CAUSAL BELIEFS OF MENTAL DISORDERS
AND TREATMENT PREFERENCES IN GHANA.

by

ANGELA MONA-LIZA LAMENSDORF

B.Sc., The University of Ghana at Legon, 1984
M.A., The University of British Columbia, 1988

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

in

THE FACULTY OF GRADUATE STUDIES
(Psychology)

We accept this thesis as conforming to the required standard

THE UNIVERSITY OF BRITISH COLOMBIA

July, 1992

© Angela Mona-Liza Lamensdorf, 1992
In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Psychology

The University of British Columbia
Vancouver, Canada

Date Sept 9, 1992
Abstract

The present study investigated the association between social change and personality, causal beliefs, and treatment style and goal preferences of 375 Ghanaian teachers. The index of social change (ISC) was conceptualized as the average percentile rank of the individual's income and levels of education and acculturation. The self-report measures (greatly modified after two pilot studies), were subscales of the Suinn\Lew Acculturation Scale, the Depressive Experiences Questionnaire (dependency), the Sociotropy-Autonomy Scale (autonomy), the Symptom Checklist 90 (paranoid ideation), the Spheres of Control Scale, and the Cognitive Somatic Anxiety Questionnaire. Respondents also completed a questionnaire on causal beliefs and treatment preferences pertaining to mental disorders. Results indicated that beliefs and treatment preferences were affected by the index of social change (ISC) and were specific to type of disorder. High ISC teachers endorsed significantly higher ratings on belief in an internal cause for Depression and Dependent Personality Disorder, and indicated greater preference for participation in treatment than lower ISC teachers. Contrary to prediction, lower ISC teachers indicated a greater preference for individual goals in treatment for Depression and Schizophrenia. High ISC teachers also reported greater perception of interpersonal control and emotional support, but less dependency, and interpersonal sensitivity than lower ISC teachers. Little support was found for the commonly observed somatization of distress among non-Western peoples. Explanations
[Page III missing from original thesis abstract]
# Table of Contents

Abstract ................................................................. ii
List of Tables ........................................................... ix
List of Figures ........................................................... x
Acknowledgement ......................................................... xi
INTRODUCTION .............................................................. 1
  Culture and health ...................................................... 1
LITERATURE REVIEW ...................................................... 2
  Africa ................................................................... 4
  Religion .................................................................. 5
  Ordering of the Universe ............................................. 6
  Ordering of Society ..................................................... 7
  Dimensions of upbringing ......................................... 8
  Marriage .................................................................. 9
  Culture in transition ............................................... 11
  Acculturation? ......................................................... 14
  Psychopathology ....................................................... 16
    Psychopathology as it arises from anthropological structures .......... 16
    Psychopathology from the socioeconomic perspective .............. 19
    Implications of the anthropological and socioeconomic perspectives ......................................................... 23
  Traditional society, personality and treatment suitability .......... 24
  Illness manifestation and symptom reporting ..................... 28
Parallel Western Psychological Concepts .................................. 30
  Causal attributions and perceptions of control .................... 31
  Psychological Control ............................................... 32
Locus of Control .............................. 34
The multi-dimensional formulation of locus of control ....................... 35
Pertinent methodological and theoretical issues on Cross-Cultural Psychology ....................... 37
Summary and Conclusions ........................................... 39
Hypotheses .................................................. 41

METHOD .................................................. 43

Measures .................................................. 44
Assessment of beliefs regarding causation of illness and treatment preferences .............. 44
Panic disorder .................................................. 44
Depression .................................................. 45
Schizophrenia .................................................. 45
Dependent Personality Disorder ........................................... 45
Response Format .................................................. 46
Assessment of therapy preferences ........................................... 46
Participatory style .................................................. 46
Directive style .................................................. 47
Individual goals .................................................. 47
Family goals .................................................. 47
Order effects .................................................. 47
Dependent variables ........................................... 47
Assessment of Acculturation: The Suinn-Lew Asian Self-Identity Acculturation Scale .............. 49
Assessment of symptoms under distress: The Cognitive Somatic Anxiety Questionnaire .............. 50
Assessment of Interdependency: The Depressive Experiences Questionnaire .............. 51
Assessment of Autonomy: The Sociotropy-Autonomy Scale ........................................... 52
Assessment of Interpersonal Sensitivity: The SCL-90 ........................................... 53
Assessment of Perception of Control: The Spheres of Control Scale ........................................... 54
Assessment of Social Support: The Emotional Support Scale ........................................... 55
Pilot Study 1, Beliefs regarding illness causation and treatment preferences of African and Canadian graduate students: the issue of sensitivity of measures across cultures ........................................56

Subjects ..........................................................56

Method ............................................................57

Results ............................................................57

The effect of culture on causal beliefs and treatment preferences .....................57

MANOVA Results ..................................................58

Differences between the two groups on psychological measures .......................66

1. Religiosity ....................................................66
2. Interpersonal Sphere of Control ..................................66
3. Acculturation ..................................................67

Discussion ........................................................67

Modification to the research protocol .........................................................70

1. Assessment of Beliefs and Treatment Preferences ......................................70

2. Standard Psychological Measures .........................................................70

Pilot Study 2: A purely Ghanaian Sample .....................................................71

Subjects ..........................................................71

Problems with measures .................................................................72

Main Study: Methodology .................................................................73

Subject Selection .................................................................73

a. Selection of Communities .....................................................73
b. Selection of subjects within each community ................................74
c. Selection of schools ............................................................75
d. Procedure for subject selection ..................................................75

Modification to the protocol .............................................................77

Inclusion criteria; validity check ........................................................79

RESULTS ........................................................................80
APPENDIX 1: Research Protocol for Pilot study ................................. 134
Demographic Questionnaire...................................................... 134
Acculturation Scale............................................................. 135
CSAQ................................................................................. 138
SCL-90...................................................................................... 138
DEQ......................................................................................... 139
Spheres of control................................................................. 140
Assessment of Causal Beliefs and Treatment
Preferences................................................................. 141
Approach to therapy............................................................ 142

APPENDIX 2: Ammended Protocol for Pilot study ......................... 147
Demographic Questionnaire...................................................... 147
Acculturation Scale............................................................. 147
SCL-90...................................................................................... 152
DEQ......................................................................................... 152
Spheres of control................................................................. 152
Autonomy Scale................................................................. 152
Assessment of Causal Beliefs and Treatment
Preferences................................................................. 152
Most appropriate approach.............................................. 155

APPENDIX 3: Protocol for the main study................................. 156
Written instructions regarding rating scales..................... 156
Demographic Questionnaire...................................................... 157
Acculturation Scale............................................................. 156
SCL-90...................................................................................... 162
DEQ......................................................................................... 162
CSAQ...................................................................................... 162
Spheres of control................................................................. 162
Autonomy Scale................................................................. 163
Emotional Support Scale..................................................... 163
Assessment of Causal Beliefs and Treatment
Preferences................................................................. 163
Panic Disorder................................................................. 164
Depression............................................................... 165
Dependent Personality Disorder................................. 165
Schizophrenia........................................................... 165
Most appropriate approach.............................................. 165

APPENDIX 4: Communities sampled..................................... 166
List of Tables

Table 1: ANOVA results: 2 (continent of origin) X 4 (types of disorder) ........................................... 59
Table 2: Means (SD) of Witchcraft/spiritual scale ............ 60
Table 3: Means (SD) of the Family conflict scale .......... 61
Table 4: Means (SD) of the Biogenetic scale ................. 62
Table 5: Participatory/directiveness scale means and standard deviations ........................................ 63
Table 6: Individual/family goal scale means and standard deviations ................................................. 64
Table 7: Means and standard deviations of psychological scales ................................................................ 67
Table 8: Intercorrelation between Education, Income, and Acculturation ............................................ 81
Table 9: Acculturation, Education, and Monthly Income means and standard deviations ...................... 81
Table 10: ANOVA results (3 ISC X 2 Gender X 4 Illness types) .............................................................. 84
Table 11: Internal/external scale means and standard deviations .......................................................... 85
Table 12: Family conflict means and standard deviations by gender ...................................................... 86
Table 13: Mean ratings and standard deviations of Biogenetic causes ................................................... 87
Table 14: Means (SD) for the Participation/directiveness scale .................................................................. 88
Table 15: Means (SD) for the Individual/family scale ........ 89
Table 16: Psychological correlates of Causal attribution and treatment preferences ................................ 90
Table 17: Intercorrelations among psychological measures ...... 92
Table 18: Means (SD) of psychological variables .............. 94
Table 19: ANOVAs on psychological measures .................. 95
Table 20: Means (SD) for the severity of illness scale ........ 97
Table 21: Choice of Healers for Depression and Chi square values for low/high ISC comparisons.........................99

Table 22: Choice of Healers for Panic Disorder and Chi square values for low/high ISC comparison.........................99

Table 23: Choice of Healers for Schizophrenia and Chi square values for low/high ISC comparisons......................100

Table 24: Choice of Healers for Dependent personality disorder and Chi square values for low/high ISC comparisons.100

Table 25: Summary of results.............................................101

List of Figures

Figure I: Summary of relationships among research variables...40
Acknowledgement

I would like to thank my professors here at the University of British Columbia for creating the supportive environment which allowed me to freely and fearlessly challenge conventional beliefs in psychology. I especially express appreciation to my research supervisor Dr. Wolfgang Linden for encouraging my first steps in the area of cross-cultural research, and to Dr. Dimitri Papageorgis for our academic explorations into the magical world of witchcraft. Special thanks go to Dr. Anita DeLongis and Dr. Michael Chandler for their research and academic expertise, to Dr. Ralph Hakstein for his invaluable statistical consultation, and Dr. Jack Rachman for making me write the first outline. Special mention is made of Mr. Chris Davis for help with the data reduction and analyses.

I thank my role model Dr. Araba Sefa-Dedeh of the Ghana Medical School, Mr. Peter Kpordugbe and Alhaji Ibrahim for the invaluable logistic support and information given during data collection. I also thank the research team members for their support and encouragement; Andrea, Carlene, Dawn, Jeff, Joseph, Laura, Suzi, and Tracy.

Finally, for nourishing my innermost being throughout the two years of this research, I am deeply grateful to my friends and family. My heartfelt thanks go to Akosua Addo, Kathy Krech, the Kwapongs, Kweku Awotwi, Lori Taylor, Melissa Pearson, Fitnat Adjetey, Mrs. Quartey, and Ma.

And Kenneth, "I am really glad you're with me. Thank-you".
INTRODUCTION

Culture and health

Culture is the expression of the ways in which people live and interact both socially and with their environment. In this way, culture is a dynamic and multi-dimensional concept which must involve, among other things, education, beliefs about the world, religion, and in Marxist terms, modes of production (i.e., the economic means of survival of a people). Culture therefore is not static and, especially in a global economy, must change with new ideas, new technology, and more interaction among different peoples.

The goal of this study is to critically examine the impact of social change on causal beliefs, personality, and treatment preferences of an educated sample of Ghanaian adults.

The following literature review will critically examine the reported causal beliefs of Ghanaians concerning mental disorder, the factors which influence these beliefs, and how the beliefs in turn influence the acceptability of treatment styles and goals. It will be argued that education, and changing economic and social values bring about changes in causal beliefs and treatment preferences. It will also be argued that assumptions made in the literature concerning African personality structure are usually not based on data, and may be too broad in generalization.

The literature review is organized along the following lines: African social organization and Traditional World view; different concepts of mental illness pertaining to such a world
view; treatment options; and relevant Western psychological constructs which have been utilized to describe and measure African world views. To begin the literature review, a brief outline is first given of the theory of "Alternative Constructivism" (Kelly, 1955) and models derived therefrom. This provides a theoretical framework within which the African world view is examined.

**LITERATURE REVIEW**

In Kelly's theory of Alternative Constructivism (Kelly, 1955) people are viewed as natural scientists who create constructs through which they view their universe. These constructs enable them to predict and control events. There are private constructs (i.e. those of individuals) and public constructs (e.g. those of psychology or biology). The same events may be interpreted through different construct systems, although it is possible that some systems explain the event better than others. Constructs are open to change and revision, especially when used to predict immediate happenings, and are less likely to change when used in the prediction of rare, remote, or future events.

Lazarus and Folkman (1984) wrote about appraisal of situations in much the same way as Kelly wrote of constructs; i.e., that the appraisal of situations is a mechanism which mediates between events and responses. Beliefs and commitments influence the appraisal of events in a given encounter. Appraisal, in turn, shapes the person's understanding of the
event, and thus shapes his or her emotions and coping efforts. Appraisals thus provide the basis for evaluating outcomes.

Similarly, Doob (1988) wrote that the search for meaning may be viewed within the framework of doctrines. Doob loosely divided doctrines into two main camps: Subjectivism and Determinism. Deterministic doctrines have a tradition that encourage "objective" observation and induction (empiricism), as well as manipulation of events to test outcome and 'prove' theories (experimentalism). Subjectivism, on the other hand, refers to doctrines that favour explanations of causality that transcend or are independent of the perceived events at hand.

The type of orientation held by an individual at a given time is thought to be situation-specific and not a character trait. Orientation may however be considered a result of the dominant culture within which an individual lives (Rotter 1966). For example, Western societies are primarily believed to have a deterministic orientation while Traditional African societies are said to have a primarily subjectivistic outlook (Doob, 1988). Doob has however cautioned that these broad classifications give erroneous impressions since they are specific to the special samples studied in the two different cultures. In studies from Western societies, samples of subjects are usually drawn from among the educated. In Traditional societies, however, subjects are usually drawn from the uneducated. The crux of the present study therefore, is that such broad generalization about non-Western societies,
without attention to factors such as education and acculturation, is unjustified.

Africa.

