7.12	2.73	(7)	11.36	(10)	8.63*
Below Average						
Threaten to Leave	6.79	5.69	(49)	7.09	(180)	1.40*
Yes	5.05	4.76	(41)	5.12	(180)	.36
No						
<u>Child Rearing Stress</u>						
Way get along with Children	6.25	4.95	(31)	6.52	(149)	1.57*
Above Average	5.52	5.40	(57)	5.56	(193)	.16
Average	8.30	1.65	(2)	9.38	(14)	7.73
Below Average						
Way help Children	6.47	5.46	(34)	6.74	(124)	1.28
Above Average	5.58	5.00	(46)	5.70	(214)	.70*
Average	6.76	2.60	(6)	10.03	(7)	7.43
Below Average						

* Significant at .05 level or better.

+ Adjusted means after controlling for level of education of wife, age of wife, ethnicity, presence of preschool age children and occupational status of the husband.

5.2.2 Marital Stress

5.2.2.1 Husband just as Loving

It appears that labour force participation mediates to reduce the impact of feeling that one's husband is not as loving as he used to be. The difference in means according to employment status on the 22-item Index was 0.66 for wives who felt that their husbands were just as loving compared to 2.88 for wives who felt that their husbands were not as loving as they use to be.

5.2.2.2 Husband more Critical

Here again employment mediates to reduce the impact of a stressful marital relationship. However, in this case the difference of the difference of means is considerably less than what it was in the case of the first indicator of the wife's perception of the marital situation. In this case, the difference of means on the 22-item Index according to employment status was 0.97 for those wives who felt that their husbands were more critical while the difference of means was 0.88 for those wives who did not rate their husbands as more critical.

5.2.2.3 Way get along with spouse

As in the previous two cases, the difference in mental health according to employment status decreases when the women evaluate the conjugal relationship, highly and increases when they evaluate it negatively. The difference in means according to employment status on the 22-item Index moves from a high of 8.63 when the women rate the way they get along with their spouse as below average to 1.83 when they rate their performance as average to a low of 0.12 when they rate their relationship as above average.

5.2.2.4 Threaten to leave

Again, employment clearly reduces the impact of a troubled marital relationship. The difference of means according to employment status on the 22-item Index was 1.40 for these wives who had threatened to leave or asked their husband to leave compared to 0.36 for those wives who had never threatened to leave.

It is noteworthy that the difference of the difference of means according to employment status for women experiencing marital stress compared to those women not under marital stress was at least 1.00 for three of the four indicators of marital stress. The exception was the measure of whether the wife perceived her husband as more critical than he used to be before. In this case there was only a slight (0.09) difference between the difference of means for women experiencing marital stress compared to that for those not experiencing marital stress.

5.2.3 Child Rearing Stress

5.2.3.1 Way get along with Children

It appears that labour force participation mediates to reduce the impact of feeling that one is not a good mother. The difference of means according to employment status on the 22-item Index was 7.73 for those wives who felt that they were below average in the way they get along with their children. This compares with a difference of means of 1.57 for those wives who rated

themselves as above average and 0.16 for those wives who rated themselves as average.

5.2.3.2 Way help Children

In this case the difference in mental health according to employment status again increases when the women rate their performance as a mother poorly. The difference in means according to employment status on the 22-item Index was 7.43 for those wives who felt that the way they help their children was below average. This compares with a difference of means of 1.28 for those wives who rated themselves as above average and 0.70 for those wives who rated themselves as average.

There is a striking similarity in the response patterns for the two indicators of perceived performance as a mother. Although the actual numbers are small, those housewives who perceived themselves as poorer than average in the way they get along with and help their children had a much higher score on the 22-item Index than employed wives who perceived themselves as a poor mother on these two measures. This supports the conclusion that

employment mediates to reduce the impact of stress from perceiving oneself as a poor mother.

It is noteworthy that there is only one group of housewives who had a score similar to that for employed wives. For both indicators of perceived performance as a mother, housewives who rated themselves as average had a score on the 22-item Index which was close to that of the employed wives who assigned themselves this same rating. In both cases the difference of the means according to employment status for wives rating themselves as average was less than 0.75.

5.3 Discussion of the Findings

In the preceeding section the possibility that employment status is related to mental health through interaction with other factors was explored for the following sets of variables: sex role orientation, marital stress and child rearing stress..

5.3.1 Sex Role Orientation

Sex role orientation does not affect the relationship between employment status and mental health.

Both liberal and traditional employed wives had a score on the 22-item Index which was considerably lower than that for housewives with similar values. As well, both housewives and employed wives with traditional sex role values had a slightly higher score on Langner's scale than wives from the same employment category with liberal values.

It should be noted that the lack of interaction effects in this case may be due to the manner in which sex role orientation was operationalized. Only extremely conservative women were identified by the measure of sex role norms which was employed in this study.

5.3.2 Marital and Child Rearing Stress

From an examination of the means on Langner's scale for housewives and employed wives for the four measures of marital stress and the two measures of child rearing stress it appears that there is an interaction effect in both cases. The difference of the means according to employment status does not remain constant. This difference decreases when the wives are not experiencing family stress and increases when they are under family stress.

