



Dissertation

By

ENEH, Gloria Nonyelum

**DEPARTMENT OF NURSING
SCIENCES UNIVERSITY OF NIGERIA
ENUGU CAMPUS**

Gender and social network factors in health behaviour

July, 2000

UNIVERSITY OF NIGERIA



BLESSED PEDENCY

**GENDER AND SOCIAL NETWORK FACTORS
IN HEALTH BEHAVIOUR**

BY

ENEH, GLORIA NONYELUM

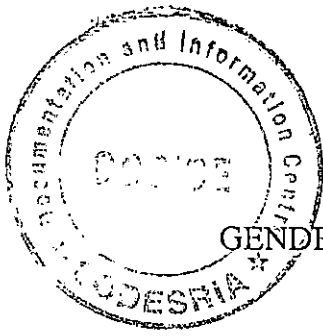
PG/M.Sc./95/18764

DEPARTMENT OF NURSING SCIENCES

UNIVERSITY OF NIGERIA

ENUGU CAMPUS

July, 2000



06 NOV. 2000

15.04.01
ENE
12175

TITLE PAGE

GENDER AND SOCIAL NETWORK FACTORS
IN HEALTH BEHAVIOUR

A DISSERTATION PRESENTED TO THE
DEPARTMENT OF NURSING SCIENCES.
FACULTY OF HEALTH SCIENCES AND TECHNOLOGY
UNIVERSITY OF NIGERIA, ENUGU CAMPUS,
IN PARTIAL FULFILMENT TO THE REQUIREMENTS
FOR THE AWARD OF THE DEGREE OF
MASTER OF SCIENCE IN COMMUNITY HEALTH NURSING

BY

ENEH, GLORIA NONYELUM

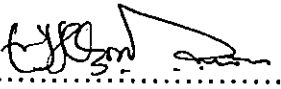
PG/M.Sc./95/18764

JULY, 2000

CERTIFICATION

ENEH, GLORIA NONYELUM, a postgraduate student in the Department of Nursing Sciences and with registration No. PG/M.Sc./95/18764, has satisfactorily completed the requirements for research work for the degree of Master of Science in Community Health Nursing.

The work embodied in this research is original and has not been submitted in part or full for any diploma or degree of this or any other university.



.....
E.I. Nwonu (Miss)
Supervisor

.....
10th August 2000
Date



.....
E. I Nwonu (Miss)
for Head of Department

.....
18th August 2000
Date

DEDICATION

TO ALL 1997 CODESRIA GRANTEES.

FOR THEIR EFFORT TOWARDS

DEVELOPMENT OF SOCIAL SCIENCE RESEARCH IN AFRICA.

ACKNOWLEDGEMENT

Concerted effort has been made to ensure the success of this research work. For this, I gratefully acknowledge the advice and help received from scores of individuals and the CODESRIA's support of the research.

My profound gratitude goes to my project supervisor, Miss E.I. Nwonu whose untiring and motherly advice to a great extent made the study an academic but pleasant experience. Special thanks also go to Barr. Emma. U. Onyeabor, Nnamdi, Ajuluchukwu, Ndukaku, Uju and Njideka for their assistance at different stages of the project work.

Finally, I greatly acknowledge the financial support received from the COUNCIL FOR THE DEVELOPMENT OF SOCIAL SCIENCE RESEARCH IN AFRICA (CODESRIA) which gave me grant towards the preparation of this thesis. I, however take the responsibility for any deficiency that might be noticed in this work.

Eneh, G. N.

TABLE OF CONTENT

	PAGE
Title page	ii
Certification	iii
Dedication	iv
Acknowledgment	v
List of Tables	vii
List of Figures	viii
Abstract	ix
CHAPTER ONE: INTRODUCTION	
Background of the Study	1
Statement of the Problem	2
Purpose of the Study	3
Rationale for the Study	3
Significance of the Study	4
Scope of the Study	5
Research Questions	5
Hypotheses	6
CHAPTER TWO: REVIEW OF RELATED LITERATURE	
Concept of Health Behaviour	7
Theoretical Framework of the Study	8
Gender and Engagement in Behaviour	10
Social Class and Engagement in Behaviour	15
Reference Group Pressure and Engagement in Behaviour	17
Summary of Literature Reviewed	19
CHAPTER THREE: RESEARCH METHODS	
Study Areas	21
Research Design	21
Sample	21
Selection of Subject	22
Instrumentation	22
Method of Data Collection	23
Method of Data Analyses	23
Return Rate of Questionnaire	25
CHAPTER FOUR: PRESENTATION AND ANALYSES OF FINDINGS	
Research Question 1	27
Research Question 2	27
Research Question 3	28

Research Question 4	29
Research Question 5	30
Hypothesis I	31
Hypothesis II	31
Hypothesis III	32
Hypothesis IV	33
Hypothesis V	33
Summary of Major Findings	34
CHAPTER FIVE: DISCUSSION OF FINDINGS	
Gender and Engagement in Behaviour	35
Gender and Social Class in Behaviour	36
Social Class and Engagement in Behaviour	37
Gender and Advice from Referents in Behaviour	38
Reference Group Pressure and Engagement in Behaviour	39
Conclusion	40
Educational Implications of the Study	40
Recommendations	41
Limitations of the Study	41
Suggestions for Further Studies	42
Summary of the Study	42
REFERENCES	44
APPENDICES	
Appendix A: Questionnaire	47
Appendix B: Critical Values of Chi-square Distribution	52

LIST OF TABLES

TABLE	TITLE	PAGE
1	Return Rate of Questionnaire across the Four States by Sex and Social Class.	25
2	Gender and Engagement in Health Behaviour	27
3	Attitude of Men and Women in the Three Social Classes towards Health Behaviour	28
4	Engagement in the Health Behaviour according to Social Class	29
5	Proportion of People that seek Advice from Referents before engaging in Health Behaviour	30
6	Reference Group Pressure and Engagement in Health Behaviour	30
7	2x2 contingency table for Dependence of Engagement in Behaviour on Gender	31

8	2x3 Contingency test of the Difference in the Attitude of Males and Females in the Three Social Classes towards Health Behaviour	32
9	2x3 Contingency test of Dependence of Engagement in Behaviour on Social Class	32
10	2x2 Contingency test of Difference between the Proportion of Man and Woman that seek advice from Referents	40
11	2x2 Contingency test of Dependence of Engagement in Behaviour on Reference Group Pressure	40

LIST OF FIGURES

FIGURE	TITLE	PAGE
1	Social Determinants of Behaviour Model	10

Abstract

There has been a world wide campaign to promote health for all through Primary Health Care. Consequently, individuals singly and collectively have roles and responsibilities in promoting feasible preventive action in health. Information on the influence of gender, social class and reference group pressure on preventive health behaviour may be helpful in developing policies and programs that will address the issue. Survey method was adopted to collect data from 3899 respondent in the capital cities of four Eastern States of Nigeria. Questionnaire was used for data generation. The data generated were analyzed using chi-square and tested for significance at 0.05 significance level. Results showed that gender, social class and reference group pressure do not influence engagement in health behaviour. It was also found that the attitudes of males and females in the three social classes towards preventive health behaviour was alike and that both gender sect do not seek advice from referents before engaging in health behaviour. Increased health educational activities to promote positive health behaviours, combined with improved access to preventive health services, could change attitudes and conducts that are harmful, resulting in reduced health risks and high level wellness.

CHAPTER ONE

INTRODUCTION

Background to the Study

At the invitation of the government of the then Union of Soviet Socialist Republic (USSR), the International Conference to exchange experience on the development of Primary Health Care (PHC) was held from 6-12 September 1978 at Alma Ata (Cabral, 1990). The Conference expressed the need for urgent action by all government, all health and development workers and the world community to protect and promote the health for all the people of the world. It declared, *inter alia* that the health status of hundreds of millions of people in the world to day is unacceptable. It was therefore, decided that a main social target of governments, international organizations and the whole world was the proclamation of political commitment by government and reduction of social inequalities (Cabral, 1990), that will permit people to lead a socially and economically productive life. As a result, PHC was launched. Under the system, the Conference emphasized the importance of individuals, families and communities assuming more responsibility for their own health. There was need for individuals, families and communities to be committed and involved in the efforts to prevent the occurrence of diseases. This is because in health, literature reports that both the direct and indirect costs of illness prevention are substantially less than the costs of treatment. Meanwhile, in the developed countries the rising cost of largely curative health services was creating immense pressure on the public authorities, according to Cabral (1990). As Hilbert (1997) reported, prevention programme not only prevent illness, disability and premature death, they greatly reduce the burden on the medical care system so that it can more effectively handle unpreventable conditions. However, several factors have been shown to have implications for

the required involvement in the preventive health activities. Some of such factors are gender, social class and reference group pressure.

Statement of the Problem

The past eighteen (18) years have witnessed a world wide campaign to promote health for all through Primary Health Care. Although the health for all strategies have been widely accepted, a substantial gap still remains between theory and practice, according to Nakajima (1990), much of the suffering, disease and premature death affecting the world today is from preventable causes. Fortunately, the cause of illness prevention are substantially less than the cost of sickness care. Hence, individuals singly and collectively have roles and responsibilities in promoting feasible preventive actions in health.