The focus here is on Black Africa, which occupies the sub-Saharan portion of the Continent. Africans may be broadly divided into different 'ethnic' groups: Sudanic Negroes, Guineans, Congolese, Nilotes, Southern and Eastern Africans, Negrillos, Khoisan, and Ethiopians. The linguistic diversity is postulated to be between 700 and 1500 languages. There is also religious diversity consisting of traditional religions, Christianity, and Islam.

Sow (1980) cites as many as 850 types of material civilization, and diverse lifestyles (sedentary and nomadic), production modes, and economic systems. Also cited by Sow is Maquet's (1962) distinction of the following categories: the civilizations of the bow (hunting-gathering), of the clearings (forest agriculture), of the granaries (savanna agriculture), of the spear (pastoral and warrior societies), of cities, and of industry.

In spite of this great diversity, Sow (1980) argues, as does Toure (1974), that there is a shared Negro-African culture that is evident in a way of thinking which derives its principles from symbols, myth, and collective ritual. In African society, the spiritual universe and society are reported to be merged into one, and people are highly sensitized to their positions in this universe and their
relative standing with everyone and everything in their world. Thus the individual cannot be thought of except in close relation with others and surrounding objects. As we shall see, this is seen to be very important in the African conceptualization of psychopathology as chaos or a break down in ordered living.

Religion

The traditional religions of Africa are primarily monotheistic, in spite of their great diversity of symbols and form. This monotheism predates the advent of Islam and Christianity on the continent.

The Supreme Being or God presides over the destinies of all things and yet is not specifically worshipped and has no designated altars. The attributes of the Supreme Being are that of the Eternal and Omniscient, Creator and Center of existence, whose power is boundless. If this sounds very much like the Judeo-Christian God, wait, for this Supreme Being is also thought to have withdrawn from the world of humans (Sow, 1980). This withdrawal is not felt by Africans to be the result of their erring ways but marks instead a liberation willed by the Creator, a liberation that can be put to good account to build a universe and manage their own lives. Certain ethnic groups regard the Earth as Goddess, on par with the Omnipotent, while others see in an Omnipotent Being, both male and female (Sow, 1980).
Ordering of the Universe

The African Universe as explained by Mythology, consists of a three-tiered space, with constant interaction between the levels. The "Highest Universe" (the macrocosm) is the world of God, the Ancestor of the particular ethnic group, and the spirits of the chosen dead. The "Intermediate Universe" (the mesocosm) is conceptualized as a no man's land, where chance reigns along with the disquieting strangeness of natural laws; a place of sojourn for wandering spirits such as genies, and the scene of the nocturnal activities of sorcerers. This then is the space of the individual and collective imaginary, and encompasses what d'Aquili, Laughlin and McManus (1979) termed the "zone of uncertainty". Finally, there is the more limited universe of practical everyday life of the people. This is the "socialized" microcosm.

"Within each universe are multiple hierarchies. The mesocosmos is of special interest to us because it is the place, the milieu par excellence, where African culture locates overt or covert conflicts, all the more readily in that there is a similarity of structure and organization between mesocosmos and microcosmos: genies and spirits have their families, lineages, and age groups, just like humans - and the two realms are in constant interaction. This is one of the principal reasons for the continuity we have observed between African thinking about the imaginary (the structured collective imaginary) and African thinking about immediate social reality...."

(Sow 1980, pp.134-135)

Religion, as thought of in a predominantly secular world would therefore refer to people's way of relating to the mesocosm and macrocosm. In a non-secular world, there often are
no words for the word "religion" that are separate from those that describe the microcosm or social reality.

Ordering of Society

African societies represent a small group of individuals who are alive, within a larger community which is conceptualized as comprising mostly the dead, ancestors, and spirits (Busia, 1962; Sow, 1980). The living members are organized on structural and hierarchical lines. There are therefore subgroups with well-defined functions, forming veritable 'social cells' that enable each community to maintain its power and increase its efficiency. Institutions that regulate society include initiatory associations such as guilds (e.g. of hunters, fishermen, farmers, blacksmiths, etc), political groupings (e.g., secret societies), associations of moral and judicial order, and therapeutic groups. The societies generally operate on the general principle of seniority, succession of the generations, and respect for old age. The traditional extended family assigns the individual a precise place in relation to the family and to the group as a whole. People are thus defined in relation to the lineage and community they belong to, in accordance with various parameters that determine their own individuality. These parameters are order of birth, gender, possible resemblance to a living relative or forebear, status related to age class, level of initiation, caste at birth, and status conferred by a particular kinship system (i.e., matrilineal or patrilineal).
In most African societies, reverence for the ancestors goes hand in hand with the reverence conferred to the old. As there is no tradition of writing in predominantly oral cultures such as the Akan of Ghana, the elders are looked up to as the educators. As Busia (1962) so succinctly stated,

"The introduction of reading and writing into such a society accentuates the gap between the generations and upsets the traditional balance between young and old, for when the young are taught to read and write, new doors to wisdom and knowledge are opened to them..." (p 37).

This is perhaps one of the most distinct ways in which African social systems have been impacted by their meeting with the Western World. In educating the youth first, the social order has often been severely threatened, and in some cases, upturned. This was the case among the Serer of Senegal for instance (Beiser, 1980). Communities in which the youth had taken control by virtue of education were less healthy (on measures of physiological and psychological adaptation to change) than communities in which both the 'uneducated' elders and educated youth formed an alliance to run their community. Thus the acceptance of the authority of the aged and wise is an acceptable, even desirable, quality among traditional Africans.

Dimensions of upbringing

Socialization, according to Sow (1980), occurs along three dimensions: the biolineal, horizontal, and vertical.

Along the biolineal dimension, the focus is on the integration of the child, then the adolescent, into the clan.
It establishes the person's position in relation to the ancestors. This is clearly demonstrated by the widespread tradition of naming a child after an ancestor whose character or physical form the child's is thought to resemble.

Along the horizontal dimension, there is integration into circles of 'intense sociality', which Sow cites as initiation societies, age-grade associations, etc, which enable a person to develop through life with his/her set of contemporaries, giving a sense of communion. Sometimes these age sets also help to acquire the skills needed in adult professional life.

The vertical dimension is the religious one which is based on the ancestors and leads to God. God is remote, distant and not immediately present in each individual, but is accessible through mediators such as Ancestors.

Marriage

A marriage between man and woman in African society is considered incomplete without children. A child is a guarantee for the future, and ensures continuity. A child is also a living symbol of the ties and continuity that exist between human beings, the spirits, and ancestors. It is in childbirth that women play their most revered role in African societies.

At some point in a woman's pregnancy in most traditional African societies, there is a separation of the couple and the woman retires to her parental home until the child is weaned. The length of separation is variable but can be up to two years. A state of abstinence from sex is practiced for health,
religious, and child-spacing reasons by women. This period is becoming shorter and shorter (Olukoya, 1986; Isenalumhe & Oviawe, 1986). When the mother returns to her husband with their child, weaning begins.

Weaning is characterized by a process of decentering with respect to the exclusive figure of the mother, and an increasing integration of the child into the rest of the family unit. There are substitute parental figures such as cousins, aunts, and uncles. Sow (1980) suggests that this might lessen the separation trauma for the child and asserts that this marks the beginning of integration into the extended family system and eventually, into the horizontal peer group.

This early socialization process may contribute to the intense interdependence so often reported as characteristic of most African ethnicities (e.g. Oyewumi, 1986). The strong social network thus created is hardly ever raptured and exists into adulthood. Social bonds and ties are therefore very important to the individual and, as we shall see, form the basis of a rich attributional system.

Sow's analyses of an African World View rings true of Traditional African society, but does not take into account possible changes which may have occurred with Africa's increasing integration with the rest of the world, and the resulting cultural and psychological impact on Africans.
Culture in transition

African lifestyles are currently in a stage of rapid transition. Industrialization, formal Western-type education, and the mass importation of Western consumer, social, and religious values place inordinate amounts of stress on the individual who always has to think first of the group before the self. This is especially so because of the lack of growth of supporting national wealth.

Possibly, conflicts between self and group interests would be felt more keenly by the first generation to move out of the social network described above, into the 'new' individualized way of life, and will be considerably less for successive generations which adopt more individualized and 'shrunken' family sizes. Such bicultural Africans would then have less social support to fall back on under stress, and would therefore have more conflicts related to issues of control over their own destiny. The influence of increasing modernization on internal conceptions of control is one of the issues around which this study focuses.

The changes in African society can be seen directly on the effects they have on family structure. In one of the rare studies which focussed on Africa and generalized its findings to Western societies, Caldwell (1982) compared fertility patterns in West Africa and Western societies. He asserted that fertility is low where the flow of wealth is from parents to children (as in the industrialized nations), and high where the flow of wealth is from children to parents (as in traditional
societies). Common lore in the sociological literature has it that change in these patterns is brought about by education, literacy, urbanization, and occupation. Caldwell, however, argued that urbanization and industrialization do not by themselves bring about a change in the family in West Africa. Caldwell suggested that Western ideas about schooling and the mass media are the major causes of changes in attitude regarding the parent-child relationship and the preference for a small rather than a large family. Caldwell asserted that ideas favoring low fertility developed within Western society itself as a consequence of technological and economic change, while such ideas are external to West Africa and come about by influence from the West.

Western technology, however, is a great part of the Western influence in Africa. Transportation and the media are also a large part of that influence, as are education and the money market economies imposed on most African countries. This is especially so in the past decade with the increasing influence of the World Bank. Thus Caldwell may not be entirely correct when he assumes that changes in tradition occur less with respect to actual experience of economy and technology, than to mere importation of ideas from the Western world.

While it is true that the importation of ideas into West Africa has influenced attitudes concerning many important areas of life, Mullings (1984) argues persuasively that economic instability that results from the change from an agrarian, fishing, or hunting economy to a market economy causes grave
changes in family support systems and relationships. She shows how, over the course of the 20th century, waves of religious conversion by evangelical movements coincided exactly with periods of economic depression in the former Gold Coast, which is now Ghana. These evangelical communities often advised their adherents to sever ties with the extended family unit, and encouraged them to rely on the church for social and sometimes economic support.

Thus it is unclear what influences social structure more significantly; economic factors or the ideological influences. Certainly, it would be more helpful to undertake the analysis not from a linear but a multi-directional perspective, which assumes that both economic and ideological factors affect family structure, and are in turn affected by the resulting change in family structure.

Caldwell (1982) also wrote of the central importance which is given to the long term relationship between parents and children and the precedence this takes over the conjugal relationship between husband and wife in African Society. This is a very important distinction between Western and African family structure. For instance, in Coyne and DeLongis's (1986) review of the social support literature in North America and England, they concluded that support from other relationships could not compensate for an unsatisfactory marriage. This conclusion may or may not be tenable in African society where the above observation suggests that the marital relationship
need not be an exclusive or confiding one, but more a social alliance or pact.

Another potential cross-cultural difference in male-female relationships is evident in the work by Umberson and House (1988), which shows that among the married in their North American sample, men were more likely than women to identify their spouse as their primary confidant. In Africa, given the socialization processes mentioned above, and the importance given to age-groups, it is likely that men and women confide more in their same-sexed peers than they do in their spouses. This is of course, an empirical question of interest.

**Acculturation?**

Can the term "acculturation" be applied to the cultural changes observed in African countries?

The Social Science Research Council's (1954) definition of acculturation, as cited by Berry, Trimble, and Olmedo (1986), is

"... culture change that is initiated by the conjunction of two or more autonomous cultural systems. Acculturative change may be the consequence of direct cultural transmission; it may be derived from non-cultural causes, such as ecological or demographic modification induced by an impinging culture; it may be delayed, as with internal adjustments following upon the acceptance of alien traits or patterns or it may be a reactive adaptation of traditional modes of life. Its dynamics can be seen as the selective adaptation of value systems, the
processes of integration and differentiation, the generation of developmental sequences, and the operation of role determinants and personality factors." (Social Science Research Council, 1954, p. 974).

The above definition suggests that the construct of acculturation is applicable to the changes in African countries today. The key elements of the construct, as derived by Berry, Trimble, and Olmedo (1986), are contact or interaction between cultures which is continuous and firsthand, change in the cultural or psychological phenomena among the people in contact, and a process of change which is dynamic.

In the case of Ghana, for example, the first element is provided by historical precedents of trading and then slavery (15-18th Century), colonization by Britain (18th to the mid 19th Century), and continuous political, economic, educational, and cultural contact with the Western world since then. The second element, that of change in cultural or psychological phenomena is also present, as noted by Caldwell (1982) of West Africa in general, and by Beiser (1986) of the Serer in Senegal. The dynamic process of change is also evident in the mixture of beliefs held by acculturating groups, sometimes traditional, and sometimes modern (Doob, 1988). In the present study, I shall be looking at the third element in particular. In the next section, the etiology of mental illness from the traditional African perspective will be examined.
Psychopathology

Several authors (e.g., Lamensdorf, 1990; Mullings, 1984; Oyewumi, 1986) have written that beliefs about mental illness among Africans include natural causes (heredity, faulty diet, bad blood, and the use of cannabis), preternatural causes (sorcery, curse/witchcraft), and supernatural causes (offences against the Gods). The focus of the next section is on preternatural causes because as noted by Sow (1980), it also is the area within which is located interpersonal conflict. In the following sections preternatural etiology for psychopathology will be examined from the anthropological and socioeconomic perspectives.

Psychopathology as it arises from anthropological structures

Sow's thesis on the anthropological structures of madness provides an excellent account of African belief systems about social and temporal reality, but does not make the leap from these structures to the etiology of disorder. However, he draws an in-depth and plausible structure on which we may very carefully "hang" a presumed etiology of psychopathology from an African perspective.