In the case of child rearing stress the largest difference in the difference of means according to employment status was for mothers who rated themselves as below average in the way they get along with and help their children. The next largest difference was in the case of mothers who rated themselves as above average. Surprisingly, the smallest difference of the difference of means according to employment status was for wives who rated themselves as average.

One plausible explanation for this difference centres around the characteristics of the role of housewife. Since being a mother is a major component of the role of full-time homemaker it is important to housewives that they be perceived as doing a good job of taking care of their children. This is reinforced by the fact that full-time homemakers are frequently pictured as having all sorts of free time to spend with their children. However, unlike paid employees, there is not a yearly performance evaluation based on predetermined performance criteria for homemakers. It is likely that many of the housewives who perceive themselves as above average are subjecting themselves to considerable psychological stress in their attempt to be the perfect

mother, while those mothers who ranked themselves as below average are distressed because in their own eyes they are a failure as a mother.

5.3.3 Conclusions

An interaction effect was observed for two of the three variables: marital stress and child rearing stress. The one measure for which no interaction effect was observed was sex role orientation.

Housewives who were experiencing marital stress and who rated themselves as below average as a mother had poorer mental health than other housewives, employed wives experiencing similar problems and employed wives without comparable problems. It appears that what the housewives with the highest mental health scores are experiencing is stress from marital problems and from problems related to their role as a mother.

A number of explanations can be suggested for the differences between the scores on the 22-item Index for employed wives under marital stress and those for housewives under marital stress. However, these differences are likely the result of a number of factors.

No doubt, some of these are related to the differences between the role of housewives and that of paid employee, while others are linked to the different personality characteristics of employed wives compared to housewives.

One factor which is likely to play a role is the fact that employed women work outside the primary location of the marital and child-related stress, the home. Since housewives perform the majority of their duties in the conjugal home, they are less likely to be able to put their problems temporarily out of their mind.

Another possibility which should be considered is differences in expectations and perceptions according to employment status. Since being a mother is only one of their roles, employed wives may set different standards for themselves. Evidence that this may be the case was provided by a recent study by Hock (1978). In a study of employed wives and homemakers with infants she found that working mothers perceived less infant distress at separation, were less anxious about separation and were less apprehensive about other care givers than homemakers were.

Another difference between employed wives and

housewives lies in the fact that employed wives have two potential sources of satisfaction - their paid employment and their unpaid job of homemaker. As well as recognition for her job performance, employment outside the home provides the wife with at least some financial security, additional social contacts and the opportunity to enhance her own sense of self-worth. In such a situation, marital, child and other problems may not be quite as devastating for her.

In the next chapter the purposes of this thesis are reviewed and general conclusions drawn. As well, suggestions are made for the direction of future research.

CHAPTER 6

CONCLUSIONS

The goal of this paper was to examine the question of whether or not there is a relationship between employment status and mental health. The major issues addressed in this study were the following:

- 1) Is the use of the 22-item Index as a measure of mental health problematic?
- 2) Is the relationship between employment status and mental health contingent upon perceived role performance and sex role orientation when age of the wife, presence of preschoolers, ethnicity and social class are controlled for?

The first of these issues to be examined was the use of the 22-item Index.

6.1 Langner's 22-item Index.

Four major methodological concerns were

identified in relation to the 22-item Index as a measure of mental health. These included:

- 1) unproven validity
- 2) response bias
- 3) multidimensionality
- 4) physical illness

6.1.1 Unproven Validity

The issue of the validity of the 22-item Index has received considerable attention. Due to methodological problems the validity of this index as a measure of community mental health has been neither proven nor disproven. Finding a methodologically sound means of determining the validity of this and other measures of community mental health should receive top priority among mental health professionals.

6.1.2 Response Bias

The following types of response bias have been investigated in relation to the 22-item Index:

- 1) social desirability

- a) need for social approval
- b) perceived trait desirability

2) acquiescence (yeasaying)

Although researchers have not been unanimous in their findings the bulk of the research seems to indicate that response bias is not a problem.

6.1.3 Multidimensionality

An important aspect of the discussion of the validity of the 22-item Index is the issue of whether the index is multidimensional. A factor analysis of this scale was conducted. One strong and five weak factors emerged.

The six factors were compared with sub-scales identified by other researchers. Factors one (vague anxiety), two (concrete anxiety), and six (severe distress) correspond roughly to Seiler and Summers' psychological stress grouping, Crandell and Dohrenwend psychological category and Rober's et al's clusters one and six. Factors three (physical anxiety), four (physical stress) and five (heart trouble) are found within Seiler

and Summers' physiological malaise category, Crandell and Dohrenwend's psychophysiological, physiological and ambiguous categories and Roberts et al's clusters two, four and six.

2 The analysis carried out in chapter five with the 22-item Index as the dependent variable was replicated with Seiler and Summers' two sub-scales and the first three Duvall factors employed as dependent measures. The conclusion reached was that in this case the 22-item Index appears to be acting as a unidimensional measure of mental health.