In Nigeria, processes of economic development, urbanization and mass education in the last few decades have created a very large group of educated women and an even larger group of educated house wives. In addition, more educated women have also become wage earners on an unprecedented scale. As such, women are currently contributing substantially to both economic activities and national development contrary to earlier assertions. Despite this contribution, a clear gender division of labour is maintained. Women are largely responsible for cooking, cleaning, shopping, washing, ironing while men's domestic tasks consist of repairs. Work that involves caring within house holds is carried out disproportionately by women, as it is in the world of paid work. Child care is the most obvious example, if men are involved in the child care it is not in the basic routine task of feeding, dressing, washing and so on, but in the more enjoyable part of child rearing such as playing with children or taking them out. Even leisure is divided by gender. According to Henwood, Melanie, Rimmer, Lesly, Wicks and Malcolm (1987), men have more access to leisure than do women. The normal male biography

continues to mean non-involvement in domestic work and child rearing and a concentration on, if not restriction to paid labour. As Nickie (1993) aptly said, women give birth to children and lactated and because of this were bound to look after them. They always had done and they always would do (Sydie, 1987; Kandal , 1988).

Working within a social system in which women are subordinated while at the same time involved in family work and paid employment, the researcher wonders what the situation is like in preventive health behaviour. Does gender affect involvement in preventive actions towards health? Does this gender factor cut across the different social classes as regards preventive health behaviour? What gender sect make use of reference groups more before engaging in health behaviour?

Purpose of the Study

The purpose of the study is to determine influence of gender and social network factors on preventive health behaviour among people in the capital cities of the people in four Eastern States of Federal Republic of Nigeria. Specifically, the study determined the following:

- (1) the role played by gender in preventive health behaviour.
- (2) the attitude of men and women in the three social classes towards preventive health behaviour.
- (3) the gender group that seek advice more from referents before engaging in preventive health behaviour.

Rationale for the Study

Evidence from around the world has demonstrated that investments in people's health is fundamental to improving a country's general welfare and economic growth as well as reducing poverty (World Bank, 1993).

Investments in gender studies have multiple payoffs, especially when it is related to health status. It contributes to individual gender well being and the actual and potential economic contributions that will be made especially by the female gender. Thus, families, communities, and the national economy will also significantly benefit. In particular, women's health has a major impact on child survival, family well being and the health and the productivity of future generations. According to Tinker, Daly, Green, Saxenian, Lakshminarayanan and Gill (1994), redirecting public spending to highly cost-effective interventions will improve allocative efficiency. Health interventions that address primary and secondary available in developing countries. Hence, the study looked into the part played by gender, social class and reference group factors in preventive health behaviour.

Significance of the Study

The findings of this study will be beneficial to individuals, health care providers, the nation and the research world. The result may be useful in mounting health education programmes to promote positive health behaviour and to change attitudes and conduct that are harmful. Such programmes can only be mounted to address specific issues that are relevant to health promotions when the Statusquo is known.

Intensifying public health education can help over-burdened health care providers educate people about healthy behaviours and thus convince the people that it is worth spending time and money to seek health. In areas where husband, wives, relatives, friends, community members or religious leaders are the principal decision-makers on people's access to health care, these groups should be targeted to receive messages that promote health services and status.

The study has borrowed concepts from many theories and models. The findings from this study will help contribute to the existing body of knowledge in the research world. A healthy nation is a wealthy nation when majority of the popular keep healthy, productivity will be enhanced contributing immensely to the economic development of the nation. The results will contribute to achievement of healthy nation.

Scope of the Study

Preventive health behaviour in this study consist only primary and secondary preventive health behaviour. Primary preventive health behaviour means engaging in personal hygiene, immunization, work, exercise, rest, sleep and recreational activities. Others include environmental hygiene and avoidance of drugs which include cigarette, alcohol, depressants, stimulants. Secondary preventive health behaviour means engagement in screening for blood pressure and breast cancer.

Social network factors refer to the social class of individuals and reference group pressure. Social class is determined from the educational, occupational and income levels of the individuals. Reference group pressure refers to the part played by any of the referents in decision-making.

Gender refers to the two sex categories in human existence (ie male and female).

Research Questions

In order to study the part played by gender, social class and reference group pressure in preventing health behaviour, the following research questions were asked:

- (1) Does gender influence engagement in preventive health measures?
- (2) What is the attitude of men and women in the three social classes towards health behaviour?

- (3) Is engagement in health behaviour related to social class?
- (4) What proportion of men and women seek advice from referents before engaging health behaviour?
- (5) Does engagement in health behaviour depend on reference group pressure?

Hypotheses

For the purpose of this study, the null hypotheses were tested at 0.05 significance level:

Hypothesis I : Engagement in preventive health behaviour is significantly independent gender.

Hypothesis II : There is no significant difference in the attitude of males and females towards preventive health behaviour in the three social class.

Hypothesis III : There is no significant relationship between engagement in preventive health behaviour and social class.

Hypothesis IV : There is no significant difference in the proportion of men and women that seek advice from referents before engaging in preventive health behaviour.

Hypothesis V : Engagement in preventive health behaviour is significantly independent of reference group pressure.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The literature related to the present study is reviewed under concept of health behaviour, theoretical framework for the study, gender and behaviour, social class and behaviour, reference group pressure and engagement in behaviour.

The Concept of Health Behaviour.

Health behaviour is strictly defined as preventive behaviour in which the client engages to minimize the potential threat of illness (Mitchell and Loustau, 1981). It is a voluntary action performed in an asymptomatic state and directed to primary prevention of disease or early detection of disease. Examples of health behaviours include hygiene practices, immunizations, work, exercise, rest, sleep and recreational activities. Others are avoidance of drugs, and participation in disease-screening programmes. According to Mitchell and Loustau (1981), the socio-cultural environment in which a person is reared has a potent influence on the person's health behaviour. Through continued association with family members, kinship and religious groups, friends, neighbours and work associates, each person learns what should or should not be valued, what actions or kinds of behaviours are considered healthy.

Health professional long have assumed that health behaviour is related directly to client knowledge. Studies in the past several decades, according to Mitchell and Loustau (1981), however have demonstrated that whether or not an individual engages in health behaviour may be related to other and perhaps more significant factors. One of the most productive outcomes of research attempting to identify these factors is the health belief model, (Rosenstock, 1974). This model has explained some components of health behaviour successfully.

Theoretical Framework for the Study

The theoretical framework for the study is based on a formulated social determinants of behaviour model. The model draws concept from Mitchell and Loustau's socio-cultural environment, social learning theory of Rotter, reasoned action theory of Pender and Pender, and health belief model of Rosenstock. This is because these theories focus on personal, interpersonal and situational factors that have been demonstrated to promote or inhibit health behaviours (Mitchell and Loustau, 1981; Murdaugh and Hinshaw, 1986; Pender and Pender, 1986).

The social learning theory of Rotter (1954, 1966) has relevance in examining the situational factor and overt behaviour (Murdaugh and Hinshaw, 1986). The theory recognizes that behaviour is not determined solely by personal characteristics, but also by situational considerations. Murdaugh and Hinshaw (1986) in discussing Rotter's social learning theory, emphasized that the manner in which an individual perceives a given situation determines which behaviours are likely to have the highest probabilities of occurring. An individual environment is viewed as composing of cues serving to arouse certain expectations for reinforcement of specific behaviours (Rosenstock, 1974).

The theory of reasoned action, (Ajzen & Fishbein, 1980), offers one approach of explaining engagement in health behaviour. According to this theory, overt behaviour is a function of one's intention to perform the behaviour. Pender and Pender (1986) observed that attitude towards a behaviour reflects belief concerning the probability of specific consequences following the behaviour and favourable or unfavourable evaluation of those consequences. Going further, Pender and Pender postulates that subjective norms represent perceived social pressure to engage in the behaviour and motivation to comply with those norms and expectations. Thus, according to the theory of reasoned action, individuals are more likely to engage in health

behaviour if such actions are seen as instrumental in achieving desired consequences and are considered worthwhile by persons or groups the individual wishes to please. The perceived social pressure of Pender and Pender is what Mitchell and Loustau (1981) referred to as socio-cultural environment. Mitchell and Loustau stated that the socio cultural environment in which a person is reared has a potent influence on the person's health behaviour. Through continued association with family members, kingship and religious groups, friends, neighbours and work associates, each person learns what should be valued, and what actions or kinds of behaviours are considered healthy (Mitchell and Loustau, 1981).

Situational considerations as contained in the above three theories are the elements being examined by this study. The study examines the postulations by Mitchell and Loustau that the socio-cultural environment in which an individual is reared has a potent influence on the persons behaviour. Two elements in this socio cultural environment which this study examined are gender and reference group pressure. Another factor being examined by this study is socio-economic status. According to Rosenstock (1974), an individual's environment composes of cues serving to arouse certain expectations for reinforcement of specific behaviours. Part of this environment is the socio-economic status of an individual in a particular social class which is determined by the educational, occupational and income levels (Friedman, 1981). An individual's social class and socio-cultural background influence his attitude (Rosenstock, 1974). Mitchell and Loustau (1981) saw this to be as a result of the class of people the individual interacts with, and the places and things he is exposed to. The formulated model is represented thus:

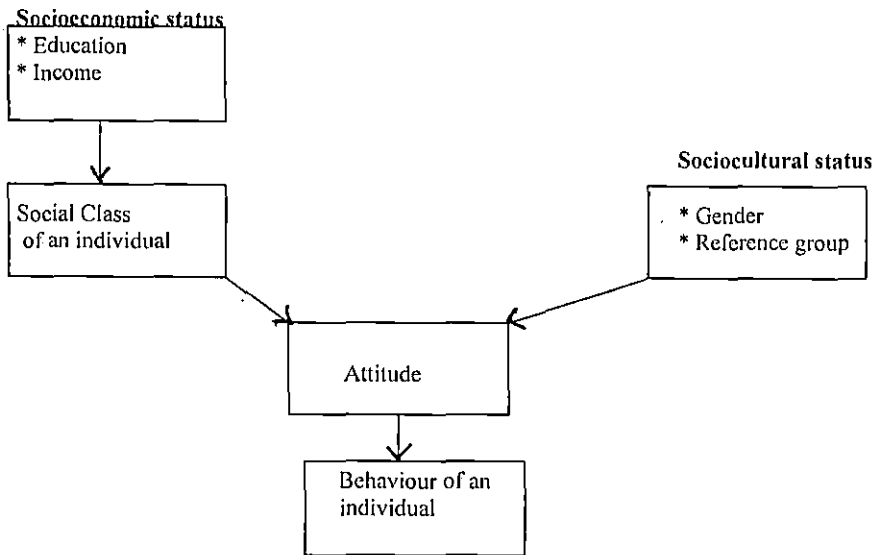


Fig1: Social Determinants of Behaviour Model

Social Determinants of Behaviour

The issues of gender, social class and reference group pressure in behaviour have been widely discussed in texts and literature. Moreover, studies (Friedman, 1981; Langlie, 1977; Baumann, 1961; Koos, 1954) have shown that conceptualization of health, health practices and the use health care services vary tremendously depending on the sex, social class status of the individual and the influence of referents.