These structures are the hierarchical order imposed on the world within and between Sow's (1980) three 'cosms' and the concept of continuity and hierarchical differentiation between the generations. In traditional African Society, according to Sow, this order centers especially around social relationships. There is concern to fix the precise identity of everyone and at
the same time to maintain the differential distance that distinguishes everyone. This is because the dissolution of that distance risks a loss of individual identity. Such a loss of identity is bound up with violence and conflict. Dissolution of social distance also destroys cultural structures and institutions which provide protection and support for the individual. Thus Sow (1980) asserts that a lot of importance is attached to activities such as classifying, differentiating, associating, and contrasting in order to avoid confusion. Confusion, or a break down of order, is thought to be madness.

Underlying the attitude that absolute care must be taken to preserve the complex web of social relationships is a rejection of natural or 'objective' law. There is the widely shared belief (Doob, 1988; Sow 1980) that there is no fundamental difference between absentmindedness, carelessness, and violence (or perhaps that their apparent difference disappears in the convergence of their consequences). For example, death and illness never have natural causes, but always occur as the result of some mistake by a human or non-human creature. These antisocial beings are perceived to be destroyers of the innermost substance of others' personhood and the essence of the community as a whole. The antisocial beings are thought to be witches, sorcerers, and genies whose realm is situated in the mesocosm discussed earlier. Lucieer (1984) illustrates this belief system by a case study of a depressed patient in East Africa whose symptoms were attributed to his beautiful lady love whom he suspected to be a genie.
In the above anthropological analyses, there is the blend of the individual's vulnerability to illness with the destruction of the essence of the Community itself. Sow (1980) elegantly puts it thus;

".... The traditional conception of the personality is molar and synthetic, in radical contrast to a molecular, individualistic, and analytical view of the personality and its disturbances (defined, in the strict sense, as "autonomous" disorders). The idea of disease or disorder as autonomous is comprehensible only within the anthropological framework of an analytical, individualistic way of thinking, which separates things " (Sow, 1980, p. 230).

Thus mental disorder is not considered an individual's problem but a problem for the community for it threatens the very order and structure of the society.

This thinking is compatible with systems theory as applied to family therapy. Defining the family as a system implies that the family is composed of a set of units or elements (individuals) standing in some consistent relationship to one another. Also that the behavior of the family system is best understood as a product of its organizational characteristic. That is, individuals within the system are not entirely free to behave according to their individually determined drives, motivation, personality attributes, and so on; rather, they are constrained and shaped in their behavior by the nature of the relationships that they have with the other elements of the family system (Steinglass, 1987).

This therefore necessitates an understanding of both the individual and family-level pathological behavior. In the first
instance, there is individual-level pathology which is thought to be influenced and shaped by the family context within which the individual lives. In the second instance, there are systemic properties of the family which contribute to dysfunctional outcomes. One could extend this analogy to the fit between the family and the larger external environment.

To come to a logical conclusion of therapy from this point of view of pathology is therefore, to treat the individual within the context of family, or to treat symptoms manifest in one individual as though representing the 'malaise' of the family as a whole, (Foster & Gurman, 1985; Minuchin, 1974; Steinglass, 1987).

One of the hypotheses of this study is that people who hold traditional beliefs about psychopathology, will look towards the strengthening of the family unit as a goal in therapy.

**Psychopathology from the socioeconomic perspective:**

Witchcraft and sorcery are reportedly feared by different ethnic groups across Africa, regardless of culture. Unlike Sow, Mullings (1984) postulated that the common concepts of sorcery and witchcraft are used to express a link between social experiences and incidents of illness, and appear to have more relevance to common economic and mobility problems than to an ethnically-bound belief system.

If one is labeled a witch, one becomes aware that one's social relationships are in poor condition, that one is looked
on with suspicion, and that one must look at repairing these social relationships or be prepared to be labeled an outcast. One also is aware that one is held responsible for all illness and misfortune that has befallen one's kinsmen or close friends. Witchcraft beliefs thus constitute a theory of causation in the supernatural in a world where human relationships are more important than material goods, and group values receive emphasis.

Fear of witchcraft serves to perpetuate the traditional social structure of reciprocal relationships among kinsmen by punishing any deviation from reciprocity. It is through such reciprocity that the individual survives in an unstable economy.

Mullings's hypothesis is that the means of production in a culture determine its belief system which in turn affects its means of production. During the pre-colonial era, when the means of sustenance was through collective production along lineage (extended family) lines, the survival of the family depended on sharing resources among family members. Any member who did not conform to this and sought individual wealth was thought to endanger the survival of the whole lineage. Any individual who did not help another in time of need was also thought to endanger the whole lineage. Thus any disruption of the social relations within a lineage constituted enough reason to be labeled as a witch, a person to be feared. What better source of attribution in times of chronic illness or misfortune?
This is in keeping with Sow's (1980) notion of the importance of maintenance of the vertical and hierarchical order of society. Any attempt to be different threatens this order, gives rise to conflict, which is conceptualized within the mesocosm, the world of chaos and spirits. And the person responsible for the threat is labeled a witch, and accused of powers of the supernatural.

However, Sefa-Dedeh (personal communication, 1990) has suggested that conflict with a person who is an important source of support (financial or emotional), may be too threatening for one to deal with. In such a case, a scapegoat is found within the family who is accused of having orchestrated this conflict, and who is labeled a witch. This serves to displace the emotions from the threatening significant source towards a non-threatening other, and allows the relationship with the significant source of support to be maintained.

Thus according to Mullings, traditional healing practices are geared towards mending these broken social relationships in the traditional setting. The goal of therapy is the re-establishment of the social relationships that ensure the survival of the group, the communal principles of sharing the wealth, and caring for one another.

In a rapidly changing society, however, the modes of production are changing into a more capitalist orientation. The source of livelihood is often no longer in the control of the lineage. Consequently, the ethic of "share the wealth" is fast
becoming impossible to follow. And yet with the extreme insecurity caused by an unstable market economy, there is even greater need to share the wealth.

New institutions have thus sprung up to address this need. Mullings uses the term "spiritual churches" to describe the new Christian non-orthodox healing churches that impose Christian beliefs on the old belief systems of the people and attempt to fill the need for security in a rapidly changing society. The churches also encourage their adherents to make causal attributions to witchcraft for illness and misfortune.

Unlike the traditional healing practices, spiritual churches do not seek to mend broken familial relationships but to break the ties with the extended family and encourage self-reliance and independence. They also encourage the use of the church congregation as a support group in times of crisis, thus replacing the lineage with the church.

Mullings' (1984) survey showed that both traditional and spiritualist healing had comparatively equal success rates and that their clientele did not differ significantly in age, educational level, status, or ethnicity.

Mullings sets the healing practices of a people within a social and economic context. She exposes the dynamic and changing aspects of a culture in transition, of forces that enhance change, and those that resist change.
Implications of the anthropological and socioeconomic perspectives

A deduction which may be made from the analyses of Sow and Mullings is that a suitable model of psychotherapy for Africa would be one which employs a systemic approach, and focuses on the social relationships of the client. The goal of therapy, therefore, should be to help the individual see family relationships not as a threat to survival, but as a complex system which may be used for support when no other exists, and to which one also gives support when needed. Therapy should also encourage independence in clients but foster the interdependence on lineage since it is, after all, the only social security system still in place in most African countries.

The very survival of lineage or family depends also on the success of individuals within the lineage. Thus the rules of how wealth is shared and what is common wealth will have to be interpreted anew for and by each family.

But would the building of social support networks other than those built on lineage be more advisable, and would these pass the test of time and misfortune?

Some real concerns remain about the impact of the transitory nature of Ghanaian society on illness conceptions and treatment preferences. Will illness cease to be seen within a family context? Will it be possible to successfully educate a client about social relationships outside the context of witchcraft, i.e, to locate conflict within the social world
rather than the mesocosm? What other variables impact on treatment preferences of Ghanaians today? These are among the questions that this study addresses.

In the sections immediately prior to this, I have examined etiology of illness from African anthropological and socioeconomic perspectives. Neither of these perspectives assumes an underlying personality structure as a basis for the causal beliefs which Africans hold for illness. In the next section, the question of personality structure as it presumably arises from living in a traditional society will be examined. The assumed relationship between such personality and treatment suitability will also be examined.

**Traditional society, personality, and treatment suitability.**

Because of the communal nature of many traditional societies, traditional peoples have been broadly defined as possessing a certain cultural 'personality'. For instance Oyewumi (1986) described the 'personality' of the Nigerian as one of mystic contemplation, comforting dependency, effortless satisfaction, and omnipotence of thought (magical thinking). According to Oyewumi, the Nigerian suppresses the drive for individual autonomy because of the patriarchal extended family system and externalizes values and thoughts to the group. Furthermore, the Nigerian is also reportedly without self-criticism, guilt, and rarely introspects. Oyewumi further described Nigerians as strongly identifying with the group, and as showing accommodation to group needs. He thus postulated the
following major implications for therapy with Nigerians: (a) that insight oriented therapy would be difficult and ill-advised in the absence of self-criticism and introspection; (b) that methods in orthodox therapy that require a patient to self-examine may lead to conflict within the patient, which is usually denied in Nigeria, or may lead to examination and challenging of the beliefs of some of the tenets of the culture; (c) that there is the tendency within the culture to project, and externalize thought; (d) that expectation of benevolent authoritarian treatment may lead to confusion in a therapeutic milieu that asks clients to make choices; (e) that since emotional dependency is encouraged, people accept help more readily from others, and even expect it; (f) that beliefs concerning the etiology of illness (sorcery, witchcraft) lead to anxieties regarding punishment for success and enormous guilt at abandoning the old ways.

In much the same vein, Varma (1988) described the "cultural personality" of East Indians and recommended that therapy for this population involve directiveness on the part of the therapist, and that therapy be brief, crisis-oriented, supportive, and flexible. She also recommended eclectic therapy tuned to cultural and social conditions with less emphasis on dynamic interpretation, and greater use of suggestion and reassurance. Furthermore, she suggested that therapy be blended with religious beliefs.

Oyewumi and Varma's descriptions of the 'Nigerian' and 'East Indian' personalities are plausible, but untested. For
example, is the tendency to externalize thought restricted to the interpersonal domain? Does it exclude the ability to self-examine? Is this 'personality' prevalent among all Nigerians and East Indians or are there modifying variables?

In essence, Oyewumi and Varma describe a 'communal-living personality'. Ghana consists of several ethnic groups, some of which share historical and cultural ties with some Nigerian ethnic groups. The two countries also have similar pre-colonial, colonial and post-independence historical experiences. Oyewumi's "Nigerian" or communal personality could therefore be applicable to Ghana. However, the communal personality, as described, appears not to have been affected by recent social, economic, and cultural changes. This study therefore looks at the impact of these changes on Oyewumi's cultural personality. For instance it is hypothesized that dependency and externalization of thought are moderated by acculturation, income, and education. This hypothesis is informed by literature (e.g. Doob, 1988) which points out that individuals in changing cultures have been found to maintain both the old subjectivistic orientations and the new acculturated deterministic beliefs.

Furthermore, neither Oyewumi nor Varma discussed the religious sophistication and the social and interpersonal systems upon which the two cultures are based. Neither mentioned African and Eastern psychological traditions, nor how similar in fact these beliefs and expectations may be to those held by people in Western societies who may have the same
socioeconomic standing as the clients observed by Varma and Oyewumi.

Romme (1987), for example, notes that the uniformity in the socioeconomic status of the majority of patients at a University Psychiatric Hospital in Zimbabwe resulted in mental health professionals ignoring stress due to sociological factors, and focussing exclusively on biological concomitants of illness. Romme pointed out that stresses were often due to the sociopolitical structure which may have led to professionals feeling powerless to intervene. Some successful interventions which Romme and his colleagues used were the establishment of social support, financial assistance, and interventions with the extended family. The success of these social and economic based interventions support Mullings's writings of the importance of the economic models of a people in their illness conceptions and the treatments that become acceptable to them, and also show the reality of survival as interdependence on the extended family unit. This offers a more plausible hypothesis than the assumption that traditional peoples have one type of personality: one characterized by dependency, such as suggested by Oyewumi and Varma. Thus, in this study, the impact of socioeconomic and cultural factors on personality, beliefs, and treatment preferences will be closely examined.
Illness manifestation and symptom reporting

The review of literature on etiology of psychopathology would not be complete without mention of cultural manifestation of illness.

Differences in the manifestation of mental distress have been reported, and have led to the questioning of the applicability of DSM-III-R type diagnoses in Africa. Kerson and Jones (1988) reported that 81% of 80 patients at a major psychiatric teaching hospital in Zaire were diagnosed by DSM-III as having schizophrenia (20%), schizophreniform (8.8%), schizoaffective (3.8%), and affective disorders (38.8%). Of interest is the report that among the manic, schizophrenic and schizophreniform patients, religious delusions were the most often reported type of delusions, followed by persecutory, and then delusions of control. The religious delusions were all related to Christian beliefs. Lamensdorf (1990) has suggested that it is in the area of religion that the clash between the old beliefs and new is most often observed.

Kerson and Jones (1988) reported that a typical patient comes to hospital in Zaire with pressured speech, insomnia and agitation, and frequently out of control. Such overactivity is socially disruptive and unacceptable, and hence more of such cases are reported than are cases which display social withdrawal.

According to Nikelly (1988), African clients usually report the somatic manifestation of depression rather than the cognitive or affective. He wrote that in Western culture,
individualism is the focus and individualistic striving acceptable and admired. Thus problems and frustrations that arise out of the individual's strife against society are acceptable. In Traditional cultures, however, the individual will is not as important as the will or well-being of society and thus expression of such strife is not easily acceptable. Thus according to Nikelly, this is the reason for the somatic rather than affective manifestation of distress.