6.1.4 Physical Illness

The fact that a number of questions on the 22-item Index have a strong physical component has been identified as a problem by a number of researchers. Concern has been expressed that these "physical symptom factors" reflect the presence of physical rather than psychological problems.

In order to gain more insight into this issue the author conducted her own analysis using physical health information plus Langner's scale. Virtually no evidence

was found to support the contention that "physical symptom variables" are measuring organic rather than psychological problems.

6.2 Interaction Effects

The possibility that employment status is related to mental health through interaction with other factors was explored for the following sets of variables:

- 1) sex role orientation
- 2) marital stress
- 3) child rearing stress

No interaction effect was observed for sex role orientation. In the case of the remaining two sets of variables an interaction effect was noted. The difference in mental health according to employment status decreased when the women were not experiencing family stress and increased when they were experiencing family stress.

Housewives who were under stress from marital problems and who rated themselves as below average as a mother had exceptionally high scores on the 22-item Index. It appears that the two types of stress measured

in this study are ones to which housewives are particularly vulnerable.

Further research is needed in order to clarify and expand the findings of this paper. Both the findings of this study and the work of Brown et al. (1975) suggest that employment helps alleviate stress when women are faced with major problems. A number of possible reasons why full-time homemakers are more vulnerable to stress than employed women were put forward in chapter five. However, the differences between women who remain homemakers and those who either choose or are forced to work outside the home and between the roles of homemaker and employee need further investigation.

As well, additional research needs to be conducted utilizing other measures of stress and examining other types of stressors. One important area which has not been touched upon in this study is job related problems and stresses of employed women.

Since the data utilized in this study are cross-sectional it is impossible to make definitive causal statements. The findings support the conclusion that marital and child related stress are associated with

decrements in mental health for housewives but not for employed wives. However, the possibility that psychologically healthier women are more apt to enter and remain in the labour force can not be ignored (i.e. the self-selection theory). A longitudinal study is needed in order to sort out the relationship between employment status, family stress and mental health.

APPENDIX A

Multidimensionality

A.1 Previous Research On This Issue

An important aspect of the discussion of the validity of the 22-item Index is the issue of whether the index is multidimensional. The first researchers to raise the question of whether the 22 items which comprise Langner's scale represent a single continuum or are multidimensional were Crandell and Dohrenwend (1967). They had psychiatrists and medical internists rate each of the 22 symptom items according to whether the symptom occurred frequently or rarely in organic illness and whether the symptom was "more psychological" or "more physiological". Their responses were used to categorize the 22 symptom items into four subsets as follows:

Psychological Symptoms Index (10 items)
Psychophysiological Symptoms (5 items)
Physiological Symptoms (3 items)
Ambiguous Symptom Index (4 items)

Using the subsets identified by Crandell and Dohrenwend several researchers have attempted to examine

the dimensionality question by examining the relationship between variables such as social class and the four sub-indices. Meile and Gregg (1973) found that age, sex and symptom status interacted with the symptom subsets. Phillipa and Segal (1969) found that women had higher scores than men on the psychological and psychophysiological symptom scales while the men scored higher on the physiological and ambiguous scales.

Another method, factor analysis, was utilized by Dohrenwend in his examination of this issue. According to Seiler's (1973) report of Dohrenwend's work, the latter obtained a four item and a two item factor from his factor analysis of the 22 item scale but found the remaining 16 items to be chaotic.¹⁰

Seiler and Summers (1974) concluded that the most reasonable interpretation of the 22-item Index is that it is actually two scales. One scale measures psychological stress and the other physiological malaise.

In a recent study, Roberts et al. (1976) employed yet another technique - cluster analysis. They derived six

10. Dohrenwend's work was presented at a Conference on Psychosocial Stress Measures held by the Mental Hygiene Research Institute in Montreal in Oct. 1971. His paper does not appear to have been published

clusters involving 18 of the 22 items. They found that their results were closer to those of Seiler and Summers' than to Crandell and Dohrenwend. They concluded that there is little to recommend what they describe as Crandell and Dohrenwend's "a priori clustering of symptoms." As well, they noted that it would appear that the statements contained in the 22-item Index do not constitute a cohesive set.

Caution must be exercised in generalizing from the results obtained by Roberts et al. Their cluster analysis was conducted using a sample population which was described in passing as consisting of "black respondents" with a later reference to it as being "essentially lower income."

A.2 Factor Analysis

It is obvious from the review of the literature which was described in the preceeding section that the multidimensionality issue is far from resolved. In order to gain more insight into this question, the 22-item Index was factor analyzed. In carrying out this analysis the technique of principal-component factor analysis with varimax orthogonal rotation was utilized. In order to be considered as a component of a factor each item had to

have a factor loading of .30 or above¹¹

The results of this analysis are presented in table A.1¹². All the items in factor one appear to revolve around a general feeling of anxiety and discouragement about one's life. The items in factor two appear to be related to the expression of anxiety in more concrete ways than the items in factor one. The ways these feelings are manifested include worrying, not being able to sleep, having headaches, and feeling nervous. These two factors were given the following names: factor one - vague anxiety and factor two-concrete anxiety.