(a) Gender and Engagement in Behaviour

Gender refers to the entire set of behaviour and social roles common to a particular sex in a given society. According to Hartman (1997), we are born male and female biologically sexes but we are created man and woman socially recognized gender. Thus, sex is biologically determined while gender is socially constructed. The social meanings attached to gender directly affect a person's behaviour. This can fundamentally affect the individual's identity, sense of self worth and ability to act on his or her own (International Women's Health Coalition, 1994). According

to Aweda (1988), the notion of socio-cultural hierarchy of gender involves a hierarchy between men and women with women being assigned the lower status. The dominant sex specific division of labour in the society assigns to women the every day, unpaid "private" work in the house-hold and in the upbringing of children, independent of whether they are "additionally" occupied in gainful employment (Aweda, 1988). Moser as reported by Grant and Newland (1991) comments that the sexual division of labour within the house hold gives the women primary responsibility not only in domestic work involving child care, family health and food provision but also in the community management of housing and basic services, along with the capacity to an income through productive work. These primary and secondary roles of the female gender rest on the expectation that women should stay at home and perform household chores while men are expected to go out to the field to hunt wild animals and till the land.

Writing on the plight of women, Nickie (1993) commented that there is a clear gender division of labour within households which allocates the majority of house hold and caring tasks to women and also affects the distribution of resources such as money, food and leisure. Outside households, women are currently contributing substantially to both economic activities and national development contrary to the earlier assertions. This is consequent upon urbanization, industrialization and modernization. Women have had a lot of improvement in their literacy and educational levels. Although the acquisition of education had enabled the women to have more freedom and greater responsibilities as paid workers in all works of life, the women continue to shoulder the responsibilities of child rearing and household upkeep. Some women are found, in addition to the household activities, trading and farming. Hence the "double shift" persists (Aweda, 1988). However, women's participation in paid employment whether it is full or part-time work, appears to affect the distribution of household tasks. For

instance, women in paid employment are less likely than full time housewives to carry the entire burden of house work, and there seems to be a difference between women with full time and those with part time employment. According to Jowel and Witherspoon (1985), 52% of women in full time jobs do the shopping compared with 64% of those with part time jobs. In comparison, Nickie (1993) discovered that 43% of women with full-time jobs share this task (shopping) with their partners whereas this is true of only 32% of women in part-time jobs. In the majority of cases, the normal male biography seems to continue to mean non-involvement in domestic work and child bearing and a concentration on, if not restriction to, paid labour. As Piachaud (1984) concluded from his study of child care, it is mothers who bear the brunt of basic child care tasks. More particularly, women's maternal role have been seen by many authors (Firestone, 1971); Goldberg, 1997; Sharpe, 1984; Millet, 1971) as the primary obstacle and some see it as positively preventing even the possibility of equality in the world of work. Supporting this, Tilly and Scott (1987) for instance, argued that with the separation of production from domestic sphere which occurs with capitalist industrialization, women participation in paid work is circumscribed by the need to attend the child care and house work. That domestic commitment affect women's participation in the work force seems startlingly obvious; it is after all accepted wisdom that women put their families first (Nickie, 1993).

However, according to Morgan (1996), men are not absent from caring work and indeed their involvement in such activities may have been under-estimated by some previous authors (Applegate and Kaye, 1993; Arber and Gilbert, 1989; Parker and Lawton, 1994). He stated that it is not that men are incapable of caring activities or that they are not to be found engaging in such activities; it is that the meaning attached to the involvement of men in these task and the kinds and the amount of support that they receive from others in order to fulfill these

obligations are shaped by consideration of gender. Morgan (1996) pointed out that men are less likely to be disabled than women, that they have greater access to caring resources and when occupying the position of the cared-for are more likely to preserve some sense of self identity rather than perceiving themselves as a burden. He reiterated that women are involved in both “caring for” and “caring about”. In the case of the former, it is noted that women are routinely found performing all the tasks and responsibilities associated with caring. Formally and informally, women are supposed to be “natural” carers.

Mastroanni, Faden and Federman (1994) stated that gender differences in life style may also affect health. They opined that women tend to get less regular exercise than men, and that more men than women drink alcohol and smoke tobacco. According to Miles (1991), there are good grounds for arguing the existence of gender differences in health behaviour. In the first place, women’s experiences of pregnancy and child birth, menstruation and menopause cause them to think about their bodies, their bodily sensations and their health in ways foreign to the thinking of men, rendering it unlikely that their health behaviour will not differ. Secondly, socialization for gender roles during childhood i.e. learning what constitutes socially approved “feminine” and “masculine” behaviour and what does not, influence the thinking of adults of both sexes as to the suitability of their actions in any given situation; thus health behaviour becomes gender-specific. Thirdly, structural differences in the lives of men and women (e.g. different experiences in work, unemployment and life style) and different ways of relating to other people, all have a bearing of their behaviour in health. Miles(1991) also contended that the main gender difference is in the seeking of help for psychological, emotional and vague but disquieting physical problems. Women are more likely to consult doctors for such reasons. In the United States, women’s visits to doctors for psychological and mental symptoms, social

counseling and weight gain is far in excess of similar consultation by men while in Britain and else where in Western Europe, estimates of female: male ratios in the consultations for neurotic and psycho-social problems vary between 2:1 and 4:1 (Miles,1991). Moreover, Monica Briscoe 's study of gender differences in consultation rates showed that:

The most striking difference between the sexes concerned the relationship between consultation rates and psychological help-seeking. Here, there was a significant positive relationship for the women and an equally significant negative relationship among the men, so that high consultation rates were associated with willingness to seek psychiatric help among the women and unwillingness among the men.

(Briscoe, 1987:509)

Thus, it is possible that many women, as a result of socialization, current social norms and doctors' attitudes allow themselves to seek for help for emotional problems whereas many men may be discouraged from doing so. In the same vain, women's participation in preventive medicine has been noted. Smith and Padula (1996) stated that in Cuba, there were aggressive health education programmes and nationwide campaigns encouraging community participation in preventive medicine. Many Cuban women began their participation in the health revolution as volunteers. The Federation of Cuban Women organized the women health volunteers into Sanitary Brigades. Participants called Brigadists played a vital role in preventive medicine. Brigadists inoculated their neighbours against poliomyelitis, tetanus and diphtheria; conducted community discussions on issues such as sanitation, contraception and cancer; encouraged pregnant women to keep doctors appointments; and reminded women to have their yearly Pap smear done.

However, it is clear that not all women that are involved in caring activities or that their involvement in such activities is identical. For one thing, class remains an important line of division for women and men engaged in care (Morgan, 1996).

(b) Social Class and Engagement in Behaviour

Social class has been defined by Friedman (1981) as an aggregate of individuals who occupy broadly similar positions on the scale of prestige. Social class refers not only to educational level, occupation and income, but also to the intricate interplay of these variables. A person's social class is probably the prime mold of the person's value system. Persons with different basic conditions of life and different levels of social order by the virtue of their varied experiences and exposure, come to see the world differently, to develop different conceptions of social reality, as well as different aspirations, fears, and values (Friedman, 1981).

Social class has been variously conceived and identified. According to Bond and Bond (1986), Marx divided the society into two social classes: the bourgeoisie, and the proletariat. The bourgeoisie, Marx referred to as owners of the means of production. Marx therefore, emphasised that the inequality between the two groups was based on the exploitation of the proletariat by the bourgeoisie. On the other hand, Weber identified a number of social classes which were based on the shared experiences of people who are similarly placed in the processes of production, distribution and exchange. Weber's classification embraces all aspects of economic position in the society. The Registrar General and the Office of Population, Censuses and Survey's definition of social class is based on the relative prestige of different occupational groups rather than their economic position and is divided into social class 1 to V (Bond and Bond, 1986).