Numerous case reports in the literature on Africa attest to such somatic manifestation of distress. Morakinyo (1985) categorized his cases of phobias and what would probably be classified by DSM-III-R as generalized anxiety disorders, into a 'hostility related phobic anxiety' group and a 'pathophobic' group. Among the 'hostility' group, he found conflict with and fear of relatives as the most frequently reported fears. The primary symptoms accompanying these fears were bodily symptoms (80%), and sleep disturbance (20%). Among the pathophobic group, there were reports of fears regarding physical damage to the body, and the reported symptoms included movement of foreign objects in the affected body area. This could be classified as a Delusional disorder, somatic type by the DSM III-R.

Thus it has been widely reported that the most common presentations of fear and depression in Africa are somaticized. However, are these reports of a somatic nature, or is the language used to describe fear and depression metaphorical? If these reports really are of somatic symptoms, could they refer
to real somatic symptoms which accompany psychological distress, such as exists with the vegetative symptoms of depression, or could patients be responding to the hospital setting in which they find themselves?

It is also apparent from the literature that reported symptoms may not be as easily classified by Western diagnostic systems, although more blatant cases such as those reported by Kerson and Jones (1988) may be. This may be because as symptoms get less severe, they may be under greater voluntary control, and therefore more influenced by the society's expectations and beliefs. This is also true of the Western world, where DSM-III-R reliability decreases as the symptom profile deviates from the typical or prototype set by the criteria. Perhaps the addition of a cultural axis to the DSM-IV would be useful for pluralistic societies such as Canada and the United States.

**Parallel Western Psychological Concepts**

In the given definition of acculturation, the third element of importance, according to Berry et al. (1986), is the impact of acculturation on psychological characteristics of the target population. The variables most often used to describe African societies are perception and locus of control (Doob 1988), dependency, autonomy, paranoid ideation (Oyewumi, 1986), and somatization of illness (Nikelly et al., 1988).

In the following sections, the focus of the literature review will turn to these constructs as they have been studied in the North American psychological literature.
Causal attributions and perceptions of control.

The distinction between attribution style for past events and locus of control for future events is crucial to the cross-cultural literature. Non-Western cultures have been described as having little sense of personal control because they score high on scales which measure external locus of control via attributions of causality. Examples of such beliefs of causality are;

".....
'uncontrollable forces' that 'restrict and dominate people's lives' (Burma, Colombia, Egypt, India).
the will of God determining family size or in taking pills blessed by God (women in Gujarat state, India)
certain experiences (e.g., seeing a snake) and in specified days and months as forecasts of future events (Somalia)......
attributing the source of disease to supernatural factors (e.g., witchcraft or ancestors) (the Ga of Ghana)"

Doob (1988).

Petersen (1987) wrote that the internality of causal attributions for past events and the internality of perceptions of control for future events are conceptually distinct and perhaps independent constructs. For instance, a person could conceivably have causal attributions that are internal and yet have an external locus of control with regard to his or her ability to influence outcome.
It is possible that in using single and uni-dimensional measures of control, researchers have been unable to determine whether they were measuring causal attributions or perception of control. In fact Petersen (1987) points out that the common measures of attribution style and locus of control often do not distinguish between the two concepts. It is therefore not surprising that they have less predictive power in the domain of behavior than they would otherwise have had.

**Psychological Control**

Control itself is conceptualized in different ways. For example, according to Janoff-Bulman and Lang-Gunn (1988), the Internality dimension may actually consist of behavioral and characterological self-blame. On the other hand Weisz, Rothbaum and Blackburn (1984) have conceptualized control not in terms of attribution, but in terms of a feeling of being in control of existing realities. Weisz et al. (1984) postulated two paths to feeling in control: primary and secondary control. In primary control, individuals enhance their rewards by influencing existing realities by acts involving personal agency, dominance, or even aggression. These acts are often intended to express, enhance, or sustain individualism and personal autonomy. In secondary control however, individuals enhance their rewards by accommodating to existing realities often by acts that limit individualism and personal autonomy but maximize satisfaction or goodness of fit with things as they are. Weisz et al. assert that rather than opting
exclusively for one form of control or other, people strive for some primary control and some secondary control, thus establishing a kind of primary-secondary ratio. The predominance of one form of control over the other is hypothesized to be influenced by an individual's background, experience, and culture. Thus Weisz et. al. argued that primary control is considered very desirable among North Americans, while secondary control, they hypothesized, was more typical of Japanese culture.

Azuma (1984) responded to this purely conceptual paper by citing examples from Japanese socialization practices which encourage children to yield in good grace during conflicts. Azuma also remarked on the different forms of yielding which reflect maturity and self-control, resignation, love, and empathy. Thus the concept of secondary control is necessarily heterogeneous in a culture such as Japan, whereas the concept of primary control is less interesting a concept in such a cultural setting.

Kojima (1984) on the other hand, asserts that primary forms of control are also common in Japanese culture, only expressed differently. For example, existing realities may be controlled indirectly by asking someone else to intervene. Therefore as assessed by Western concepts of primary control, these indirect forms of 'operant' control strategies are often missed, dismissed outright, or misinterpreted as secondary control.
The ideas and exceptions given by Azuma (1984) and Kojima (1984) regarding different forms of control are applicable to Africa. African socialization also emphasizes identification with the group and yielding to resolve conflict, while exerting control indirectly. It is possible that in focusing on assessing primary control strategies in non-Western cultures in the same ways as one would assess them in Western cultures, the research has presented a very distorted view of non-Western control concepts.

**Locus of Control**

Unlike the Weisz et al. conceptualization of control, Rotter's (1966) conception of locus of control was developed to help refine predictions of how reinforcements change expectancies:

"When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in **external control**. If the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this as belief in **internal control**" (Rotter, 1966, p. 1)

In Rotter's formulation, locus of control is a uni-dimensional and situational construct and can predict behavior if the following parameters are known: the value of particular reinforcements to the individual, his or her psychological situation, and available alternative courses of action. The
assessment of these parameters and their definition however, were not clearly specified by the theory, and thus not accounted for in much of the subsequent research, resulting in weak predictive validity of the locus of control construct.

Other problems included lack of generalization across time and situations (Lefcourt, 1982; Rotter, 1975), and the unidimensional nature of the Rotter Internal-External (I-E) Scale.

The multi-dimensional formulation of locus of control

Paulhus and Christie (1981) reviewed work done by factor-analyses of the Rotter I-E scales. They stated that such analyses yielded dimensions interpreted on the one hand as the degree to which specific external forces control the individual (e.g., just world, difficult world, chance, powerful others), and on the other end, one central core (the internal end) that opposes all these external forces. Other factor analyses of the entire domain of perceived control such as Coan's (cited in Paulhus & Christie, 1981) have yielded clusters based on the domain of behavior such as sociopolitical activity, interpersonal behavior, personal achievement, and self-control. Based on this, Paulhus et. al., (1981; 1990) conceptualized three spheres of activity within which an individual has expectancies of control: personal achievement, control of the interpersonal world, and the sociopolitical environment. They developed the Spheres of Control scales which have been extensively used. The scales are composed of 30 items, are in a Likert scale format, and provide a profile of an individual's
perception of control across the above mentioned three behavioral domains.

As noted above, (Azuma, 1984; Kojima, 1984; Weisz et al., 1984) cultures differ in what are acceptable forms of exerting control in the interpersonal realm, and the importance they place on interpersonal relationships, as well as whether or not they prize interdependence over autonomy. Cultures also differ greatly over the actual political contribution of each individual, a factor which is likely to affect perception of control.

The multi-dimensionality of locus of control is also apparent in the target area of health. Wallston and Wallston (1981) devised a multi-dimensional measure of locus of control of health with three scales; 'personal control', 'chance', and 'powerful others'. 'Chance' and 'powerful others' are measures of externality, and are positively correlated but share only 26% of the variance. Unfortunately, the scales do not predict preventive health behavior in healthy populations although they predict compliance with suggested health behaviors in chronic patients (Wallston and Wallston, 1981). Wallston and Walston encouraged researchers to make up simple and specific health locus of control scales to target specific questions. This study heeds this advice, and such a scale was constructed to assess causal beliefs of mental disorder, and preferences of degree of control in therapy situations.

Thus it would appear that to employ a uni-dimensional scheme in the classification of perception of control on the
basis of attribution for past events is oversimplified as is the attempt to classify a group as external or internal on a broad and uni-dimensional measure of locus of control such as Rotter's scales. It seems more appropriate to reconsider the construct as the situational construct it was designed to be, and to give the conditions and the specific domains under which a group could be external or internal, as Paulhus and Christie (1981), and Paulhus and Van Selst (1990) have done.

Pertinent methodological and theoretical issues on Cross-Cultural Psychology

Often, papers written on the sociology and psychology of Africa consist of collections of myth, legend, and cultural practices, and interpretations of these. Although they offer some insight, the conclusions they draw remain as yet untested. There are also thought-provoking analyses of field studies, with little attempt at quantification and measurement.

In contrast, mainstream North American culture is extensively documented through both field and laboratory studies. The psychological research, however, has the tendency to treat its subjects as though they were devoid of a social and cultural background, and as though single constructs could describe the total persona of these people.

The literature on African culture is the converse. It looks at the sociocultural variables, and ignores the individual differences. When the literature focuses on individual differences, it often compares individuals on
concepts developed from a Western perspective (Ho, 1988),
concepts which often cast negative aspersions over traditional
people's thinking and way of life. The above concerns also
highlight the underlying differences between the methodologies
of cross-cultural and mainstream psychology (Clarke, 1987).

The study of cross cultural psychology falls under the
hypothetico-inductive approach. Hypotheses are formulated as
minor generalizations of observed 'facts', and the explicit
theoretical superstructure is allowed to take shape more or
less as an afterthought. In cross-cultural psychology
therefore, there appear to be no over-arching theories
.....yet. Whether or not there will be or need be is open to
debate, time, and increased interchange of ideas among
psychologists in different cultures (Paranjpe, Ho, & Rieber,
1988).

This study adopts as its philosophical basis that of
constructive alternativism. To this end, the social reality of
the Western world as regards the concept of control has been
looked at through the lens of attribution psychology and locus
of control formulations. The social reality of Africa has been
explored from the anthropological and socioeconomic
perspectives.

The hypotheses of this study, are drawn from the
generalizations of psychologists, sociologists, and
psychiatrists who have written about Africa. All the studies
with the exception of a few (e.g., Beiser, 1980; Caldwell,
1982; Mullings, 1984) are descriptions of case studies, or
employ the phenomenological anthropological approach. There have been very few quantitative analyses of personality characteristics, causal beliefs, or treatment preferences in Africa in the clinical psychology literature. There have been few quantitative attempts to examine the impact of social change on causal beliefs and treatment style and goal preferences. This study will attempt such an analysis.

Summary and conclusions

In Africa, the personal impact of social change on individuals has rarely been taken into account in the psychological literature. The modifying effects of variables such as education, income, and acculturation on personality, causal beliefs, and treatment preferences have rarely been assessed quantitatively. The literature suggests that people undergoing acculturation hold both the traditional beliefs of their forefathers, and the new beliefs of the impacting culture. The relative strengths of these two sets of beliefs and the degree of integration should give a measure of the change process, and would be affected by factors such as amount of exposure to the new culture. In Ghana exposure is usually through formal education, income and increased social status.

High education and socioeconomic status are usually associated with more social influence. Thus possibly, such increased influence (when compared with less social standing) may lead to greater perception of control and autonomy, which in turn would lead to greater preference for goals that enhance
personal responsibility and growth, as well as for participation in decision making situations.

Figure I below summarizes the relations among psychological, cultural, and demographic variables, attributions, and treatment preferences. The main objectives of this study are to quantify these relations, and assess the association between treatment choice and personality-type variables. It is not assumed that the relations are unidirectional. Ultimately, the goal is to be able to propose models of mental health care for various groups of the population based on the most salient independent variables that this research identifies.

Figure I: Summary of relations among research variables.

Causal Beliefs

Income
Education
Traditional values

Treatment preferences
Models for mental health

Psychological factors
e.g. locus and spheres of control
autonomy
dependency
interpersonal sensitivity
Hypotheses

1. Regarding the association between social change and causal beliefs and treatment preferences, it is expected that
the more highly educated, the higher the socioeconomic status, and the greater the degree of acculturation, the stronger will be
a. the belief in an internal cause of illness,
b. the preference for individual goals in treatment, and
c. the preference for a participatory style of treatment

2. Regarding the effects of personality on causal beliefs and treatment preferences, it is expected that
greater perception of Control and Autonomy will be associated with
a. belief in the internal causation of illness,
b. preferences for individual goals, and
c. preference for participation in treatment.

Dependency and Interpersonal sensitivity will be positively correlated with
d. belief in the external causation of illness
e. a preference for directiveness in treatment and
f. the strengthening of family bonds

3. Regarding the relation between the constructs of psychological control and Dependency, it is expected that
Autonomy and Control will be uncorrelated with Dependency.
4. Regarding the somatization of illness, it is expected that mode of anxiety expression will be associated with degree of acculturation and years of education.
METHOD

Two pilot studies were carried out prior to the main study to determine the suitability of measures developed in North America for Ghana. In the first study, Canadian and African graduate students at the University of British Columbia were compared on causal beliefs regarding illness, treatment preferences, and constructs of control and dependency. Following this study, the measures were modified for greater suitability in the Ghanaian culture, and considerably shortened. The seven-point Likert scales were reduced to five points.

In the second pilot study, a group of 14 Ghanaian adults were sampled with the modified research protocol. Their reported difficulties with the wording of the questionnaires formed the basis of the final changes made to the questionnaires.

The final version of the research protocol was then administered to 375 teachers from three different types of communities (urban, transitional, and rural) and all ten regions of Ghana.

The following sections comprise descriptions of the measures used in the study, reports on the two pilot studies, the resulting changes to the research protocol, and the method of the main study.
Measures

Assessment of beliefs regarding causation of illness and treatment preferences.