Factor three contains seven items covering a wide range of physical symptoms. Alone any one of them could

11. It is conventional to use an eigenvalue of 1.00 as a cut-off point. This procedure was not followed in the present situation because the author's interest was not in each individual factor per se but rather in comparing these factors with the sub-indices which have been identified by other researchers. Researchers employ cut-off points as low as .25 for an item to be considered as loading on a factor (Denton and Taylor, 1955). The relatively low cut-off of .30 was selected in this case in order to ensure that all items which made sense theoretically were included in each factor.
12. For a copy of the exact questions in the 22 item index see appendix D. In order to enable interested researchers to refer to the exact questions the number assigned to each item in appendix D is listed beside it in all tables.

TABLE A.1

RESULTS OF FACTOR ANALYSIS

<u>Factor 1 (Vague Anxiety)</u>		<u>Factor Score</u>	<u>Eigenvalue</u>
92	Can't Get Going	.53	4.06
99	Isolated, Feel Apart*	.39	
100	Nothing Turns Out	.64	
101	Wonder If Worthwhile	.64	
 <u>Factor 2 (Concrete Anxiety)</u>			
83	Headache*	.39	1.09
90	Trouble Sleeping	.39	
91	Restless	.43	
95	Nervous	.50	
96	Worry	.37	
98	Personal Worries *	.46	
99	Isolated, Feel Apart *	.30	
 <u>Factor 3 (Physical Anxiety)</u>			
81	Sour stomach	.36	.76
82	Clogged Head	.38	
83	Headache*	.35	
85	Short of Breath*	.40	
86	Hot Flashes	.37	
87	Weak Spells	.47	
88	Cold Sweats	.45	
 <u>Factor 4 (Physical Stress)</u>			
80	Poor Appetite	.32	.50
89	Faint	.54	
97	Hands Tremble	.59	
 <u>Factor 5 (Heart Trouble)</u>			
84	Heart Beats Hard	.82	.45
85	Short of Breath *	.32	
 <u>Factor 6 (Severe Distress)</u>			
93	Poor Memory	.47	.36
94	Low Spirits	.30	
98	Personal Worries *	.30	

* Variables appearing in more than one factor

indicate the presence of some type of physical disorder. However, as a group these items appear to be symptomatic of some type of mental distress which is manifesting itself through minor physical problems. This factor was given the title physical anxiety.

Factor five contains the two items out of the 22 which deal with symptoms of heart trouble. It is noteworthy that one of the two items, shortness of breath, loaded with both factors three and five. In the case of factor three, shortness of breath, like the other six items probably reflects psychological distress which manifests itself in the form of minor physical ailments.

There are two quite different interpretations possible in the case of factor five. One is that the heart beating fast and being short of breath indicate physically based heart problems. An equally plausible alternative is that these two items reflect heart related methods of reacting to psychological stress. This factor was given the name, heart trouble.

Factors four and six are more difficult to interpret. Two of the three items in factor four, a poor appetite and trembling hands, would seem to be indicative

of psychological stress and a feeling of depression. However, fainting (if real as opposed to simply feeling dizzy) would indicate some type of physical problem. Factor four was given the label physical stress.

In the case of factor six, it is noteworthy that low spirits loaded with a poor memory and personal worries rather than with the items in factor one which, at least on the surface, seem to reflect similar feelings. It may be that a poor memory, personal worries and low spirits reveal a general feeling of disorientation due to psychological problems.

Another possibility is that factor six is indicative of a pronounced reaction to psychological distress. This is supported to some extent by the work of Roberts et al. (1976). They divided their sample into impaired (scores of 4 or more) and unimpaired (scores of less than 4) individuals. Two of these items, low spirits and poor memory, emerged as a cluster for the impaired but not for the unimpaired group. Factor six was assigned the title severe distress.

A.3 Comparison with Results of Other Studies

As discussed earlier during the process of examining the question of multidimensionality the 22-item Index has been analyzed by a number of researchers. The major studies are as follows:

<u>Name of Investigators</u>	<u>Method of Analysis</u>	<u>Number of Items Included In final Results</u>	<u>Finding</u>
Crandell and Dohrenwend (1967)	rating of items by mental health professionals	22	4 categories
Dohrenwend (1971-unpublished)	factor analysis	6	2 factors
Seiler and Summers (1974)	authors decision	22	2 scales
Roberts et al. (1976)	cluster analysis	18	6 clusters
Duvall	factor analysis	22	6 factors

The results of those studies for which information is available will be compared with results of the factor analysis of the 22-item Index which was conducted for this study. The one study for which no detailed information is available was Dohrenwend's factor analysis.