Social class differences in the use of health services have been a subject of considerable interest to researchers. Using hospital admission rates and data about length of stay in hospital in Scotland for 1963, Carstairs and Patterson found clear evidence of increased use of health services from social class I to social class V (Bond and Bond, 1986). Social class differences

also appear to be greater in the use of preventive services. Bond and Bond (1986), reported that routinely collected Scottish data about antenatal booking showed that, although, there has been an increase in the proportion of women in all social classes booking by 20 weeks of gestation, the proportion of married women making a later antenatal booking (that is after more than 20 weeks of gestation), increased for lower social classes. The finding of this study showed that married women from social class I that booked late for antenatal care was 11%, social class II and III were 12% each, social class IV-15% and social class V was 18%. Similar class differences have been found in presentation for postnatal examination, immunization, antenatal and postnatal supervision and uptake of vitamin supplements (Bond and Bond, 1986). According to Bond and Bond (1986), Cartwright in her study of family planning services found a clear relationship with social class of the proportion of mothers having antenatal examination, attending family planning clinic and discussing birth control with their general practitioners. They also reported that Sanson and Colleagues found that women from social class IV and V were less likely to be screened for cervical cancer, though this disease is more prevalent among women of the lower social classes. On the other hand, Janet and Meininger in 1986 had the interesting finding that in the United States, women of lower social class were more likely to seek medical help than the middle class women (Miles, 1991). Similarly, in Britain, middle-class women were more likely than working class women to turn to doctors as a first resort (Miles, 1991). Discussing further on the issue of social class, Friedman (1981), wrote that in the upper class, the families and their members are closely protected and guided from social exposure involving other social classes. The class is very firmly entrenched in its culture, social activities are husband dominated and members act independently of kin. In the middle class, the kingship group is close and major social activities often take place with relatives from

the husband's or wife's family. These social activities rest primarily in the hands of women (Friedman 1981). Within the lower class, one still sees traditional gender roles being clearly defined more than in any other class. Friedman (1981) stated that in 1962, Komarovsky found that the majority of men and women in this class believe that the women's place is in the home.

Social class of an individual also affects the pattern of pressure from referents towards engagement in health behaviour.

(c) Reference Group Pressure and Engagement in Behaviour

Reference group refers to a network of individuals with which an individual most closely and positively identifies and whose values and norms he or she shares (Mitchell & Loustau, 1981). Friedman (1970) terms this group the lay referral system and defines it as a network of consultants ranging from the nuclear family to successively more distant, select and authoritarian persons. The function of this network of consultants is to reflect social norms of health to an individual, thereby helping one to arrive at a decision regarding health or illness status. A large part of the significance of this social structure lies in its role in encouraging or discouraging the individual's movement towards medical consultation. People may independently become aware that something is wrong; nevertheless they generally need some agreement by their social groups that their symptoms need medical attention (Mitchell and Loustau, 1981). People who are well integrated into their lay referral network may prefer not to act independently. For example, among Mexican Americans and some other ethnic groups, treatment decisions are frequently made with others, particularly with the family (Mitchell and Loustau, 1981).

According to Cotterell (1996), there are two broad kinds of social influence on behaviour namely informational influence (the use of information from others who are perceived to be

reliable sources in order to steer one's own behaviour) and the normative influence (the use of such information to behaviour in ways that are seen as desirable by others, and which meet with other approval). Informational influence deals with supplying details about objective reality. Normative influence is based on pressure to comply, in situations where the group has some form of power to exact conformity. Parson (1963) reasoned that where the person needing the information turns to another person for advice that person is put in the position of influence. What is central to Parson's concept of social influence is the issue of trust: a persons willingness to accept information from an outside source depends on the persons trust in the source as being genuine and reliable. Cotterell (1996) reiterated that a more sophisticated version of these social influences processes is offered by social identity theory, which includes the influence process both direct social pressures to conform and self-categorization as a group member. According to Abrams, Wetherell, Cochrane, Hogg and Turner (1990), the vehicle of social influence is not group pressure or social comparison in the broad sense, but what Turner calls "referent informational influence" derived from social identification with a particular social category, and "awareness of one's social identity as an ingroup member". It is the people who are regarded by the individual as belonging to the same group or category as she/he does who are the relevant social reference sources; and it is from seeming to disagree with those who one expects to agree that uncertainly arises (Cotterell, 1996). Abrams et al (1990) suggest that normative influence only arises when people are subject to interpersonal pressure. That is, in a situation where a person is consciously aware of his/her group membership, only ingroup pressure has any affect on his/her attitudes or behaviour.

Pressure exerted by an outgroup including parents, teachers or health educators may be resisted or ignored. People do not change their behaviour just because they are noticed by other

people, because these others may not be salient influences on social identity. When members of one's ingroup are involved, because they are significant others, they are recognized as possessing information concerning the ingroup norms, and one is likely to change his/her behaviour in line with these norms (Cotterell, 1996).

Summary of Literature Reviewed.

Health behaviour has been defined as a voluntary action taken by an individual to prevent the potential threat of an illness. Health behaviour is aimed at primary prevention or early detection of disease and include among others hygiene practices, immunization, rest, sleep, work, exercise and recreation. Others are avoidance of drugs and participation in disease-screening exercises. Studies in the past have demonstrated that whether or not an individual engages in health behaviour may be related to certain significant factors. Some of these factors have been explained by the health belief model of Rosenstock, social learning theory of Rotter, reasoned action theory of Pender and Pender, and Mitchell and Loustau's concept of socio-cultural environment. Thus, the theoretical frame work for the study is based on a formulated social determinants of behaviour model. This model surveys the influence of socio-economic (social class) and socio-cultural (gender and reference group pressure) factors on attitude towards a behaviour and ultimately on engagement in such a behaviour.

The influence of gender, social class and reference group pressure on behaviour has been widely discussed in texts and literature. The social meaning attached to gender directly affect a person's behaviour. Thus, the female gender's primary and secondary role expectation includes performance of household chores while the male gender is expected to provide for the family upkeep. However, some women are found, in addition to household activities, trading and farming and some men still engage in child care and other household activities.

A person's social class is probably the prime mold of the person's value system and thus behaviour. Individuals from a particular social class, by virtue of their varied experience and exposure, see the world differently and develop different conceptions of social reality and behave differently. In other words, each class seems entirely entrenched in its culture and social activities.

Reference group is a network of consultants with which an individual identifies. The primary role of reference group in health is to reflect social norms of health to an individual thereby helping the individual arrive at a decision regarding health. There are two kinds of social influence namely informational and normative influences. While informational influence deals with supplying details about objective reality, normative influence is based on pressure to comply. A more sophisticated version of this social influence processes is offered by social identity theory, which includes in the influence process both direct social pressure to confirm and self categorization as a group member. It is the people who are regarded by an individual as belonging to the same group or social category (i.e. the ingroup), who can exert pressure that will affect the individual's attitude and behaviour.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter discusses the areas of study, the research design adopted, the sample and sampling procedure. Instruments used for the study, validation of the instruments, methods of data collection and analyses were also discovered.

Study Areas

The study covered four Eastern States of the Federal Republic of Nigeria namely Abia, Anambra, Enugu, and Imo States. These states were chosen because they have almost some cultural background and as such may define the issues of gender and lay referral system in the same way.

Research Design

The survey method was used for the study to cast light on current situation and to show the need for change, where necessary. The instruments used was the questionnaire which consisted of two sections. The type of data collected for the study included information on the subjects' gender status, educational and income levels, reference group pressure and engagement in preventive health behaviour. The statistical parameter used in analysing the data was chi-square.

Sample

The sample consisted of 4000 residents of households in the capital cities of Umuahia, Awka, Enugu and Owerri of the four states of Abia, Anambra, Enugu and Imo respectively. One thousand residents were picked in each state capital. This sample size comprised of 50% (500) males and 50% (500) females who are gainfully employed.

The distribution of the sample across formal educational levels and social classes was done at random.

Selection of Subjects

Each capital city was stratified into three zones of high, medium and low density areas. Within each stratum of density area, 14 streets were randomly selected. From the selected streets, 24 households were picked. One gainfully employed adult from each household participated in the study. Selection of male and female subjects was guarded and done alternately from the households.

Instrumentation

The data for the study were obtained mainly from primary sources using the questionnaire. This questionnaire was also used as an interview guide to collect data from those who cannot properly appreciate the content of the questionnaire.

The instrument has three sections. Section A collected data on the demographic variables of sex, education and income. The educational and income levels were used to determine social class and were scored on a five-point and three point scales respectively. On the whole, a total score of less than 4 stood for low social class, a total score of between 4 and 6 implied middle social class while a score of more 6 meant high social class. Section B was on engagement in preventive health behaviour and has 25 questions. Section C measured the influence of reference group pressure on engagement in health behaviour. This section has eight questions. The six referents mentioned most frequently in the pilot study were incorporated into these questions.

To obtain information on engagement in preventive health behaviour and reference group pressure, a five point likert scale was used. The scoring of the scale stood at strongly agree (5),

agree (4), undecided (3), disagree (2) and strongly disagree (1). Some of these questions were negatively framed and scored in the reverse order to reduce elements of bias and monotony.

In all 36 questions were used to measure both the dependent and the independent variables under study.

Method of Data Collection

Data collection was carried out by the researcher and her two research assistants. The distribution of questionnaire was done face to face by the researcher and her assistants. The researchers stopped at every other house on the assigned streets to request for participation in the study from any gainfully employed resident of the house. If the individual was unable to respond to the questions at that time, the researchers arranged and returned at a later date either to collect the completed questionnaire or to conduct the interview. Data were collected late afternoon cum evening hours during working days, then Saturdays and Sundays to maximise response rate.

Data collection lasted three weeks in each state giving a total of 12 weeks for the whole field work in the four states.

Method of Data Analyses

The data collected were analysed in percentages for all the research questions. The five hypotheses formulated for the study were tested for significance at 0.05 level using chi-square.

The first hypothesis stated that engagement in preventive health behaviour is significantly independent of gender. A subject score on engagement in health behaviour was obtained by summing up scores for the 25 items on this dimension. A score of 65 and above meant engagement while a score of 64 and below represented non-engagement. The number of males

and female within each category of engagement was determined and then tested for independence.