A measure was developed to assess beliefs of illness causation. Four vignettes were composed which described 'experiences' of depression, panic disorder, schizophrenia, and dependency personality disorder. Each vignette was made up of seven symptoms which form the prototype of each symptom cluster described by the DSM III-R. The vignettes were equated for number of words, reference to time, frequency, and severity as far as was possible.

The four 'illness' vignettes were selected to reflect a wide spectrum of mental illness affecting mood (depression), body functions (panic disorder), personality (dependent personality disorder), and cognitive and behavioral deficits (schizophrenia).

Panic disorder

Panic disorder was selected because of the very somatic nature of the symptoms. According to Nikelly (1988), somatic symptoms are more socially acceptable to Africans than are cognitive or emotional symptoms, hence the tendency to report somatic symptoms in times of mental distress. The panic disorder vignette comprised mostly somatic symptoms to determine if these would be perceived as having different causes than illness considered more "mental".
Depression

Depression, on the other hand, is defined as a mood disorder, and diagnosed primarily for the affective and mood symptoms that accompany it. It has however been widely reported by professionals working in Africa that Africans report less of the affective than the somatic problems associated with depression. We thus included primarily the affective components. This was to examine the difference, if any, between reported causation of panic (somatic) and depression (affective).

Schizophrenia

Schizophrenia was added because it is the best known description of 'madness' in lay terms, and the most obvious form of psychopathology which the Ghanaian public identifies.

Dependent Personality Disorder

Interdependence better describes the collective nature of most African societies than the term dependency. Dependency in its most extreme form must create problems in both African and Western societies. This vignette was presented to learn whether the Ghanaian population would indeed find Dependent Personality Disorder problematic.

The vignettes are reproduced in Appendix 1.
for the effect of social change on causal beliefs, treatment preferences, and personality variables are discussed, as well as pertinent issues derived therefrom for health care planning and research in Ghana.
Response Format

After each vignette, several questions regarding causality and treatment preferences were posed with seven-point Likert scales (1= strongly disagree 7= strongly agree.) As well, an open ended format was provided in order to tap as wide a field of causal attributions as possible.

Assessment of therapy preferences.

In this part of the protocol, we examined the popular notion in the literature that people from communal or traditional societies would be more comfortable with goals which strengthen bonds within the family rather than strive for individuality. We also examined whether they preferred to be active participants in treatment or wanted therapists to be directive.

Two vignettes describing styles of therapy were composed. These represented 'directive' and 'participatory' styles in therapy. Two vignettes also described different goals in therapy: 'individual' and 'family'. For the purposes of this study, the operational definitions of these terms are as follows:

Participatory style

The therapist encourages the client to participate fully in determining the goals of treatment, and offers the client alternatives with regards to treatment approaches, techniques, solutions, etc.
Directive style
The therapist determines the goals of treatment, strategies, and solutions, and takes charge of therapy.

Individual goals
Goals in therapy which emphasize independence, responsibility, assertiveness, and more internal control.

Family goals
Therapy which emphasizes strengthening family ties, increasing sharing, reliance on, and nurturing among family members.

Order effects
The order of presentation of the vignettes was balanced across groups to counteract order effects. Within each group, four order sequences were selected so that each story was presented in each position an equal number of times. Similarly therapy styles and goals appeared in each position an equal number of times, using a modified Latin-square design.

Dependent variables
Each vignette on mental illness and treatment yielded several measures of beliefs regarding illness causation and treatment preferences.

Thus for each mental disorder, there were three seven-point scales on causation (family conflicts,
witchcraft/powerful external forces, and bio/genetic/chemical) and four scales on treatment preferences (directive, participatory, individual goals and family strengthening goals), making 28 dependent measures.

For the sake of parsimony the treatment preference scales were combined into two scales: Goals and Styles of treatment. For this study, the two scales were assumed to be unidimensional. The two variables making up each scale were assumed to lie on opposite ends of each dimension. The Goal Scale for example, had on its low end, the preference for strengthening family bonds, while on the high end lay the preference for goals which promote personal growth. If both goals were thought desirable, then the score would lie between the extreme ends.

The Goal scale was composed by reversing subjects' rating on Family goals (subtracting each subject's rating on Family goals from eight, six for the main study) and adding this to the subject's rating for individual goals. This sum was then divided by two to get the average rating for goal preference on an individual-family preference scale. Thus a score greater than 3.5 (2.5 in the main study) on the Goal scale, signified a high rating or preference for Individual goals in treatment, while a score below 3.5 signified a preference for family goals in treatment.

For the Style scale, each subject's score on the Directiveness scale was reversed and added to his or her rating on Participation. The average of the two was then taken as the
subject's score on the Style scale. Thus a score above 3.5 (2.5 in the main study) indicated a preference for participation in treatment. A score below 3.5 indicated a preference for directiveness on the part of the therapist.

To explore the specificity of causes and treatment preference to illness type, it was important not to collapse scales across vignettes, but to include them separately in a repeated measures analyses of variance. This will be discussed in the section on results below.

Assessment of Acculturation: The Suinn-Lew Asian Self-Identity Acculturation Scale (SL-Asia)

The SL-Asia is composed of 21 multiple choice questions which cover language, identity, friendship choice, and attitudes. The questions thus assess behaviors and preferences. The items are scored by summing across the forced choice items for all 21 items and is reported to have a reliability coefficient of .88 (Suinn, Rickard-Figueroa, Lew, & Vigil, 1987)

A mean item score of five indicates strong identification with Western cultural norms, while a mean of below 2.9 signifies strong identification with Asian cultural norms (Lai & Linden, in press). Suinn et al. (1987) suggested a third, bicultural group, members of which report identification with both Western and Asian cultures.

For this study, progressively extensive modifications were made to the SL-Asia as it was used on an African and a Canadian
sample, and then on a Ghanaian sample. In the resulting Acculturation Scale, the terms African and then Ghanaian were substituted for Asian. The Suinn-Lew (SL-Asia) itself had similarly been adapted from the Acculturation Rating Scale for Mexican Americans (Suinn et al. 1987).

In the current study, an item concerning the generational structure of the respondent's family was dropped. The response options of three questions were modified so that for these items, there were three instead of five response options (See Appendix 1).

The term "acculturation" and the expression "identification with traditional values" are used interchangeably in this report, one being the converse of the other in the way the construct is measured. A low score on the scale represents a strong identification with traditional African norms, while a high score represents acculturation or identification with Western cultural norms. Further changes to the scale are discussed in the two sections on results of the pilot studies below.

Assessment of symptoms under distress: the Cognitive-Somatic Anxiety Questionnaire (CSAQ)

The CSAQ was devised by Schwartz, Davidson, and Goleman (1978) to discriminate between cognitive and somatic anxiety. The scale has 14 items, seven of which describe cognitive symptoms and seven somatic symptoms characteristic of anxiety.
Respondents rate these items from 'not at all true' of their experience to 'very true' on a five-point Likert-type scale.

Recent research on the structure of the CSAQ by Steptoe and Kearsley (1990) confirmed that the cognitive and somatic subscales are relatively non-overlapping and internally consistent (Cronbach's alpha=.80 and .63, respectively). The external validity was reported to be good as suggested by its success in matching subjects to either cognitively or somatically-oriented treatment programs (Norton & Johnson, 1983).

Assessment of Interdependency: The Depressive Experiences Questionnaire (DEQ)

The DEQ was developed by Blatt, D'Afflitti, and Quinlan (1976). Its 66 Likert-type items tap attitudes toward the self and interpersonal relations rather than depressive symptoms. The items load onto three factors which are labeled Dependency, Self-Criticism, and Efficacy.

Blatt et al. (1976) suggested a complex system of differential weighting of factors in the scoring of the questionnaire for males and females. However Welkowitz, Lish, and Bond (1985) have shown that simply adding up the scores on the Likert scale for both men and women, and shortening the questionnaire leaves the scale with good psychometric properties: Cronbach's alphas of .81, .86, and .72 for the dependency, self-criticism, and efficacy scales, respectively.
The Dependency subscale was found to be significantly correlated with the Beck Depression Inventory, \( r = 0.42 \), and with the Bem Sex Role Inventory F scale \( r = 0.32 \) by Welkowitz et al (1985).

In the current pilot study, the Dependency subscale (composed of 33 items) was the measure of choice particularly because the items were standardized with a non-patient population. A high score measures the tendency to be dependent on significant others, to have reactions of frequently perceived threat of abandonment, and experiences of emptiness, loneliness, and helplessness. A medium level score could be conceived as Interdependency. For the second pilot study and the main study, the shortened version (20 items) suggested by Welkowitz et al (1985) was used.

**Assessment of Autonomy: The Sociotropy-Autonomy Scale**

According to Beck, Epstein, Harrison and Emery (1987), individuality is an expression of values, goals, and drives relevant to self-definition, mastery of bodily functioning, and acquisition of power and control over the environment. It was thus hypothesized that stressors that thwart an autonomous individual's achievement of goals will lead to depressive mood. Such a person would prefer collaborative problem-solving to directiveness in therapy, and a focus on increasing mastery experiences.

The autonomy scale was constructed from the self reports of patients. A factor analysis by the authors of the scale
yielded three factors: individualistic or autonomous achievement, mobility/freedom from control by others, and preference for solitude. The scale consists of 30 items scored on a 5-point scale and has good internal consistency, with Cronbach's alpha of .83. For the first pilot study, the scale was extended to a seven-point scale to ensure consistency of responding across all scales.

Assessment of Interpersonal Sensitivity: The SCL-90.

The SCL-90 is a multi-dimensional symptom self-report inventory developed by Derogatis, Lipman, and Covi, (1973). It comprises 90 items, each measured on a five-point distress scale from 'not at all' to 'extremely'. The SCL-90 has been shown to have convergent validity with the MMPI (Derogatis, Rickels & Rock, 1976). It has norms both for clinical and normal samples.

The entire scale comprises nine symptom constructs, two of which are interpersonal sensitivity and paranoid ideation. Paranoic ideation represents paranoid behavior fundamentally as projective thought with hostility, suspiciousness, grandiosity, and a fear of loss of autonomy. The Paranoid Ideation Subscale consists of six items and is the only measure of its kind known to the author which approximates the need to constantly check one's social environment in collective societies where interpersonal relations are extremely important. Thus the paranoid ideation subscale is therefore used in the current study to explore the interpersonal sensitivity which is
reported to arise out of communal living. The paranoid ideation subscale is the preferred measure over the Interpersonal Sensitivity Subscale. This is because the latter measures a construct which, according to Derogatis and Cleary (1977), is consistent with the traditional notion of the "inferiority complex" and highlights feelings of personal inadequacy, self-deprecation, and acute self-consciousness. This conceptualization of interpersonal sensitivity therefore does not capture the interpersonal sensitivity which characterizes the "dependent" cultural personalities described by Oyewumi (1986) and Varma (1988). Hence the construct of interpersonal sensitivity in collective societies will be measured by the Paranoid Ideation subscale, and henceforth referred to throughout the thesis as interpersonal sensitivity.

Assessment of Perception of Control: The Spheres of Control Scale.

The Spheres of Control Scale was first published by Paulhus and Christie (1981) and has since undergone two revisions (Paulhus 1983; Paulhus & Van Selst, 1990). The scale comprises three scales of ten items each of which assess three components of perceived control: personal control, interpersonal control, and socio-political control. The subscales have norms from both student and non-student populations and the coefficients for the total score range from .75 to .83 (cited in Paulhus et al., 1990). With mixed sex groups, the highest alphas for each of the subscales are .65, .85, and .80.
respectively. Correlations with other similar measures as cited in Paulhus et al.'s (1990) compilation of data are moderately high: personal control correlates positively with achievement internality \((r=.36)\), academic self efficacy \((r=.44)\), and Rotter's "Predictable World" \((r=.42)\). The interpersonal scale correlates negatively with Davis's personal distress \((r=-.36)\) and positively \((r=.44)\) with Extraversion. The socio-political scale correlates negatively with Machiavellianism \((r=-.24)\), and appears to have the lowest convergent validity of the three subscales.

There are rather large overlaps of variance among the subscales. However, the scales allow the assessment of a profile of perception of control in various 'spheres' of an individual's life. The easy format and language in which it is written makes it very appealing.

Assessment of Social Support: the Emotional Support Scale

The Emotional Support Scale by DeLongis, Folkman, and Lazarus (1988) provides an index of perceived support among the members of one's social network.

Subjects rate their perceptions of the availability of emotional support from up to eight members of their network on three dimensions; trust, caring and accessibility. These dimensions of emotional support are rated on a five-point Likert-type scale (not at all, slightly, moderately, very, and extremely). The sum of ratings across the three dimensions is divided by the number of network members to give a measure of
the average amount of emotional support received from network members.

The internal consistency (Cronbach's alpha) of the scale is reported as .54. The emotional support scale is negatively correlated (p < .05) with daily hassles and with mood changes on the same day (Delongis et al., 1988).

**Pilot study 1**

Beliefs regarding illness causation and treatment preferences of African and Canadian graduate students: the issue of sensitivity of measures across cultures.

**Subjects**

Subjects were 23 Canadian and 29 African graduate students of the University of British Columbia. They were contacted through graduate student representatives of their various departments and through the African Student's Association. The two groups were equivalent on years of education and were approximately matched on their courses of study.

The ratio of male to female was not equal in the entire sample and reflected the ratio of male to female in higher education.

The African group consisted of six female and 23 male graduate students. The Canadian group comprised eight female and 15 male graduate students. All subjects were in departments of study outside of health and related disciplines (including Psychology). All the African students were born and
raised in East and West Africa. Three out of the 23 North Americans were raised outside Canada (one in the U.S. and two in England).