Table A.2 presents a comparison of the results of the factor analysis carried out for this paper with those obtained by Crandell and Dohrenwend. Factors one, two and

TABLE A.2

COMPARISON OF CRANDELL AND DOHRENWEND'S
CATEGORIES WITH DUVAL'S FACTORS

<u>Crandell and Dohrenwend's Categories</u>		<u>Duval's Factors</u>					
		1	2	3	4	5	6
<u>Psychological</u>							
99	Feel Apart	x*	x*				
92	Can't Get Going	x					
100	Nothing Turns Out	x					
101	Wonder if Worthwhile	x					
95	Nervous		x				
96	Worrying Type		x				
91	Restless		x				
90	Trouble Sleeping		x				
94	Low Spirits						x
93	Memory Not all right						x
<u>Psychophysiological</u>							
98	Personal Worries		x*				x*
87	Weak			x			
88	Cold Sweats			x			
86	Hot all over			x			
83	Headaches		x*	x*			
<u>Physiological</u>							
89	Faint				x		
82	Clogged Head, Nose			x			
80	Poor Appetite				x		
<u>Ambiguous</u>							
81	Sour Stomach			x			
85	Short of Breath			x*		x*	
84	Heart Beats Hard					x	
97	Hands Tremble			x			

* Variables appearing in more than one factor

six combined include all the items identified as psychological by the mental health professionals. It would appear that in the present study the factor analysis identifies three aspects of what the professionals labelled as psychological stress. These are vague anxiety (factor one), concrete anxiety (factor two) and severe distress (factor six).

Four out of seven items in factor three come from their psychophysiological category. Two of the remaining items come from their ambiguous category and one is from their physiological group. In the case of factor four, two of the items are from their physiological category and one is from their ambiguous category.

As table A.3 indicates when the results of the factor analysis are compared with Seiler and Summers' interpretation of the 22-item Index all of the items in factor one, most of those in factor two and two out of the three items in factor six fall within their psychological stress category. All the items in factors three, four and five fall within Seiler and Summers' physiological malaise category.

Roberts et al. carried out a cluster analysis for

TABLE A.3

COMPARISON OF SEILER AND SUMMER'S CATEGORIES
WITH DUVALI'S FACTORS

<u>Seiler and Summers'</u> <u>Categories</u>		<u>Duvali Factors</u>					
<u>Psychological Stress</u>		1	2	3	4	5	6
92	Can't Get Going	x					
94	Low Spirits						x
91	Restless		x				
96	Worries		x				
95	Nervous		x				
98	Worries		x*				x*
99	Fell Apart, isolated	x	x*				
100	Nothing turns out	x					
101	Nothing Worthwhile	x					
<u>Physiological Malaise</u>							
87	Weak			x			
80	Poor Appetite				x		
90	Trouble Sleeping		x				
93	Poor Memory						
86	Hot Flashes				x		
84	Heart Beats Hard		x			x	
85	Short of Breath			x*		x*	
89	Fainting				x		
81	Acid Stomach			x			
88	Cold Sweats			x			
97	Hands Tremble				x		
82	Fullness in Head			x			
83	Headache		x*	x*			

* Variables appearing in more than one factor

males alone, females alone and for males and females together. In each case they found a somewhat different set of items formed each cluster as well as finding a varying number of clusters. It is likely that different results would be obtained if a cluster analysis was carried out using data from a white population. Unfortunately, Roberts et al.'s sample population was limited essentially to lower class blacks. However, it is worthwhile to examine their cluster analysis results for the female segment of their sample population.

As Table A.4 show cluster one is made up of items from factors one and two. Cluster six is made up of two of the three items in factor six and cluster three consists of two of the items from factor three. In the case of clusters four and five there is no clear pattern. They are made up of items from factors two, three, four and six.

A.4 Conclusions and Further Research

Thus, in summary it would appear that factors one, two and six correspond roughly to Crandell and Dohrenwend's psychological category, Seiler and Summers' psychological stress grouping and Roberts et al.'s

TABLE A.4

COMPARISON OF ROBERTS ET AL'S CLUSTER
ANALYSIS WITH DUVAL'S FACTORS

<u>Roberts et al's</u> <u>Cluster Analysis</u> <u>for the Female Population</u>		<u>Duval's Factors</u>					
<u>Cluster 1</u>		1	2	3	4	5	6
91 Restless			x				
96 Worrying type			x				
95 Nervous			x				
90 Trouble Sleeping			x				
99 Feel Apart	x*		x*				
100 Nothing turns out	x						
101 Nothing worthwhile	x						
<u>Cluster 2</u>							
92 Can't Get Along	x						
84 Heart Beats Hard						x	
85 Short of Breath				x*		x*	
<u>Cluster 3</u>							
87 Feel Weak				x			
88 Cold sweats				x			
<u>Cluster 4</u>							
81 Acid Stomach				x			
97 Hands Tremble					x		
<u>Cluster 5</u>							
89 Fainting Spells					x		
98 Worries		x*					x*
<u>Cluster 6</u>							
94 Low Spirits							x
93 Poor Memory							x

* Variables appearing in more than one factor

clusters one and six. Factors three, four and five are distributed through Crandell and Dohrenwend's remaining three categories, are scattered through Roberts et al's clusters two, three, four and five and are all found within Seiler and Summers' physiological malise category.

In this study, the first three of the six factors identified in the factor analysis conducted for this paper and Seiler and Summers' psychological and physiological malise groupings are utilized in the analysis along with the 22-item Index. These sub-indices were included in the hope of obtaining some additional insights into the issue of whether or not the 22-item Index is multidimensional. The results obtained when each of the sub-indices was utilized as the dependent variable are presented in appendix B.