The second hypothesis stated that there is no significant difference in the attitude of males and females towards preventive health behaviour in the three social classes. A subject's score on the 33 items measuring engagement in health behaviour and influence of reference group pressure were summed up and an average score determined. An average score of 3.5 and above stood for positive attitude whereas any score below 3.5 were regarded as negative attitude. Scores on the two items measuring education and income were summed up. A score less than 4 stood for low social class, between 4 and 6 for middle class while a score of more than 6 meant high social class. The number of males and females that have positive attitude towards preventive health behaviour in the three social classes were determined and tested for homogeneity.

The third hypothesis which tested that there is no significant relationship between engagement in preventive health behaviour and social class was also tested for homogeneity. A score of 65 and above in the 25 items measuring engagement implied engagement in the preventive health behaviour while a score below 65 meant non-engagement. The number of people in the three social classes that engage or do not engage in health behaviour was determined and tested.

The fourth hypothesis posited that there is no significant difference in the proportion of men and women that seek advice from referents before engaging in preventive health behaviour. Scores on the eight items measuring reference group pressure were summed up and an average got for each individual. An average score of 3.5 and above was regarded as presence of reference group pressure while any score below 3.5 was seen as no reference group pressure.

The proportion of males and females who seek advice was determined against those (male and females) who do not seek advice from referents, then subjected to test of homogeneity.

Hypothesis V stated that engagement in preventive health behaviour is significantly independent of reference group pressure. The number of people who engage in health behaviour and those who do not engage was determined and tabulated against the number that seek advice from the reference and those who do not. These were tested for dependence.

Return Rate of Questionnaire

Data collection lasted twelve weeks. Of the 4000 questionnaire sent out, 3919 copies of questionnaire were returned, giving a return rate of about 98%. The 3919 copies were assessed for completeness of data collected. Only 3899 copies of questionnaire was found completely and correctly filled. This number (3899) was used for analysis of the research questions and testing of the hypotheses. The distribution of the returned questionnaire across the four states by sex and social class is as follows:

Table 1 : Return Rate of Questionnaire across the Four States by Sex and Social Class.

Social class	States								Total
	Abia		Anambra		Enugu		Imo		
	M	F	M	F	M	F	M	F	
Lower	218	143	226	145	220	150	222	147	1471
Middle	130	181	127	176	131	178	118	172	1213
Upper	127	169	125	179	132	172	131	180	1215
Total	475	493	478	500	483	500	471	499	
Grand total	968		978		983		970		3899

From table 1, it can be observed that the percentage return rate per state (per 1000 questionnaire sent out in each state) is as follows:

Abia State 96.8%

Anambra State 97.8%

Enugu State 98.3%

Imo State 97.0%

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF FINDINGS

This chapter presents and analyses the results of the study. Data collected regarding the research questions are presented in tables 2 to 6 while the hypotheses formulated for the study were tested using data as shown in tables 7-11.

Research Question 1: Does gender influence engagement in preventive health behaviour? The data collected for this research question are as in Table 2.

Table 2: Gender and Engagement in Preventive Health Behaviour

Gender	Engagement in Health Behaviour		Total
	Yes	No	
Males	764 (19.6%)	1146 (29.4%)	1910 (49%)
Females	1094 (28%)	895 (23%)	1989 (51%)
Total	1858 (47.6%)	2041 (52.4%)	3899

The data in Table 2 shows that almost half (1989 [51%]) of the people that participated in the study are females, while 1910 (49%) are males. Of this 1989 females, 1094 (28%) engage in preventive health behaviour and 895 (23%) do not. Only 764 (19.6%) males engage in preventive health behaviour while a greater majority of men 1146 (29.4%) do not. This implies that gender influences engagement in preventive health behaviour since more women engage in preventive behaviour than men.

Research Questions 2: What is the attitude of men and women in the three social classes towards preventive health behaviour? The findings to this question are as reported in Table 3.

Table 3: Attitude of Men and Women in the Three Social Classes towards Health Behaviour.

Social Classes	Attitude				Total
	Positive		Negative		
	Males	Females	Males	Females	
Lower	205(5.2%)	150(3.9%)	677(17.3%)	439(11.3%)	1471(37.7%)
Middle	413(10.6%)	638(16.3%)	93(2.4%)	69(1.8%)	1213(31.1%)
Upper	502(12.9%)	677(17.4%)	20(0.5%)	16(0.4%)	1215(31.2%)
Total	1120(28.7%)	1465(37.6%)	790(20.2%)	524(13.5%)	3899

From Table 3 above, it can be observed that, of the 3899 respondents, 1465 (37.6%) women have positive attitude while 524 (13.5%) of them showed negative attitude towards preventive health behaviour. Out of the 1465 (37.6%) women that indicated positive attitude, the greatest percentage of them (17.4%) (i.e. 677 women) were from the upper social class. This was followed closely by 638 (16.3%) women from the middle social class. The least number 150 (3.9%) were from the lower class. On the other hand, women with negative attitude towards preventive health behaviour were more in the lower class 439 (11.3%). Sixty nine women (1.8%) from middle class showed negative attitude while women from the upper class were the least 16 (0.4%) to show negative attitude.

Similarly, majority of men from the upper class 502(12.9%) showed positive attitude towards preventive health behaviour, followed by 413 (10.6%) men from middle class. Men from the lower class came last, with 205 (5.2%) of them indicating positive attitude. However, the greatest percentage of men that showed negative attitude towards preventive health behaviour were from the lower class 677 (17.3%). Men from the middle class came second with a wide margin 93 (2.4%), while the least to indicate negative attitude were men from the upper class 20 (0.5%).

Research Question 3 : Is engagement in health behaviour related to social class?

For this research question, the data collected are as follows.

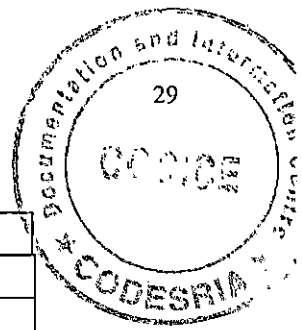


Table 4 : Engagement in Preventive Health Behaviour according to Social Class

Social class	Engagement		Total
	Yes	No	
Lower	227(5.8%)	1244 (31.9%)	1471 (37.7%)
Middle	595 (15.3%)	618 (15.8%)	1213 (31.1%)
Upper	1036 (26.6%)	179 (4.6%)	1215 (31.2%)
Total	1858 (47.7%)	2041 (52.3%)	3899

The results show that while majority (1036 (i.e.) 26.6%) of the people that engage in preventive health behaviour are from the upper class, 1471 (37.7%) of people who do not engage came from the lower class. The class that ranked second in engagement is the middle class with 595 (15.3%) while the lower class came last with 227 (5.8%). On the issue of non-engagement, the middle class still ranked second 618 (15.8%) and the upper class came last with 179 (4.6%).

From the data above, it can be deduced that, (irrespective of the fact that the highest number (1471) of respondents came from the lower class), social class has implications for engagement in preventive health behaviour. While most people in the lower class do not engage in preventive health behaviour, most people in the upper class engage in such behaviour. The middle class ranked second in both dimensions with the number that do not engage being a little more than the number that engage (618 [15.8%] v.s 595 [15.3%]).

Research Question 4 : What proportion of men and women seek advice from referents before engaging in preventive health behaviour?

Table 5 shows the findings to the above question.

Table 5 : Proportion of People that seek Advice from Referents before engaging in Health Behaviour .

Gender	Advice from Referents		Total
	Yes	No	
Males	463 (24.9%)	301 (16.2%)	764 (41.1%)
Females	750 (40.4%)	344 (18.5%)	1094 (58.9%)
Total	1213 (65.3%)	645 (34.7%)	1858

The data in Table 5 reveals that 1213 (65.3%) out of 1858 respondents seek advice from referents while 645 (34.7%) respondents do not. Of the 1213 respondents that seek advice, 463 (24.9%) are males while 750 (40.4%) are females. 301 (16.2%) male respondents do not seek advice and 344 (18.5%) female respondents do not too, giving a total of 645 (34.7%) respondents who do not seek advice.

Research Question 5 : Does engagement in preventive health behaviour depend on

reference group pressure? The findings to this research question are as in table 6 below:

Table 6 : Reference Group Pressure and Engagement in Health Behaviour.

Engagement in health behaviour	Reference Group Pressure		Total
	Yes	No	
Yes	1213 (31.1%)	645 (16.5%)	1858 (47.6%)
No	1352 (34.7%)	689 (17.7%)	2041 (52.4%)
Total	2565 (65.8%)	1334 (34.2%)	3899

From Table 6, it can be seen that out of the 2565 (65.8%) respondents that seek advice, 1213 (31.1%) engage in prevention health behaviour and 1352 (34.7%) do not. Of the 1334 (34.2%) respondents that do not seek advice from referents, 645 (16.5%) still engage in preventive health behaviour while 689 (17.7%) do not. However, out of the total number (1858 [i.e.47.6%]) that engage in preventive behaviour, only 645 (16.5%) do not seek advice.

Further more, it is worthy of note that, of the 2041 (52.4%) respondents that do not engage in health behaviour, majority (1352 or 34.7%) seek advice from referents before defaulting.

It can be deduced that engagement in preventive health behaviour depends on reference group pressure since majority of respondents that seek advice either finally engage in or finally do not engage in health behaviour.

Hypothesis 1 :

Engagement in preventive health behaviour is significantly independent of gender. Chi-square was used to test this hypothesis as shown in Table 7.