Method

Subjects received a research protocol which comprised two parts. The first part was composed of a questionnaire on demographic variables, acculturation, and psychological measures of dependency, interpersonal sensitivity, autonomy, the CSAQ, and emotional support. The second part of the protocol assessed beliefs regarding illness causation and treatment preferences.

Subjects were given a letter of consent which also explained the procedure, and were given the questionnaires to do in their spare time. Usually the completed questionnaires were returned within two days. All except one Canadian graduate student returned completed questionnaires. One African student did not complete the part of the questionnaire which was related to therapy preferences.

Results

1. The effect of culture on causal beliefs and treatment preferences.

The experimental design was conceptualized as a between-within design, with two groups (between factor: continent of origin) by four repeated measures (vignettes on mental illness). The dependent variables were three causes of illness
(family conflicts, biological/chemical/genetic attributions, and witchcraft or powerful external forces), and two types of treatment: participant/directive, and individual goals/family goals.

The data were analyzed with MANOVA first, with a criterion of p = .05, followed by univariate ANOVAs with p levels set at .01 and Tukey's post hoc comparisons with p levels set at .05. The deliberate use of a p value of .05 for the post-hoc tests was to balance the likelihood of type 1 and type 2 errors. This was deemed necessary in the pilot study primarily because of the small sample sizes involved.

Mauchley's test of Sphericity resulted in a W = .001, Chi-squared = 295.08, p < .001, showing non-sphericity of the model, i.e., unequal variances over repeated measures. Thus post-hoc Tukey tests were performed slightly differently. The mean square within (MSe) was calculated for each contrast as the pooled variance of the two means in a contrast. As well, the analyses were conservative with the F values tested only by adjusted degrees of freedom (the Conservative test) to take into account non-sphericity.

**MANOVA Results**

There was no significant main effect for continent of origin F (5, 44) = .44, but the interaction between continent of origin and type of illness was significant F (15, 416) = 2.86 p < .05 such that differences between the groups was dependent on type of disorder. There was a significant main effect for type
of mental illness $F(15, 416)=36.03$, $p < .001$, such that subjects' causal beliefs and treatment preferences were specific to or dependent on type of disorder. (See table 1 for a summary of the univariate ANOVAs).

Table 1:

ANOVA results: 2 (Continent of origin) X 4 (TYPES OF DISORDER).

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variable</th>
<th>MS</th>
<th>$F$</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTINENT OF ORIGIN</td>
<td>Causes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Witchcraft</td>
<td>22.05</td>
<td>4.15</td>
<td>1, 50</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>family conflict</td>
<td>30.32</td>
<td>3.97</td>
<td>1, 50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>biogenetic</td>
<td>.85</td>
<td>.09</td>
<td>1, 49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>goal</td>
<td>3.16</td>
<td>.99</td>
<td>1, 49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>style</td>
<td>0.28</td>
<td>.07</td>
<td>1, 49</td>
<td></td>
</tr>
<tr>
<td>TYPE OF ILLNESS</td>
<td>Causes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Witchcraft</td>
<td>12.27</td>
<td>11.16</td>
<td>3, 150</td>
<td>**</td>
</tr>
<tr>
<td></td>
<td>family conflict</td>
<td>10.54</td>
<td>4.13</td>
<td>3, 150</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>biogenetic</td>
<td>25.48</td>
<td>11.45</td>
<td>3, 147</td>
<td>**</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>goal</td>
<td>24.57</td>
<td>18.33</td>
<td>3, 147</td>
<td>**</td>
</tr>
<tr>
<td></td>
<td>style</td>
<td>27.89</td>
<td>14.29</td>
<td>3, 147</td>
<td>**</td>
</tr>
<tr>
<td>CONTINENT X TYPE OF ILLNESS</td>
<td>Causes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Witchcraft</td>
<td>2.91</td>
<td>2.65</td>
<td>3, 150</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>family conflict</td>
<td>2.16</td>
<td>.84</td>
<td>3, 150</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>biogenetic</td>
<td>8.87</td>
<td>3.98</td>
<td>3, 147</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>goal</td>
<td>1.08</td>
<td>.81</td>
<td>3, 147</td>
<td></td>
</tr>
<tr>
<td></td>
<td>style</td>
<td>2.25</td>
<td>1.15</td>
<td>3, 147</td>
<td></td>
</tr>
</tbody>
</table>

$+ p < .05$, $* p < .01$, $** p < .001$
Thus significant differences between the means of the two groups were apparent only on two causal beliefs specific to illness.

The African graduate students rated biogenetic causes significantly higher in Panic disorder than did the Canadian graduate students (see table 4). There was a slight difference ($p < .05$) between the two groups on their rating of witchcraft or spiritual causes in schizophrenia (see table 2).

Table 2

Means (SD) of Witchcraft/spiritual scale

<table>
<thead>
<tr>
<th></th>
<th>Canadian</th>
<th>African</th>
<th>entire sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panic</td>
<td>1.30</td>
<td>1.86</td>
<td>1.61</td>
</tr>
<tr>
<td></td>
<td>(0.88)</td>
<td>(1.48)</td>
<td>(1.27)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>1.91</td>
<td>3.21</td>
<td>2.63 *</td>
</tr>
<tr>
<td></td>
<td>(1.76)</td>
<td>(2.14)</td>
<td>(2.07)</td>
</tr>
<tr>
<td>Depression</td>
<td>1.33</td>
<td>1.93</td>
<td>1.65</td>
</tr>
<tr>
<td></td>
<td>(0.70)</td>
<td>(1.67)</td>
<td>(1.36)</td>
</tr>
<tr>
<td>Dependent pd.</td>
<td>1.48</td>
<td>1.62</td>
<td>1.56</td>
</tr>
<tr>
<td></td>
<td>(1.20)</td>
<td>(1.11)</td>
<td>(1.14)</td>
</tr>
</tbody>
</table>

* Significant between group difference, $p < .05$

In general, ratings for belief in spiritual causes in illness were the lowest (compare tables 2, 3, and 4). However, with respect to type of illness, causal belief in spiritual causes were rated highest for schizophrenia, $p < .01$. See Table 2.
Family conflict was thought to be important in the etiology of all four mental disorders as shown by the relatively similar ratings in column 3 of Table 3 below (to a slightly larger extent in depression than the other disorders). The only significant difference between means at the .01 significance level was between ratings on panic and depression.

Table 3. Means (SD) of the Family conflict scale

<table>
<thead>
<tr>
<th></th>
<th>Canadian</th>
<th>African</th>
<th>entire sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panic</td>
<td>4.70</td>
<td>4.14</td>
<td>4.38</td>
</tr>
<tr>
<td>(2.08)</td>
<td>(2.08)</td>
<td>(2.08)</td>
<td></td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>4.61</td>
<td>4.31</td>
<td>4.44</td>
</tr>
<tr>
<td>(2.29)</td>
<td>(1.95)</td>
<td>(2.09)</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>5.91</td>
<td>4.86</td>
<td>5.33</td>
</tr>
<tr>
<td>(1.73)</td>
<td>(1.87)</td>
<td>(1.87)</td>
<td></td>
</tr>
<tr>
<td>Dependent pd.</td>
<td>5.48</td>
<td>4.31</td>
<td>4.83</td>
</tr>
<tr>
<td>(1.41)</td>
<td>(2.07)</td>
<td>(1.89)</td>
<td></td>
</tr>
</tbody>
</table>
Biogenetic causes were thought to be important in the etiology of schizophrenia, panic, and depression, in that order as indicated by means greater than the midpoint of the scales (see table 4 below). Although the mean rating for dependent personality disorder was quite low, the only significant difference between means occurred between schizophrenia and Dependent personality disorder at the .01 level.

Table 4
Means (SD) of the Biogenetic scale

<table>
<thead>
<tr>
<th></th>
<th>Canadian</th>
<th>African</th>
<th>entire sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panic</td>
<td>3.56</td>
<td>4.65</td>
<td>4.17</td>
</tr>
<tr>
<td></td>
<td>(2.08)</td>
<td>(1.70)</td>
<td>(1.94)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>4.65</td>
<td>4.55</td>
<td>4.60</td>
</tr>
<tr>
<td></td>
<td>(2.25)</td>
<td>(2.05)</td>
<td>(2.12)</td>
</tr>
<tr>
<td>Depression</td>
<td>4.09</td>
<td>3.24</td>
<td>3.61</td>
</tr>
<tr>
<td></td>
<td>(2.11)</td>
<td>(2.14)</td>
<td>(2.15)</td>
</tr>
<tr>
<td>Dependent pd</td>
<td>2.78</td>
<td>3.04</td>
<td>2.92</td>
</tr>
<tr>
<td></td>
<td>(1.83)</td>
<td>(2.06)</td>
<td>(1.95)</td>
</tr>
</tbody>
</table>

* Significant Between group difference, p < .05
The mean ratings for all disorders on participatory style were above the mid-point of the scale and indicated a preference for participation over directiveness in treatment (see Table 5 below).

Table 5

Participatory/directiveness scale means and standard deviations

<table>
<thead>
<tr>
<th></th>
<th>Canadian</th>
<th>African</th>
<th>entire sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panic</strong></td>
<td>5.74</td>
<td>5.19</td>
<td>5.44</td>
</tr>
<tr>
<td></td>
<td>(1.28)</td>
<td>(1.59)</td>
<td>(1.47)</td>
</tr>
<tr>
<td><strong>Schizophrenia</strong></td>
<td>4.30</td>
<td>4.12</td>
<td>4.21</td>
</tr>
<tr>
<td></td>
<td>(1.64)</td>
<td>(2.23)</td>
<td>(1.97)</td>
</tr>
<tr>
<td><strong>Depression</strong></td>
<td>5.13</td>
<td>5.61</td>
<td>5.39</td>
</tr>
<tr>
<td></td>
<td>(1.45)</td>
<td>(1.49)</td>
<td>(1.48)</td>
</tr>
<tr>
<td><strong>Dependent pd</strong></td>
<td>6.00</td>
<td>5.95</td>
<td>5.97</td>
</tr>
<tr>
<td></td>
<td>(.98)</td>
<td>(1.31)</td>
<td>(1.16)</td>
</tr>
</tbody>
</table>
Dependent personality disorder received the highest rating on Individual goals of treatment (see table 6). The mean rating on this differed significantly ($p < .01$) from the other mean ratings for panic, depression and schizophrenia. For all disorders except schizophrenia, mean ratings were above 3.5, indicating a preference for goals which increase autonomy.

Table 6

<table>
<thead>
<tr>
<th></th>
<th>Canadian</th>
<th>African</th>
<th>entire sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panic</td>
<td>4.24</td>
<td>3.63</td>
<td>3.90</td>
</tr>
<tr>
<td></td>
<td>(1.48)</td>
<td>(1.04)</td>
<td>(1.28)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>3.50</td>
<td>3.23</td>
<td>3.35</td>
</tr>
<tr>
<td></td>
<td>(1.52)</td>
<td>(1.42)</td>
<td>(1.46)</td>
</tr>
<tr>
<td>Depression</td>
<td>3.83</td>
<td>3.61</td>
<td>3.71</td>
</tr>
<tr>
<td></td>
<td>(1.26)</td>
<td>(1.41)</td>
<td>(1.33)</td>
</tr>
<tr>
<td>Dependent pd</td>
<td>4.93</td>
<td>5.03</td>
<td>4.99</td>
</tr>
<tr>
<td></td>
<td>(1.42)</td>
<td>(1.17)</td>
<td>(1.28)</td>
</tr>
</tbody>
</table>

The results in tables 1 to 6 show that in general, the African and Canadian graduate students gave similar attributions for the four types of disorders. The only significant difference between the groups was that the African graduate students endorsed biogenetic causes slightly more often for panic disorder, and spiritual causes slightly more often for schizophrenia than did the Canadians. Both groups differentiated among the mental disorders in terms of etiology and treatment preference. For instance, for schizophrenia,
participatory style and individual goals were rated lowest when compared with the other three disorders.

The different mental disorders were differentially rated on causation and treatment.

Table 7
Means and standard deviations of Psychological scales

<table>
<thead>
<tr>
<th></th>
<th>Canadian</th>
<th>African</th>
<th>entire sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religiosity</td>
<td>0.56</td>
<td>1.44</td>
<td>1.04</td>
</tr>
<tr>
<td></td>
<td>(0.73)</td>
<td>(0.70)</td>
<td>(0.83)</td>
</tr>
<tr>
<td>Acculturation</td>
<td>82.49</td>
<td>41.97</td>
<td>59.88</td>
</tr>
<tr>
<td></td>
<td>(4.13)</td>
<td>(4.38)</td>
<td>(4.25)</td>
</tr>
<tr>
<td>Spheres of control</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>personal</td>
<td>50.04</td>
<td>48.00</td>
<td>48.90</td>
</tr>
<tr>
<td></td>
<td>(6.44)</td>
<td>(8.96)</td>
<td>(7.94)</td>
</tr>
<tr>
<td>interpersonal</td>
<td>45.43</td>
<td>52.90</td>
<td>49.60</td>
</tr>
<tr>
<td></td>
<td>(10.29)</td>
<td>(7.33)</td>
<td>(9.44)</td>
</tr>
<tr>
<td>political</td>
<td>40.74</td>
<td>43.93</td>
<td>42.52</td>
</tr>
<tr>
<td></td>
<td>(9.42)</td>
<td>(8.82)</td>
<td>(9.14)</td>
</tr>
<tr>
<td>Autonomy</td>
<td>138.48</td>
<td>146.28</td>
<td>142.83</td>
</tr>
<tr>
<td></td>
<td>(16.24)</td>
<td>(18.74)</td>
<td>(17.94)</td>
</tr>
<tr>
<td>Dependency (30 items)</td>
<td>130.39</td>
<td>127.55</td>
<td>128.81</td>
</tr>
<tr>
<td></td>
<td>(22.29)</td>
<td>(22.63)</td>
<td>(22.30)</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>21.17</td>
<td>23.69</td>
<td>22.57</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>(6.23)</td>
<td>(6.41)</td>
<td>(6.15)</td>
</tr>
<tr>
<td>CSAQ (somatic)</td>
<td>21.87</td>
<td>19.86</td>
<td>20.75</td>
</tr>
<tr>
<td></td>
<td>(7.10)</td>
<td>(8.41)</td>
<td>(7.84)</td>
</tr>
<tr>
<td>CSAQ (cognitive)</td>
<td>18.78</td>
<td>20.38</td>
<td>19.67</td>
</tr>
<tr>
<td></td>
<td>(8.33)</td>
<td>(8.16)</td>
<td>(8.19)</td>
</tr>
<tr>
<td>Emotional support (mean)</td>
<td>6.17</td>
<td>5.61</td>
<td>5.86</td>
</tr>
<tr>
<td></td>
<td>(1.70)</td>
<td>(1.91)</td>
<td>(1.82)</td>
</tr>
</tbody>
</table>

* Significant between-group differences, p < .004.
Differences between the two groups on Psychological measures

In order to test for differences on psychological measures, a series of 11 univariate one-way ANOVAs were executed. Bonferroni corrections were made to control for type I error. Thus assuming a family-wise error rate of .05, each comparison was made at the .004 level. Only significant differences are discussed below. See Table 7 above for means and standard deviations.