APPENDIX B

Multidimensionality Findings

B.1 Method of Analysis

The issue of whether the 22-item Index is a multidimensional unidimensional measure was discussed in Appendix A. Two sets of sub-indices were selected for further examination, one set of these sub-indices was based upon an analysis of subject responses and the other upon the clinical judgement of the items by a professional. Seiler and Summers' psychological and physiological indices were compiled on the basis of Seiler's evaluation of the items while Duvall's factors were identified through factor analysis of data from female respondents. The first three of the six factors identified by Duvall are included in this analysis. The last three factors were excluded due to their low eigenvalues and conceptual unclearness.

It was decided to compare the results obtained by employing the 22-item Index as the dependent variable with those obtained by utilizing Seiler and Summers' indices and Duvall's factors as dependent measures. If the

results are different when the sub-indices are employed as the dependent measure this would indicate that the 22-item Index is not a unidimensional measure of mental health. However, if the results obtained when the sub-indices are utilized are similar to those obtained when the 22-item Index is employed as the dependent measure this would not prove that the index is unidimensional. Such findings would indicate only that in this case the 22-item Index acts as a unidimensional scale.

It was decided to compare the difference of means for employed wives and housewives on the independent measures utilized in the analysis of the relationship between employment status and mental health (chapter five). The difference of means according to employment status for the 22-item Index were taken from table 5.1. In the case of Seiler and Summers' two indices and Duvall's three factors the difference of means according to employment status were computed.

When the 22-item Index was employed as the dependent measure the difference of the difference of means according to employment status was atleast 1.00 in all but the following three cases:

- 1) There was a difference of difference of means of only .11 according to employment status between those women with liberal sex role values and those with traditional values.
- 2) There was a difference of a difference of difference of means of .09 according to employment status between those women who felt that their husbands were more critical than they used to be and those women who did not feel that their husbands were more critical than they had been previously.
- 3) In the case of the variable, way help children, there was a difference of difference of means of more than 1.00 according to employment status between women who rated themselves as below average and those who rated themselves as average and above average. However, there was only a difference of difference of means of .58 according to employment status between those women who rated themselves as above average and those who rated themselves as average.

The difference of means for the 22-item Index, Seiler and Summers' psychological and physiological indices and Duvall's vague anxiety, concrete anxiety and

TABLE B.1
Difference of Means According to Employment Status⁺

22-Item Index	Psychological (Seiler & Summers)	Physiological (Seiler & Summers)	Vague Anxiety (Duvall 1)	Concrete Anxiety (Duvall 2)	Physical Anxiety (Duvall 3)
Husband just as loving					
Yes	.66	.25	.46	.16	.30
No	2.88	1.07	1.67	.28 .77	1.06
Way get along with Spouse					
Above Average	.12	.06	.29	.04	.24
Average	1.83	.79	1.00	.44	.63
Below Average	8.63	3.30	6.80	1.52	3.72
Threaten to Leave					
Yes	1.40	.37	1.02	.11	.65
No	.36	.31	.11	.28	.10
Way get along with children					
Above Average	1.57	.35	1.11	.24	.71
Average	.16	.03	.22	.01	.13
Below Average	7.73	5.75	2.65	3.88	2.34
Way help children					
Above Average	1.28	.14	.87	.08	.79
Average	.70	.37	.59	.20	.22
Below Average	7.43	2.12	3.86	.76	1.75

+ Means were adjusted to control for level of education of the wife, occupational status of the husband, ethnicity, age of the wife and presence of preschool aged children.

physical anxiety factors are given in table B.1 for the independent measures. Due to the small difference in the difference of means on the 22-item Index for sex role orientation and husband more critical these two variables were excluded from this table. Figures are given for each category of the variable, way help children. However, due again to the relatively small difference in the difference of means on the 22-item Index, comparisons will not be made between the results for women who rate themselves as above average and those who rate themselves as average.

B.2 The Findings

There is a consistent pattern for the first variable, husband just as loving. For the 22-item Index, Seiler and Summers' two indices and Duvall's three factors the difference of means between employed wives and housewives was higher when the wife felt her husband was not as loving as he used to be than when the wife felt her husband was as loving as he was previously.

A consistent pattern also emerges for the second variable, way get along with spouse. For the 22-item Index, Seiler and Summers' two indices and Duvall's three factors the difference of means between employed wives and

housewives was highest for those wives who rated themselves as below average. Next highest were those wives who rated themselves as average. The difference of means was lowest for those wives who rated themselves as above average.

For the variable, threaten to leave, Seiler and Summers' two indices and Duvall's second and third factors followed the same pattern as the 22-item Index. The difference of means between housewives and employed wives was greater for those wives who had threatened to leave their husbands than for those who had never threatened to leave. In the case of Duvall's first factor, vague anxiety, the pattern was the opposite of that for the 22-item Index.

For the variable, way get along with children, Seiler and Summers' two indices and Duvall's factors one and three followed the same pattern as the 22-item Index. The difference of means between employed wives and housewives was highest for those wives who rated themselves as below average. Next highest were wives who rated themselves as above average. The difference of means was lowest for those wives who rated themselves as average.