Table 7 : 2x2 Contingency Table of Dependence of Engagement in Preventive Health Behaviour on Gender

Gender	Engagement		Total
	Yes	No	
Males	764 (910.2)	1146 (999.8)	1910
Females	1094 (947.8)	895 (1041.2)	1989
Total	1858	2041	3899

$$X^2 = 0.09 \text{ df} = 1 \text{ p} > 0.05$$

The result in Table 7 indicates that $p > 0.05$. Bearing in mind the decision rule which states that the null hypothesis should be rejected if the calculated value is greater than or equal to the critical value and accepted if the computed value is less than the table value, the null hypothesis is accepted. This implies that engagement in preventive health behaviour is significantly independent of gender.

Hypothesis II :

There is no significant difference in the attitude of males and females towards preventive health behaviour in the three social classes. The result is shown in Table 8.

Table 8: 2x3 Contingency Test of the Difference in the Attitude of Males and Females towards Health Behaviour in the Three Social Classes.

Social class	Positive Attitude		Total
	Males	Females	
Lower	205 (153.8)	150 (201.2)	355
Middle	413 (455.4)	638 (595.6)	1051
Upper	502 (510.8)	677 (668.2)	1179
Total	1120	1465	2585

$$X^2 = 0.2 \text{ df} = 2 \text{ p} > 0.05$$

Table 8 shows that $p > 0.05$. Considering the decision rule, the null hypothesis which states that there is no significant difference in the attitude of males and females towards preventive health behaviour in the three social classes is accepted.

Hypothesis III

There is no significant relationship between engagement in preventive health behaviour and social class. Data verifying the above hypothesis were analysed as shown in Table 9.

Table 9 : 2 x 3 Contingency Test of Dependence of Engagement in Preventive Health Behaviour on Social Class.

Social class	Engagement in health behaviour		Total
	Yes	No	
Lower	227 (701)	1244 (770)	1471
Middle	595 (578)	618 (635)	1213
Upper	1036 (579)	179 (636)	1215
	1858	2041	3899

$$X^2 = 1.98 \text{ df} = 2 \text{ p} > 0.05$$

The result in Table 9 reveals that $p > 0.05$. Thus, the null hypothesis which states that there is no significant relationship between engagement in preventive health behaviour and social class is accepted. This means that engagement in health behaviour is not related to social class.

Hypothesis IV :

There is no significant difference in the proportion of men and women that seek advice from referents before engaging in preventive health behaviour. The result obtained is as in Table 10.

Table 10 : 2 x 2 Contingency Test of Difference between the Proportion of Men and Women that seek Advice from Referents

Gender	Advice from Referents		Total
	Yes	No	
Males	463 (498.8)	301 (265.2)	764
Females	750 (714.2)	344 (379.8)	1094
Total	1213	645	1858

$$X^2 = 0.04 \quad df = 1 \quad p > 0.05$$

From the Table 10 above, it can be seen that $p > 0.05$. Considering the decision rule which states that the null hypothesis should be accepted if the calculated value is less than the critical value, the null hypothesis of no significant difference in the proportion of men and women that seek advice from referents before engaging in health behaviour is accepted.

Hypothesis V :

Engagement in preventive health behaviour is significantly independent of reference group pressure. Data generated from this hypothesis were analysed in Table 11.

Table 11 : 2 x 2 Contingency Test of Dependence of Engagement in Preventive Health Behaviour on Reference Group Pressure.

Engagement in Health behaviour	Reference Group Pressure		Total
	Yes	No	
Yes	1213 (1222.3)	645 (635.7)	1858
No	1352 (1342.7)	689 (698.3)	2041
Total	2565	1334	3899

$$X^2 = 0.0006 \quad df = 1 \quad p > 0.05$$

Table 11 shows that $p > 0.05$. The implication is that the null hypothesis is accepted. This means that engagement in preventive health behaviour is significantly independent of reference group pressure.

Summary of Major Findings.

The major findings of the study are as summarised below:

- (1) Engagement in prevention health behaviour is not dependent on gender.
- (2) Attitude of males and females towards preventive health behaviour in the three social classes is about the same.
- (3) Engagement in preventive health behaviour is not related to social class.
- (4) There is no difference in the proportion of men and women that seek advice from referents before engaging in preventive health behaviour.
- (5) Engagement in preventive health behaviour is not dependent on reference group pressure.

CHAPTER FIVE

DISCUSSION OF FINDINGS

This chapter discusses the major findings of the study and the implications within the contextual framework of previous findings in this area. Conclusions and recommendations based on the findings were made and limitations of the study and suggestions for further studies also stated.

Gender and Engagement in Health Behaviour

Data generated showed that just about half (51%) of the respondents were females, out of which majority (28%) engaged in preventive health behaviour while 23% do not. Of the 49% males that participated, only 19.6% engaged in preventive health behaviour. The remaining 29.4% do not, as shown in Table 2. However, chi-square test of hypothesis indicated that engagement in preventive health behaviour is significantly independent of gender ($p > 0.05$), thus the null hypothesis of independence was accepted (see Table 7).

The finding is in contrast with the argument of Miles (1991) that there are good grounds for the existence of gender differences in health behaviour. Miles argued that because women experience pregnancy, childbirth, menstruation and menopause, they think about their bodies and health in ways foreign to the thinking of men, making health behaviour gender-specific. Furthermore, the finding does not agree with the opinion of Mastroanni et al (1994) that women tend to get less regular exercise than men and that more men than women drink alcohol and smoke tobacco. The difference between the finding of this study and other findings may be attributed to the fact that this study surveyed “purely” preventive health behaviour and not health practice in general. As Miles (1991) contended, the main gender difference is in the seeking of help for psychological, emotional and vague but disquieting physical problems. For

instance, in the United States, Britain and elsewhere in Europe, estimates of female consultations for neurotic and psycho-social problems were far in excess of similar consultation by men. In the examples above, estimates were got for health-seeking behaviour while the present study involved only healthy subjects who do not seek health.

Gender and Social Class in Preventive Health Behaviour

Table 3 shows that majority of the respondents (37.7%) were from the lower social class, followed by respondents from upper class (31.2%) and lastly by the middle class respondents (31.1%). Out of the total number of respondents (3899), 37.6% of females have positive attitude towards health behaviour and 28.7% of males have positive attitude. When these data were subjected to chi-square test, the null hypothesis which states that there is no significant difference in the attitude of males and females towards preventive health behaviour in the three social classes was accepted ($p > 0.05$) see Table 8.

The finding is not in line with the assertion of Friedman (1981). Friedman is discussing gender roles in the three social classes stated that social activities in the upper class is husband-dominated while in the middle class, these activities often take place with relatives from the husband's or wife's family. He further, reiterated that in 1962, Komarovsky found out that the majority of males and female in the lower class believe that the woman's place is in the home. The difference in the findings may be due to the type of activities being discussed and the time frame of the two findings. Friedman was describing attitude and behaviour in social activities, while the present study described attitude towards health activity. Men's attitude towards preventive health behaviour may be such that it supports that of the women, who may not actually be interested in social activities. Moreover, Friedman reported on events of 1960s and

1980s while this study reports on late 1990s events. The time lapse may be contributory to the no difference in attitude noted in the study.

Social Class and Engagement in Behaviour

Data on Table 4 reveals that the greatest majority of people that engage in preventive health behaviour are from the upper class (26.6%), out of the total proportion of people (47.7%) that engage in such behaviour. The least proportion (5.8%) came from the lower social class. On the issue of non-engagement, the lower class topped the list (31.9%) while the upper class came last with 4.6% out of the total proportion (52.3%) that do not engage in health behaviour. This degree of engagement by the people in the three social classes is not significant since test of hypothesis (see Table 9) showed no relationship between engagement in health behaviour and social class ($p>0.05$).

The result is not in agreement with the finding of Carstairs and Patterson in 1963, as reported by Bond and Bond (1986). Using hospital admission rates and data about length of stay in hospital, Carstairs and Patterson found increased use of health services from social class I to social class V. Similarly, the finding disagrees with the report of Bond and Bond that Sanson and Colleagues found that women from social class IV and V were less likely to be screened for cervical cancer. The variation in the finding of this study and the two studies mentioned above may be attributed to the classification of social classes. The present study used three classes for social status of the respondents while both Carstairs and Patterson; and Sanson and Colleagues used the Registrar General Five Classes of social status. The classification system used by this study is likely to cluster individuals into groups thereby diffusing the effect of class differences while the Registrar General Five Classes is detailed and may make manifest the salient attributes of the different classes. However, the result is in line

with the finding of Janet Meininger in 1986. Miles (1991) reported that Janet Meininger had the interesting finding that in the United States, women of lower social classes were more likely to seek medical help than were middle class women. Similarly, Miles reported that in Britain, middle-class women were more likely than working-class women to turn to doctors as a first report. Nevertheless, it is worthy of note that while the present study involved both men and women, the reported findings of other researchers on this issue were only on women. Thus, the difference in the findings may be attributed to the nature of the sample used for the studies.

Gender and Advice from Referents in Health Behaviour

1858 respondents engage in preventive health behaviour. Of this number, 1213 (65.3%) seek advice from referents before engaging in health behaviour. Out of this number that seek advice, a greater percentage (40.4%) are females while males are (24.9%). See Table 5. However, when the data were subjected to chi-square test, the null hypothesis of no significant difference in the proportion of men and women that seek advice from referents before engaging in health behaviour was accepted ($p > 0.05$ as shown in Table 10).