1. Religiosity: Religiosity was measured as the frequency with which subjects reported taking part in religious activities. The mean for the African group was 1.44 (SD = .70), and for the Canadian group it was .56 (SD = .73, F (1, 48) = 18.95, p = .0001). The African group thus reported more involvement in religious activities than did the Canadian group.

2. Interpersonal Sphere of Control

The mean score for the African group was 52.90 (SD = 7.33) while that for the Canadian was 45.43 (SD = 10.20), F (1, 50) = 9.31, p = .0036. Therefore the African group reported a greater perception of control of the interpersonal sphere of their lives than did the Canadian group. This may be because interpersonal relationships are of greater importance in a collective society than within an individualistic one, or because it may be more socially desirable to have control in that sphere in one culture than in the other. Perhaps people who leave their countries of origin perceive more of an
obligation to learn to get on with others in order to survive in the new culture, than people who remain in their original culture.

3. Acculturation

The African group had a mean of 41.97 (SD = 4.38), and the Canadian group had a mean of 82.48 (SD = 14.45). The two groups were thus culturally distinct groups, $F(1,50) = 205.8, p < .001$.

Discussion

The African group consistently rated slightly more agreement with witchcraft/spiritual causes for illness than did the Canadian group. This trend was, however, not statistically significant. Similarly, the Canadian group consistently rated family conflicts higher than the African group. Again this trend was not statistically significant. Given that the statistical criterion for significance was overly conservative for a pilot study, these two trends suggested that perhaps had the sample sizes been larger, the hypothesized differences between cultures on causal beliefs and treatment preferences could have been significant. From these results therefore, it was inferred that with few modifications and larger sample sizes, the questionnaires would successfully detect differences among groups with different levels of acculturation in Ghana.

The results indicated that individuals believed in multiple causes for different disorders, as well as specificity
of causes to disorders. This may be inferred from the differential ratings of causes for different disorders. They preferred different styles and goals for therapy for different disorders. In other words, it seemed that the sample was quite sophisticated in their thinking about mental illness and treatment. The specificity of causality and treatment to mental illness as well as the multiplicity, reflected the spectrum of models used in the formal psychological literature and thus supports Rogers' (1990) view that psychological theory reflects the common beliefs and sayings of the people it studies. On the other hand, this specificity of thinking regarding mental illness may be a result of the high education level of the sample.

The results indicate that the two groups were distinct culturally and the African group observed significantly more religious practices than the Canadian group. The African group rated themselves as having greater control in the Interpersonal sphere than did the Canadian group.

The two groups did not differ on other psychological measures of control and dependency. Nor did they differ significantly on their treatment preferences. These similarities between groups may have arisen because, although culturally distinct, the two groups were composed of very highly educated individuals. The groups also had small sample sizes, thus limiting the power of the tests to detect differences.
The small sample size limits the inferences which may be made from these results, and so discussion will be deferred until the main Discussion section below.

In the course of running the pilot study, the opinions of the first twenty subjects were solicited regarding changes that they would recommend for the main study. They recommended unanimously that the questionnaires be shortened, that the scales be given anchors and shortened to five instead of seven points. It was also suggested that the items be reworded so as not to suggest extreme positions, leaving it to the subject to choose extremes on the response scale if desired. It was recommended that the Acculturation measure be revised to allow more choice for international cultural preferences other than North American or African before it is used with another North American Sample.

Almost all subjects agreed that they observed no bias for any particular therapy style or goal on the part of the investigator, but one suggested that the wording for the directive approach be moderated. See Appendix 2 for the revised protocol for the second pilot study which embodied these changes.

Some African students remarked that if they were to respond as though they were in Africa, the responses would probably be different, and found that the lack of context for the vignettes made it more difficult to give causal attributions and to suggest treatment preferences. African
students also reported less familiarity with the self-report psychological measures than Canadian students.

Modifications to the research protocol

1. Assessment of Beliefs and Treatment preferences.

A causal attribution scale for 'Character weakness' was included after the open-ended responses of subjects indicated that this was an important attribution. 'Character weakness' also provides an 'internal' etiology which contrasts well with spiritual or 'external' etiology.

2. Standard Psychological Measures

a. The Acculturation Scale

This scale was extensively modified to reflect cultural realities in Ghana. Items were made more situation-specific. For example, due to the multi-ethnic nature of Ghanaian society, people may speak different languages with friends, family and at work. Thus language preferences were tapped using three items; for work, family, and friends. Similarly two items were included to tap where the subject had grown up, and at three different stages of youth. This was an attempt to reflect the influence of changing environments.

Six items were included which reflected typical Ghanaian culture: the pouring of libation in prayer, eating of special festival foods, belief in the supernatural, living with and taking care of extended family, and participating in fitness activities (very non-traditional).
There was a re-wording of items to reflect more "Ghanaian" English. For instance "How do you identify yourself" on item 3, became "What would you call yourself". Response options were modified so that options 4 and 5 on each item reflected Western or International tastes in culture, while 1 and 2 were reflective of traditional Ghanaian cultural norms. Option 3 was reworded to reflect a midway point between these two.

Pilot Study 2: A purely Ghanaian Sample.

22 Ghanaians from the Capital city, Accra were asked to complete the shortened version of the research protocol. The results of this group were analyzed only with respect to subjects' difficulties with the questionnaires. The following points are culled from the brief report sent in from the Research Assistant who ran the study from the Ghana Medical School Department of Psychology.

Subjects

14 out of the 22 people asked volunteered for the study. They were all known to the research assistant. Subjects were therefore non-randomly sampled and not necessarily representative of the Ghanaian population. Their ages ranged from 25 to 40 years. All had at least a high school education, with 79% having university bachelor degrees. The sample comprised eight men and six women. Subjects lived in the capital city, Accra, and were involved in various white-collar occupations.
Problems with measures

1. Subjects found the questionnaires long and complicated, and suggested that the vignettes describing mental illness be shortened.

2. Subjects were confused by the use of double negatives on some items: e.g. DEQ, item 2: "I am not bothered by the lack of permanence in human relationships". etc.

3. Some of the response choice items offered on the acculturation scale were found to be too restrictive, while others were found not to offer meaningfully different options. There was also a problem with language. For instance the term 'ethnic group' is hardly used in Ghana and therefore confusing. The term 'tribe' was suggested as a substitute.

4. All psychological measures had a five-point Likert-type format. However the behavioral anchors differed for each questionnaire. For example, 'strongly agree - strongly disagree', 'false-very true', and 'never - always'. Subjects found this confusing and suggested that uniformity be maintained across all measures.

The research protocol was further modified to reflect these concerns (see Appendix 3). The final version of the Acculturation Scale had a moderate internal consistency of Cronbach's alpha = 0.70.
Main Study: Methodology

Subject selection:

a. Selection of communities

The goal of sample selection was to ensure that there would be adequate representation of subjects from communities undergoing various levels of societal change. Communities in Ghana can be divided into three types: non-traditional, transitional and traditional communities.

These different types of communities have been defined by the Ghana Bureau of Statistics and the World Development Report (1990) according to population density. Non-traditional societies correspond to urban centers which have a population of 500,000 or more. Traditional communities correspond to the villages which have a population of 5000 or less, while transitional societies range between these two and are a blend of traditional and urban lifestyles.

Within each of these broad groupings there are communities which have been identified as common or natural points of convergence, i.e., towns, villages, or cities which are foci of meeting for several communities. These communities therefore become for the surrounding areas, centers for education, markets, entertainment, religion etc. Approximately 5000 such communities were identified by the National Service Secretariat of Ghana in a report for the Ministry of Education and the Health Insurance Project in 1990.

These 'focal' communities therefore comprise villages, towns, and cities, which differ in their degree of
urbanization, but are similar in that they are centers of convergence for the areas around them.

Administratively, the country is divided into ten Regions which function much like the provinces of Canada. For the purposes of the current study, the 5000 focal communities were categorized by region and by degree of urbanization (i.e. 10 by 3 units). From each unit, five communities were randomly selected, from which one was chosen on the basis of the ease of accessibility by road, and the availability of twelve or more teachers in the community. See Appendix 4 for the selected communities.

b. Selection of subjects within each community

Subjects were Ghanaian teachers aged between 25 to 56 years. Their level of education ranged from a minimum of completion of teacher training college to a master's degree.

Under the British colonial education system, basic teacher-training college corresponded to ten years of education. These teachers staffed the public primary education system. An additional two or three years added a specialization diploma which allowed a teacher to teach in the second cycle institutions. Most of the teachers in the second cycle institutions were also university graduates, or had received university degrees or diplomas after their teaching specialization.

Thus there were three types of teachers: those with the 'minimum' teacher-training education, those with
specialization, and those with university degrees/with or without teacher training. Included in this third sample were a few with master's degrees.

Teachers were selected because they represent a wide spectrum of socioeconomic, educational, and modernization levels. And yet they also make a relatively homogeneous sample because they belong to one profession. They impart formal knowledge, and occupy approximately similar levels within the social strata within the communities they serve; village, town, or city.

c. Selection of Schools.

The number of schools per unit or community depends on its size and ranges from hundreds of schools in the large cities to two schools in the smallest community sampled. The schools could be classed into first and second cycle institutions.

In each community the higher of the two kinds of school was sampled when both were available. In most traditional communities, there were only primary schools. When there was more than one school district or school in a community, then a school was randomly selected from a list provided by the Ministry of Education.

d. Procedure for subject selection

At the school, the head was contacted with letters of introduction from the Ghana Medical School and from the
National Service Secretariat. All schools granted permission to have their teachers participate.

In most of the schools, the heads would designate one teacher as the contact person. This teacher assembled all teachers and introduced me. I then gave a brief description of the research and invited volunteers.

Ninety-eight percent of those contacted agreed to participate. In smaller communities, there often were six teachers in each primary school where only six grades were offered. In such circumstances, two schools were sampled. When numbers permitted, up to 15 questionnaires were distributed in each community.

Teachers went over the items and asked questions to clarify the instructions or obtain more information regarding the goals of the study and what the information would be used for. Sometimes the teachers opted to complete the questionnaires on the same day or requested that I return in two or three days. On my return, I would spend up to 20 minutes with each teacher, going through the questionnaire, ensuring that all items had been completed, and going over the validity checks to ensure that the response format had been clearly understood. Teachers graciously completed incomplete questionnaires. This period was also used for debriefing, to respond to questions or concerns that they had regarding the research protocol, and sometimes to discuss personal questions regarding mental health and coping with mental illness or deviant child behavior.
Teachers unable complete the questionnaires by the time previously agreed to, opted to send them by mail. Thus the response rate was over 99% for distributed questionnaires. All teachers received 500 cedis for participating in the study. This is equivalent to 14% of an average monthly salary for teachers. This amount has approximately the same food purchasing power as five Canadian dollars have in Canada.

Modification to the protocol

As suggested by the second pilot study, instructions and behavioral anchors to each psychological measure were made identical. Items on these measures were carefully reworded to 'undo' double negatives, a process also highly recommended by Brislin (1986). He also suggested that in modifying instruments for use in a different culture, even if there is a shared language such as English, sentences should contain no more than 16 words. For this reason long sentences were broken up into two or more. All measures were thus affected, some more so than others (see Appendix 3).

The original and re-worded items were shown to two graduate students of English to check for similarity in meaning, with further changes made if both students agreed that the meanings differed.

The vignettes were shortened to four short sentences each. With the inclusion of the 'character weakness' scale, it was possible to form a uni-dimensional scale on internal/external causes of illness, similar to those
constructed for treatment preferences. Thus a low score on this dimension would signify a high rating on belief in witchcraft as a cause of illness. A high score would signify a high rating on belief in character weakness as a cause of illness.

To obtain a subject's score on the internal/external scale, the rating for belief in witchcraft was reversed, and the result added to the subjects rating for belief in character weakness as a cause of illness. The average was then obtained by dividing the sum by two. Mathematically, this may be represented as

$$\frac{(6 - \text{score on witchcraft}) + \text{score on character weakness}}{2}$$

Inclusion criteria: validity check.

As well as rating their treatment preferences on Likert-type scales for each goal and style, subjects also had to choose their more preferred goal and more preferred style. If this choice was inconsistent with the relative rating of treatment preference (for instance if they rated goal A higher than goal B, but chose goal B as their preferred goal), then the subject's results were not included in the analyses. Because such inconsistency may possibly have arisen from lack of familiarity with self-report questionnaires, difficulties with language, or inattention, it was deemed appropriate to exclude the responses from the analyses.