In the case of Duvall's second factor, concrete anxiety, the highest difference of means was for wives who rated themselves as below average in the way they get along with their children. This is consistent with the pattern observed for the 22-item Index and the other four dependent measures. However, for Duvall's second factor there was virtually no difference in the difference of means for those women who rated themselves as average and the difference of means for those women who rate themselves as below average. This pattern is different than that for the rest of the dependent measures.

In the case of the last variable, way help children, the largest difference of means was for wives who rated themselves as below average in the way their help their children. This held for the 22-item Index, Seiler and Summers' two indices and Duvall's three factors.

In summary, the results obtained using Seiler and Summers' two indices and Duvall's three factors were similar to those obtained when the 22-item Index was employed as the dependent measure. In the case of Seiler and Summers' two indices and Duvall's third factor the pattern of the results was exactly the same as that for

the 22-item Index. Both Duvall's first and second factor differed from the pattern for the 22-item Index in one instance. From these results it would appear that in this case the 22-item Index is acting as a unidimensional scale.

APPENDIX C

Multidimensionality: Summary of the findings

One of the unresolved issues regarding the use of Langner's 22-item Index as a measure of community mental health is whether or not it is a unidimensional scale. In order to gain more insight into the question of whether the 22-item Index is multidimensional, a factor analysis of the 22 items which comprise Langner's scale was conducted. The factor analysis is described in appendix A. Six factors emerged. However, it is noteworthy that only the first two of these factors had eigenvalues above 1.00 and only the first and fourth factors had more than one item with a factor score above .50.

The six factors identified by Duvall were compared with the factors identified by other researchers. These comparisons are described in detail in appendix A. Factors one (vague anxiety), two (concrete anxiety), and six (severe distress) correspond roughly to Seiler and Summers' psychological stress grouping, Crandell and Dohrenwend's psychological category and Robert's et al's clusters one and six. Factors three (physical anxiety),

four (physical stress) and five (heart trouble) were found within Seiler and Summers' physiological malaise category, Crandell and Dohrenwend's psychophysiological, physiological and ambiguous categories and Roberts et al's clusters two, three, four and five.

In two of the preceeding four studies the grouping of items from Langner's Index was based on the opinion of the raters. In Crandell and Dohrenwend's case this rating was carried out by mental health professionals. In Seiler and Summers' study Seiler classified the items considering only their surface meaning.

The remaining two studies analyzed Langner's scale using the responses of subjects to the 22 symptom statements. Roberts et al. utilized cluster analysis while factor analysis was employed in the present study by Duvall. In the Roberts et al. and the Duvall analysis the first and the strongest factor (cluster) reflects psychological distress and anxiety. Robert et al. noted:

"Our results also confirm those of Meile and Gregg in that the items which seem to hang together the best are those that Crandell and Dohrenwend identified as psychological (1976:488)."

Are the psychological sub-scales measuring the same thing as the 22-item Index as a whole? Are the physiological sub-scales isolating a different phenomenon than either the psychological sub-scales or Langner's scale as a whole? In order to provide some insight into these questions the difference of means for employed wives and housewives on the independent measures utilized in the analysis in chapter five were computed for Seiler and Summers' two scales and three of Duvall's factors. These were compared with the difference of means according to employment status on the 22-item Index. Details of this analysis are found in appendix B.

Only those instances where the difference of the difference of means according to employment status on the 22-item Index was at least 1.00 were examined. The results were as follows:

<u>Independent Measure</u>	<u>Number of Cases in which Difference of Means for Seiler & Summers' Scales & Duvall's Factors followed Same Pattern As that for 22-item Index</u>
Husband just as loving	5
Way get along with Spouse	5
Threaten Leave	4
Way get along with children	4
Way help children	5
Total	<u>23</u>

In 23 out of 25 possible cases or 92 percent of the time the pattern of the results obtained using Seiler and Summers' two indices and Duvall's three factors was similar to that obtained when the 22-item Index was employed as the dependent measure. Thus, in this case, it appears that the 22-item Index is acting as a unidimensional measure of mental health.

APPENDIX D

The 22-Item Index

80. Would you say your appetite is poor, fair good or too good?
- * Poor
Fair
Good
Too Good
DK
NA
81. Are you bothered by acid or sour stomach several times a week?
- * Yes
No
DK
NA
82. Does there seem to be a fullness or clogging in your head or nose much of the time?
- * Yes
No
DK
NA
83. How often are you ever troubled with headache or pains in the head -- would you say often, sometimes, or never?
- * Often
Sometimes
Never
DK
NA
84. How often have you ever been bothered by your heart beating hard -- would you say often, sometimes, or never?
- * Often
Sometimes
Never
DK
NA
85. How often have you ever been bothered by shortness of breath when you were not exercising or working hard -- would you say often, sometimes, or never?
- * Often
Sometimes
Never
DK
NA