This finding is contrary to the assertion of Morgan (1996) that men are more likely than women to preserve some sense of self-identity when they need help rather than perceiving themselves as a burden. He however, attributed this to the meaning attached to the involvement of men in these caring tasks. He said that the kinds and amount of support that men receive from others in order to fulfill these obligations are shaped by considerations of gender. He reiterated that women are involved in both “caring for” and “caring about”, as such may need advice more from referents. The difference between the finding of this study and what Morgan said may be attributed to the kinds of activities involved. Morgan discussed caring activities as a whole while this study is concerned with activities aimed at disease prevention or early

detection of disease. People of both sexes may seek advice as to what to do to maintain health but when it comes to caring, the entire activity is seen as a woman's job. According to Miles (1991), socialization for gender roles during childhood (i.e. learning what constitutes socially approved "feminine" and "masculine" behaviour and what does not), influences the thinking of adults of both sexes as to the suitability of their actions in any given situation.

Reference Group Pressure and Engagement in Behaviour

Data generated showed that of the 3899 respondents, 2565 (65.8%) seek advice from referents. Of this 2565 that seek advice, 1213 (31.1%) engage in preventive health behaviour while majority 1352 (34.7%) do not, as shown in Table 6. This data was subjected to test of hypothesis. It was found that engagement in preventive health behaviour is significantly independent of reference group pressure ($p > 0.05$) as shown in Table 11.

The finding is not in conformity with the statement of Mitchell and Loustau (1981). They stated that people may independently become aware that something is wrong with them but that the people generally need some agreement by their social group that their symptoms need medical attention. Mitchell and Loustau further stated that among Mexican Americans and some other ethnic groups, treatment decisions are frequently made with others, particularly with the family. The difference may be due to the fact that in preventive health behaviour, there is no perceived threat of disease, so the individual concerned may not need to consult with the referents before taking a decision on preventive steps towards maintaining health. Mitchell and Loustau discussed health seeking behaviour. In their own instance, the individual is already sick and may need social influence to arrive at a decision regarding medical consultation. This study concerned itself with behaviour that will maintain health and prevent disease occurrence. The finding of independence of health behaviour on reference group pressure may also be

attributed to the kind of social influence. According to Cotterell (1996), two broad kinds of social influence on behaviour exist – informational and normative. Informational influence deals with supplying details about objective reality while normative influence is based on pressure to comply, in situations where the group has some form of power to exact conformity. The present study took place in the capital cities of four Eastern State of the Federal Republic of Nigeria, so normative influence to comply in a township situation may have been lacking. Abrams et al (1990) opined that normative influence only arise when people are subject to interpersonal pressure, that is, in a situation where a person is consciously aware of his/her group membership. Group consciousness is not deep in townships because neighbours may not be socially closely knit. On the issue of informational influence which deals with objective reality, the importance of prevention is an established reality to almost everybody.

Conclusion

Results from the study reveal that engagement in health behaviour is not dependent on gender and that attitude of males and females towards preventive health behaviour is about the same. It was also noted that engagement in health behaviour is not related to social class nor is it dependent on reference group pressure.

Educational Implications of the Study

The importance of prevention cannot be over-emphasised. Findings from this study can help in promoting positive health behaviours by contributing to change in attitudes and conducts that are harmful. Knowledge gained from the results of this survey could help health educators appreciate the status quo and thus help them plan health educational activities.

Decision-makers on health matters at all levels (ranging from the family to the national level) could benefit from findings of the study. This group should also be targeted in health education programmes towards a change in attitude and behaviour.

Recommendations

- On the basis of the findings, the following recommendations have been made:
- Emphasis should no longer be laid only on women. It has been established that men are also interested in health behaviour. Health educational activities therefore, should also be geared towards everybody.
 - Government and policy makers should make all levels of health care easily accessible to the populace since health behaviour is not dependent on social class nor pressure from referents.
 - Government should lay more emphasis on preventive care rather than curative care. The study showed that majority of the respondents do not engage in health behaviour.

Limitations of the Study

Some factors were identified as sources of limitations to this study and they are as follows:

- Control of variables – such variables as life-style and experience, age, marital status, race and ethnicity affect behaviour but were not controlled in this study.
- Measurement of variables – measurement problem met within the study concerned lack of specificity in the measurement of behaviour. There was no quantification of behaviour as regards the number of times the action is expected to occur for it to be termed engagement in behaviour.

Suggestions for Further Studies

Based on the findings, the researcher suggests the following for further studies:

- An investigation into other social factors that may determine health behaviour (such as age, life-style, marital status, race and ethnicity).
- A similar study involving the rural people (i.e. people resident in rural communities).
- A similar study repeated for other state capitals in the Federal Republic of Nigeria.

Summary of the Study

The study was conducted to determine influence of gender and social network factors on preventive health behaviour among people in capital cities of four Eastern States of the Federation. The objectives of the study were to determine whether gender, social class and reference group pressure influence engagement in health behaviour. Consequently, five research questions and five hypotheses were formulated.

The sample consisted of 4000 residents of households in the capital cities of the four Eastern States namely Abia, Anambra, Enugu, and Imo. This sample size was selected using stratified sampling technique.

The questionnaire was the only instrument used for data collection from both the literate and illiterate groups. It was used as an interview guide for the illiterate group.

Data collected were analysed using percentages and chi-square test of hypothesis. The findings shows that:

- Gender does not influence health behaviour.
- Men and women have the same attitude towards health behaviour.
- Health behaviour is not related to social class.

- Men and women seek advice alike from referents before engaging in health behaviour.
- Reference group pressure does not influence engagement in health behaviour.

Based on the findings, conclusions were drawn and recommendations and suggestions for further studies made.

REFERENCES

- Abrams, D., Wetherell, M., Cochrane, S., Hogg, M.A and Tunier, J.C. (1990). Knowing what to think by knowing who you are: Self-categorisation and the nature of norm formation, conformity and group polarisation. *British Journal of Social Psychology* 29:97-119.
- Ajzen, I. and Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behaviour*. Englewood Cliffs New Jersey: Prentice-Hall.
- Appleton, J.S. and Kaye, L.W. (1993). Male Elder Caregivers. In C.L. Williams (ed.) Doing "Women Work": *Men in Non-Traditional Occupations*. Newbury Park, Ca: Sage.
- Arber, S. and Gilbert, N. (1989). Men: The forgotten Carers. *Sociology*, 23(1) 111-18.
- Aweda, D.A. (1988) "Sociocultural Values, Sex Roles and National Development In Nigeria" *Research for Development*. Ibadan: The Nigerian Institute of Social and Economic Research.
- Baumann, B. (1961) "Diversities in conceptions of Health and Physical Fitness" *Journal of Health and Human Behaviour* 2 (1): 40.
- Bond, John and Bond, Senga (1986). *Sociology and Health Care*. New York: Churchill Livingstone.
- Briscoe, M. (1987). Why do people go to the Doctor? Sex Differences in the Correlation of G.P Consultation. *Social Science and Medicine* 25: 507-513.
- Cabral, A.J.R. (1990). Maintaining the Health-For-All Momentum. *World Health Forum* 11(4): 435-439.
- Cotterell, John (1996). *Social Networks and Social Influences in Adolescence*. London: Routledge.
- Firestone, Shulamith (1971). *The Dialectic of Sex*. London: Paladin.
- Freidson, Elliot (1970). *Profession of Medicine: A Study in the Sociology of Applied Knowledge*. New York: Dodd, Mead.
- Friedman, Marilyn M. (1981) *Family Nursing: Theory And Assessment*. New York: Appleton-Century-Crofts.
- Goldberg, Steven (1979). *Male Dominance: The Inevitability of Patriarchy*. London: Abacus Sphere Books.

- Hartman, H. (1997). The Unhappy Marriage of Marxism and Feminism: Towards a more Progressive Union. In Nicholson (ed.) *The Second Wave: A Reader in Feminist Theory*. New York: Routledge.
- Henwood, Melanie, Rimmer, Lesley and Wicks, Malcom (1987) *Inside the Family: Changing Roles of Men and Women*. London: Family Policy Centre. Occasional paper 6.
- Hilbert, Morston S (1977). Prevention: Presidential Address. *American Journal of Public Health* 67(4): 353-356.
- International Women's Health Coalition (1994) *Challenging the Culture of Silence: Building Alliances To End Reproductive Tract Infection*. New York: International Women's Health Coalition.
- Jowel, Roger and Witherspoon, Sharon (eds.) (1995) *British Social Attitudes*. London: Gower.
- Kandal, Terry K (1988). *The Women Question in Classical Sociological Theory*. Miami, Florida: International University Press.
- Koos, E.L. (1954) *The Health of Regionville*. New York: Columbia University Press.
- Langlie, J.K. (1977). Social Networks, Health Beliefs and Preventive Health Behaviour. *Journal of Health and Social Behaviour* 18: 258.
- Mastroianni, Anna C., Faden, Ruth and Federman, Daniel (eds) (1994). *Women & Health Research: Ethical and Legal Issues of Including Women in Clinical Studies*. Volume 1 Washington, D.C.: National Academy Press.
- Miles, Agnes (1991). *Women, Health and Medicine*. Philadelphia: Open University Press.
- Millet, Kate (1971). *Sexual Politics*. London: Sphere.
- Mitchell, Pamela H and Loustau, Anne (1981). *Concepts Basic To Nursing*. New York: McGraw-Hill Book Company.
- Morgan, D.H.J. (1996). *Family Connections: An Introduction to Family Studies*. Cambridge: Polity Press.
- Moser, Caroline O.N. (1991). Gender Planning in the Third World: Meeting Practical & Strategic Needs. In Rebecca Grant & Kathleen Newland (eds.) *Gender and International Relations*. Great Britain: Open University Press.
- Murdaugh, Carolyn and Hinshaw Ada Sue (1986). Theological Model Testing To Identify Personality Variable affecting Preventive Behaviour. *Nursing Research* 35(1): 237-41.