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86. Do you every so often suddenly feel hot all over?
* Yes
No
DK
NA
87. Do yo feel weak all over much of the time?
* Yes
No
DK
NA
88. How often have you been bothered by "cold sweats" -- would you say often, sometimes, or never?
* Often
Sometimes
Never
DK
NA
89. How often have you ever had any fainting spells or lost consciousness -- would you say never, a few times, or more than a few times?
* More than a few times
A few times
Never
DK
NA
90. How often have you had any trouble in getting to sleep or staying asleep --- would you say often, sometimes or never?
* Often
Sometimes
Never
DK
NA
91. * Have you ever had periods of such great restlessness that you couldn't sit long in a chair or couldn't sit still very long?
* Yes
No
DK
NA
92. Have you had periods of days, weeks or months when you couldn't take care of things because you couldn't "get along"?
* Yes
No
DK
NA

APPENDIX D

93. Does your memory seem to be all right?
(Does your memory seem to be good?)
- * Yes
* No
DK
NA
94. In general, would you say that most of the
time you were in very good spirits, good
spirits, low spirits, or very low spirits?
- * Very low
* Low
Good
Very Good
DK
NA
95. How often are you ever bothered by nervousness
where you are irritable, fidgety, or tense --
would you say often, sometimes, or never?
- * Often
Sometimes
Never
DK
NA
96. Are you the worrying type (a worrier)?
- * Yes
No
DK
NA
97. How often do your hands tremble enough to
bother you -- would you say often, sometimes,
or never?
- * Often
Sometimes
Never
DK
NA
98. Have you personal worries that get you down
or make you physically ill?
- * Yes
No
DK
NA
99. Do you feel somewhat apart, even among friends --
rather isolated or alone?
- * Yes
No
DK
NA

APPENDIX D

100. Do you ever feel that nothing turns out for you
the way you want it to, that your wishes aren't
fulfilled? * Yes
No
DK
NA

101. Do you sometimes wonder if anything is worthwhile
anymore? * Yes
No
DK
NA

* An asterisk indicates the scored or pathognomonic
responses.

DK Indicates "Don't Know".

NA Indicates "No Answer".

APPENDIX E

PHYSICAL HEALTH QUESTIONS

102. Within the last two weeks, did you stay in bed all or part of any day because you were not feeling well?

Yes
No
DK
NA

103. Were there any other days, in the last two weeks that you were not able to do the things you usually do because you were sick?

Yes
No
DK
NA

104. Do you have any health problem or illness that you have had for more than three months?

Yes
No
DK
NA

106. Within the last year have you received treatment in the hospital?

Yes
No
DK
NA

107. During the past years have you had any of the symptoms listed on this card? You may just tell me the number of those you have had.

1. bad injury to eye
2. bad injury to ear
3. fainting spells
4. head injuries bad enough to knock you out
5. convulsions - fits
6. apoplexy - strokes

Shortness of Breath

7. that makes you stop after climbing 10 steps
8. that awakened you from sleep
9. with wheezing
10. a cough almost everyday
11. coughed up yellow or green sputum (phlegm)
6 times a day almost everyday
12. coughed up blood
13. asthma
14. tuberculosis

APPENDIX E

Pain (pressure or tight feeling) in your chest when you

- 15. were angry or excited
- 16. walked fast or uphill and that left you after a few minutes rest
- 17. frequent nausea or vomiting
- 18. vomiting blood

Heartburn, indigestion or pain in your stomach

- 19. above the navel (belly button)
- 20. below the navel
- 21. in the right side of the belly
- 22. in the left side of the belly
- 23. that came on while or right after eating
- 24. that came on 1 or 2 hours after eating
- 25. that awakened you from sleep
- 26. that was helped by antacids or baking powder
- 27. that was relieved by a bowel movement

Bowel movements that are frequently

- 28. loose and watery
- 29. dry and hard like marbles
- 30. mixed with mucus or slimy matter
- 31. thin like a pencil
- 32. black when not taking iron or vitamins
- 33. bloody
- 34. burning or pain when urinating
- 35. loss of control of the bladder
- 36. trouble starting urination
- 37. urine which was bloody or the color of black coffee
- 38. low back pain
- 39. rheumatoid arthritis
- 40. blurring of eyesight lasting over a few minutes
- 41. times when you were cross-eyed
- 42. spells of seeing double

APPENDIX E

108. During the past year, have you had any of the symptoms listed on this card?

- A. irregular periods
- B. bleeding between periods
- C. heavy bleeding during your period
- D. unusually painful periods
- E. unusually tense, or jumpy just before or during your period
- F. excessive vaginal discharge
- G. pain during intercourse

109. During the past year, have you frequently taken any of the drugs on this list? Again, just tell me the numbers.

- 1. high blood pressure medicine
- 2. insulin or diabetes pills
- 3. iron or anemia medicine
- 4. penicillin or other antibiotics
- 5. reducing medicine
- 6. thyroid medicine
- 7. allergy medicine
- 8. phenobarbital or barbiturates, "nerve medicine"
- 9. pain medicine
- 10. sleeping pills
- 11. stomach or digestion medicine
- 12. tranquilizers
- 13. mind expanding drugs (LSD, marijuana, cocaine, heroin, amphetamines)

110. Do you drink alcoholic beverages?

- A. How many drinks would you estimate you have in a week's time.

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