- Nakajima, Hiroshi (1990). Health and Development in the 1990s. *World Health Forum*. 11(4): 355-57.
- Nickie, Charles (1993). *Gender Divisions and Social Change*. Great Britain: Harvester Wheatsheaf.
- Parker, G. and Lawton, D. (1994). *Different Types of Care, Different Types of Carer*. London: HMSO.
- Parson, T. (1963). On the Concept of Influence: *Public Opinion Quarterly* 27: 37-92.
- Pender, Nola J. and Pender, Albert R. (1986). Attitudes, Subjective Norms, and Intentions to Engage in Health Behaviour. *Nursing Research* 35(1): 371-78.
- Piachaud, David (1984). *Round about 50 Hours a Week*. London: Child Poverty Action Group.
- Rosenstock, I.M. (1974). The Health Belief Model and Preventive Health Behaviour. *Health Education Monograph*. 2(4): 354-383.
- Rotter, J.B. (1966). Generalised Expectancies for Internal Versus External Control of Reinforcement. *Psychological Monograph* 80: 1-28.
- Rotter, J.B. (1954). *Social Learning Theory and Clinical Psychology*. New York: Prentice-Hall.
- Sharpe, Sue (1984). *Double Identity*. Harmondsworth: Penguin.
- Smith, Lois M. & Padula, A. (1996). *Sex & Revolution: Women in Socialist Cuba*. New York: Oxford University Press.
- Sydie, Rosalind A. (1987). *National Women, Cultured Men: A Feminist Perspective on Sociological Theory*. Milton Keynes: Open University Press.
- Tilly, Louise and Scott, Joan (1987). *Women, Work & Family* London: Methuen.
- Tinker, Anne; Daly, Patricia; Green, Cynthia; Saxenian, Helen; Lakshminarayanan, Rama and Gill, Kirrin (1994). *Women's Health and Nutrition: Making a Difference. World Bank Discussion Papers*. Washington, D.C., U.S.A.: The World Bank.
- World Bank (1993). *World Development Report, 1993: Investing in Health*. New York: Oxford University Press.

APPENDIX A

Department of Nursing Sciences
University of Nigeria
Enugu Campus
August 20, 1998.

QUESTIONNAIRE

I am a postgraduate student of the above Department. I am engaged in a study to determine whether gender and social network factors influence health behaviour. Please, you are required to supply some necessary information that will enable me carry out the study. All information collected will be entirely used for the purpose of the project work and will be strictly treated as confidential.

You are not required to give your name since there is no personal attachment to the information you give.

Thank you
Eneh, G.N. (Miss).

Instructions – Please tick (✓) in the box beside the option that best describes you.

Section A : Demographic data

(1) Sex : (a) Male ()

(b) Female ()

(2) Educational Qualification:

(a) Completed primary education ()

(b) Completed secondary education ()

(c) NCE / OND & its equivalent ()

(d) First Degree and HND ()

(e) Masters Degree and above ()

(3) Income level :

(a) Below N5,000 per month ()

(b) Between N5,000 and N10,000 per month ()

(c) Above N10,000 per month ()

Section B : Engagement in Health Behaviour

Below are some statements on some aspects of primary and secondary preventive health behaviour . Please, tick (✓) to indicate the degree of your own participation.

Personal hygiene

(1) I wash my hands before every meal and after using the toilet because it is important for health maintenance.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(2) I usually clean my teeth twice every day (first thing in the morning and last thing at night) in order to keep my teeth healthy

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(3) Every member of the family uses one towel after bathing to show oneness and for economic reasons.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(4) In my family, we drink from the same cup or glass provided it is clean.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

Immunization

The most important preventive measure towards protecting the community against preventable communicable diseases is immunization of a child against :

Diseases	Opinions				
	Undecided	Strongly agree	Agree	Disagree	Strongly disagree
(5) Tuberculosis					
(6) Diphtheria					
(7) Whooping cough					
(8) Poliomyelitis					
(9) Tetanus					

Work, Exercise, Rest, Sleep and Recreational activities

(10) I am always at work from 6am to 5pm daily in order to maintain my family.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(11) I observe two (2) hours resting period every afternoon.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(12) Usually, I go to bed before 10pm and wake up before 6am every day.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(13) I always exercise regularly, that is jog, run, or walk briskly at least three times every week

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(14) However, I still make out at least one hour every day for leisure – time activities like dancing, swimming, visiting friends etc.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

Avoidance of drugs : (cigarette, alcohol, depressants, stimulants and others).

(15) I smoke about five sticks of cigarette every day because it help me to keep alert.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(16) I drink alcohol

Never () Rarely () Occasionally () Often () Very often ()

(17) I usually take some drugs like valium, librium, piriton to make me fall asleep if I am finding it difficult to sleep off.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(18) I always take a cup of coffee without milk to make me keep awake.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(19) Though panadol is good for headache, it should not be bought just from patent medicine dealer without doctors' prescription.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(20) All drugs should be taken only under medical prescription and supervision.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

Screening for Blood Pressure and Breast Cancer

(21) Regular checking of blood pressure in a health facility is very important for health maintenance.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(22) I usually go to the clinic or hospital to check my blood pressure ----- times a year.

Never () Once () Twice () Three () Four

(23) I carry out breast self – examination at least once every month to detect early breast lump.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

Environmental hygiene

(24) Dustbins have been provided in every room in my house for disposal of refuse and this is usually discarded every morning.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(25) To keep a healthy environment, I always cut grasses around the house, drain the gutters at least once a week and avoid littering the surrounding with cans.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

Section C : Reference Group Pressure

(1) Generally, my spouse/friends/aunt/uncle/co-worker/religious leader takes part in most health decisions that I make.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(2) And I always want to do what my spouse/friends/aunt/uncle/co-worker/religious leader advices I should do on matters concerning health.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(3) If my spouse/friends/aunt/uncle/co-worker/religious leader thinks the barriers to preventive health behaviour are greater than the benefits, I will totally see it that way.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(4) If he/she takes the benefits as being greater than the barriers, I will see it that way too.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(5) In otherwords, I would engage in preventive wealth behaviour because my spouse/friends/aunt/uncle/coworker/religious leader thinks so.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

6) It does not matter whatever opinion I have about the health matter.

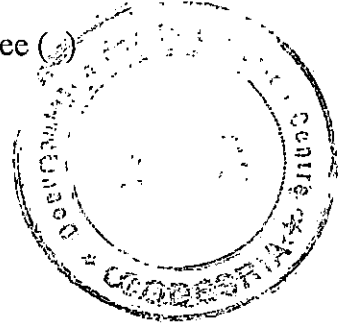
Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

7) In any case, my spouse/friends/aunt/uncle/coworker/religious adviser always insists on my following his/her instructions.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()

(8) However in my opinion, my spouse/friends/aunt/uncle/coworker/religious leader knows a lot about health.

Undecided () Strongly agree () Agree () Disagree () Strongly disagree ()



APPENDIX B

Critical Values Of The Chi-Square Distribution

	$X^2_{.99}$	$X^2_{.975}$	$X^2_{.95}$	$X^2_{.95}$	$X^2_{.025}$	$X^2_{.01}$	$X^2_{.005}$	d.f
3	.000157	.000982	.00393	3.841	5.024	6.63	7.879	1
	.0201	.0506	.103	5.991	7.378	9.21	10.597	2
	.115	.216	.352	7.815	9.348	11.34	12.838	3
	.297	.484	.711	9.488	11.143	13.27	14.860	4
	.554	.831	1.145	11.070	12.832	15.086	16.750	5
	.872	1.237	1.635	12.592	14.449	16.812	18.548	6
	1.239	1.690	2.167	14.067	16.013	18.476	20.278	7
	1.646	2.180	2.733	15.507	17.535	20.096	21.955	8
	2.088	2.700	3.325	16.919	19.023	21.666	23.589	9
	2.558	3.247	3.940	18.307	20.483	23.208	25.188	10
	3.053	3.816	4.575	19.675	21.920	24.724	26.757	11
	3.571	4.404	5.226	21.026	23.337	26.217	28.300	12
	4.107	5.009	5.892	22.362	24.736	27.688	29.819	13
	4.660	5.629	6.571	23.685	26.119	29.141	31.319	14
	5.229	6.262	7.261	24.996	27.488	30.578	32.801	15
	5.812	6.908	7.962	26.296	28.845	32.000	34.267	16
	6.408	7.564	8.672	27.587	30.191	33.409	35.718	17
	7.015	8.231	9.390	28.869	31.526	34.805	37.156	18
	7.633	8.907	10.117	30.144	32.852	36.191	38.582	19
	8.260	9.591	10.851	31.410	34.170	37.566	39.997	20
	8.897	10.283	11.591	32.671	35.479	38.932	41.401	21
	9.542	10.982	12.338	33.924	36.781	40.289	42.796	22
	10.196	11.689	13.091	35.172	38.076	41.638	44.181	23
	10.856	12.401	13.848	36.415	39.364	42.980	45.558	24
	11.524	13.120	14.611	37.652	40.646	44.314	46.928	25
	12.198	13.844	15.379	38.885	41.923	45.642	48.290	26
	12.879	14.573	16.151	40.113	43.194	46.963	49.645	27
	13.565	15.308	16.928	41.337	44.461	48.278	50.993	28
	14.256	16.047	17.708	42.557	45.722	49.588	52.336	29
	14.953	16.791	18.493	43.773	46.979	50.892	53.672	30