Thus for each subject, the following information was available: scores for personal, interpersonal, and political
control, acculturation, dependency, autonomy, interpersonal sensitivity, and cognitive/somatic symptom manifestation. Also available were four scores (one from each vignette) for each of the following variables; internal/external, biogenetic, family conflict belief scale scores, participation/directiveness style and individual/family goals scores.
RESULTS

Sample size and descriptors.

A total of 375 teachers participated in the study. The response rate for questionnaires was 99%, resulting in 372 completed and returned questionnaires. The exclusion of cases after the validity check (8.9%) left a remainder of 339 valid cases. This final sample was composed of 113 female and 226 male teachers. The unequal female/male ratio reflects that found in the Ghana Education Service, and among the educated in Ghana.

1. Basis of Grouping

The three crucial independent variables; education, income, and acculturation in hypothesis 1 were combined to form a single dimension, an index of social change, along which subjects were grouped. The principle underlying this combination of variables may be considered analogous to that underlying socioeconomic status, which is usually calculated as an aggregate of income, education, and occupation (e.g. Aube and Linden, 1991; Blishen and McRoberts, 1976). The index of social change (ISC) was calculated as the average of each subject's percentile rank on the three variables. The internal reliability of the ISC scale was high (Cronbach's alpha = 0.83). A high ISC score represents increasing formal education, high income and changing cultural practices or high acculturation. A low ISC score represents lower education, lower income and greater identification with traditional
values. Being a continuous dimension, the ISC captures the various combinations of income, education, and acculturation which exist in a heterogeneous population, and allows their quantification into a single measure of an individual's stance on change, relative to his or her social environment. The intercorrelations among the variables are shown in Table 8 below. See Table 9 for the means and standard deviations of the three variables.

Table 8
Intercorrelations between Education, Income, and Acculturation.

<table>
<thead>
<tr>
<th></th>
<th>ACCULT</th>
<th>EDUCATION</th>
<th>INCOME</th>
<th>ISC</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCULT</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDUCATION</td>
<td>.34**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INCOME</td>
<td>.02</td>
<td>.44**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>ISC</td>
<td>.58**</td>
<td>.82**</td>
<td>.68**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

* p < .01 ** p < .001

Table 9:
Means (SD) of Acculturation, Education, and Monthly Income

<table>
<thead>
<tr>
<th></th>
<th>LOW ISC</th>
<th>MEDIUM ISC</th>
<th>HIGH ISC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accult.</td>
<td>64.30 (5.88)</td>
<td>69.45 (7.87)</td>
<td>74.79 (7.93)</td>
</tr>
<tr>
<td>Education (years)</td>
<td>10.71 (1.03)</td>
<td>12.49 (2.06)</td>
<td>15.95 (1.73)</td>
</tr>
<tr>
<td>Income (cedis)</td>
<td>28,750 (827)</td>
<td>35,750 (816)</td>
<td>43,060 (543)</td>
</tr>
</tbody>
</table>
The combination of the variables was undertaken only after separate analyses of each variable yielded similar results across dependent variables. Only the results of analyses with the ISC are presented in this thesis.

**Testing Hypothesis 1:**

With respect to the index of social change, the first hypothesis may be restated thus:
1. the higher the index of social change, the stronger will be
   a. the belief in internal causes of illness
   b. the preference for individual goals in treatment
   c. the preference for a participatory style in treatment.

The experimental design was conceptualized as a between-within design. There were two between group factors (ISC and gender) by four levels of the within factor (types of mental disorder). There were five dependent measures: three causal beliefs (family conflicts, biogenetic attributions, and internal/external causes), and two treatment scales: participant/directive style, and individual/family goals.

Standard procedure was MANOVA first, with a criterion of $p < .05$, followed by univariate ANOVAs, and Tukey's post hoc comparisons with $p$ levels set at .01.
Mauchley's test of sphericity executed for the MANOVA showed non-sphericity of variances across the repeated measures, $W = .13$, Chi-square = 587.48 with 119 degrees of freedom, $p < .05$. Thus post-hoc Tukey tests were performed as in Pilot study 1 above for contrasts between low and high ISC groups. Normal Tukey contrasts were executed for simple effects on the within-subject measure: i.e., type of disorder.

Results of the MANOVA.

There was a significant multivariate main effect for ISC $F(10, 592)=2.87$, $p < .05$, and for gender $F(5, 295)=2.30$, $p < .05$. There was a significant multivariate main effect for type of disorder $F(15, 2685)=28.52$, $p < .05$. and there was a significant interaction between ISC and type of mental illness $F(30, 4485)=3.43$, $p < .05$.

Thus the social index of change and gender of a subject were significantly associated with causal beliefs and treatment preferences. These in turn depended on which type of illness was under question.

There were no significant interactions between gender and ISC $F(10, 592)=1.05$, and no three-way interactions $F(30, 572) = .08$.

See Table 10 below for a summary of the results of the ANOVAs. Because there were no gender by ISC interactions, these values are not included in the summary table.
Table 10
ANOVA results (3 ISC X 2 GENDER X 4 ILLNESS TYPES).

<table>
<thead>
<tr>
<th>Effect</th>
<th>Variate</th>
<th>MS</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cause</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>internal/external</td>
<td>7.07</td>
<td>4.75</td>
<td>2, 313</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>family conflict</td>
<td>4.21</td>
<td>1.72</td>
<td>2, 313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>biogenetic</td>
<td>2.78</td>
<td>1.19</td>
<td>2, 313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>individual/family</td>
<td>6.53</td>
<td>6.37</td>
<td>2, 313</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>participate/direct</td>
<td>30.88</td>
<td>16.55</td>
<td>2, 313</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>GENDER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cause</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>internal/external</td>
<td>0.41</td>
<td>0.27</td>
<td>1, 313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>family conflict</td>
<td>27.71</td>
<td>11.30</td>
<td>1, 313</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>biogenetic</td>
<td>0.03</td>
<td>0.01</td>
<td>1, 313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>individual/family</td>
<td>0.06</td>
<td>0.06</td>
<td>1, 313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>participate/direct</td>
<td>0.05</td>
<td>0.03</td>
<td>1, 313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TYPE OF DISORDER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cause</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>internal/external</td>
<td>76.57</td>
<td>100.26</td>
<td>3, 939</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>family conflict</td>
<td>24.81</td>
<td>21.78</td>
<td>3, 939</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>biogenetic</td>
<td>20.21</td>
<td>15.98</td>
<td>3, 939</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>individual/family</td>
<td>11.79</td>
<td>18.34</td>
<td>3, 939</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>participate/direct</td>
<td>13.53</td>
<td>17.41</td>
<td>3, 939</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>ISC X TYPE OF ILLNESS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cause</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>internal/external</td>
<td>3.15</td>
<td>4.12</td>
<td>6, 939</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>family conflict</td>
<td>1.41</td>
<td>1.23</td>
<td>6, 939</td>
<td></td>
<td></td>
</tr>
<tr>
<td>biogenetic</td>
<td>0.92</td>
<td>0.73</td>
<td>6, 939</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>individual/family</td>
<td>2.44</td>
<td>3.80</td>
<td>6, 939</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>participate/direct</td>
<td>1.61</td>
<td>2.07</td>
<td>6, 939</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .01   ** p < .001
Internal/External Attributions of Illness.

As Table 10 indicates, the index of social change was significantly associated with internal/external attributions of causality. Tukey's post-hoc tests of differences showed a significant difference between high and low ISC groups on internal/external causal attributions. The high ISC group reported a significantly stronger belief in character weakness (internal) as a cause of depression and dependent personality disorder than did the low ISC group. The medium group's mean rating lay between these two. See Table 11.

Table 11
Internal/external scale means and standard deviations

<table>
<thead>
<tr>
<th></th>
<th>low ISC</th>
<th>mid ISC</th>
<th>high ISC</th>
<th>entire population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panic</td>
<td>3.22</td>
<td>3.20</td>
<td>3.18</td>
<td>3.20</td>
</tr>
<tr>
<td></td>
<td>(.95)</td>
<td>(.89)</td>
<td>(.88)</td>
<td>(.90)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>2.64</td>
<td>2.62</td>
<td>2.80</td>
<td>2.69</td>
</tr>
<tr>
<td></td>
<td>(1.02)</td>
<td>(1.08)</td>
<td>(1.13)</td>
<td>(1.07)</td>
</tr>
<tr>
<td>Depression</td>
<td>3.33</td>
<td>3.35</td>
<td>3.73</td>
<td>3.47 *</td>
</tr>
<tr>
<td></td>
<td>(.99)</td>
<td>(1.10)</td>
<td>(.93)</td>
<td>(1.03)</td>
</tr>
<tr>
<td>Dependent pd</td>
<td>3.64</td>
<td>4.10</td>
<td>4.21</td>
<td>3.99 *</td>
</tr>
<tr>
<td></td>
<td>(1.00)</td>
<td>(.82)</td>
<td>(.86)</td>
<td>(.93)</td>
</tr>
</tbody>
</table>

* Significant difference between low and high ISC, p < .01

The mean ratings differed significantly (p < .01) for each disorder. On the continuum from least to most internal (table
11 above), the disorders were thus aligned: schizophrenia, panic disorder, depression, and dependent personality disorder.

Table 12 below shows that female subjects gave a significantly higher rating to family conflicts as a cause of all illness than did male subjects. ISC did not affect ratings on family conflict. Family conflict was rated highest as a cause of depression. The mean rating for depression was thus significantly higher than mean ratings for the other three disorders. The mean ratings on panic disorder, dependent personality disorder and schizophrenia did not differ significantly from each other.

Table 12.
Family conflict means and standard deviations by gender

<table>
<thead>
<tr>
<th></th>
<th>male</th>
<th>female</th>
<th>entire population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panic</td>
<td>2.91</td>
<td>3.23</td>
<td>3.02 *</td>
</tr>
<tr>
<td></td>
<td>(1.26)</td>
<td>(1.19)</td>
<td>(1.24)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>2.91</td>
<td>3.28</td>
<td>3.04 *</td>
</tr>
<tr>
<td></td>
<td>(1.25)</td>
<td>(1.15)</td>
<td>(1.23)</td>
</tr>
<tr>
<td>Depression</td>
<td>3.46</td>
<td>3.71</td>
<td>3.54 *</td>
</tr>
<tr>
<td></td>
<td>(1.14)</td>
<td>(1.19)</td>
<td>(1.17)</td>
</tr>
<tr>
<td>Dependent pd.</td>
<td>2.76</td>
<td>3.04</td>
<td>2.86 *</td>
</tr>
<tr>
<td></td>
<td>(1.19)</td>
<td>(1.22)</td>
<td>(1.20)</td>
</tr>
</tbody>
</table>

* Significant difference between males and females, p < .01
Table 13 shows means for ratings on the Biogenetic scales. There were no significant differences between high and low ISC groups, nor between males and females on their rating of biogenetic cause.

Biogenetic attributions were rated highest with respect to panic disorder. The difference between the mean rating for Panic and the other three disorders was significant ($p < .01$). The mean rating for biogenetic causes for schizophrenia was also significantly higher than for depression or dependent personality disorder.

Thus panic disorder and schizophrenia were seen to have more of a biogenetic cause than the other two disorders.

Table 13

Mean ratings and standard deviations for Biogenetic causes.

<table>
<thead>
<tr>
<th></th>
<th>low ISC</th>
<th>mid ISC</th>
<th>high ISC</th>
<th>entire population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panic</td>
<td>3.58</td>
<td>3.62</td>
<td>3.62</td>
<td>3.61</td>
</tr>
<tr>
<td></td>
<td>(1.22)</td>
<td>(1.12)</td>
<td>(1.26)</td>
<td>(1.20)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>3.36</td>
<td>3.39</td>
<td>3.22</td>
<td>3.32</td>
</tr>
<tr>
<td></td>
<td>(1.32)</td>
<td>(1.27)</td>
<td>(1.32)</td>
<td>(1.30)</td>
</tr>
<tr>
<td>Depression</td>
<td>3.16</td>
<td>2.94</td>
<td>2.87</td>
<td>2.99</td>
</tr>
<tr>
<td></td>
<td>(1.25)</td>
<td>(1.22)</td>
<td>(1.29)</td>
<td>(1.26)</td>
</tr>
<tr>
<td>Dependent pd.</td>
<td>3.17</td>
<td>3.25</td>
<td>2.96</td>
<td>3.13</td>
</tr>
<tr>
<td></td>
<td>(1.21)</td>
<td>(1.17)</td>
<td>(1.26)</td>
<td>(1.22)</td>
</tr>
</tbody>
</table>
High ISC groups rated participation in treatment significantly higher or more desirable than low ISC groups for all disorders (refer to table 14). Mean ratings for the medium ISC group in general lay between these two.

The disorder for which participation was rated the highest was dependent personality disorder. This rating was significantly higher than that for depression, which was also significantly higher than the ratings for panic disorder and schizophrenia. That is, for disorder considered to have relatively higher internal etiology, (depression and dependent personality disorder), there was relatively greater preference for participation than for those disorders considered to have less internal causation.

Table 14
Means (SD) for the Participation/directiveness scale:

<table>
<thead>
<tr>
<th>Disorder</th>
<th>low ISC</th>
<th>mid ISC</th>
<th>high ISC</th>
<th>entire population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panic</td>
<td>2.99</td>
<td>3.30</td>
<td>3.55</td>
<td>3.28 *</td>
</tr>
<tr>
<td></td>
<td>(.97)</td>
<td>(1.14)</td>
<td>(1.07)</td>
<td>(1.08)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>3.11</td>
<td>3.02</td>
<td>3.55</td>
<td>3.22 *</td>
</tr>
<tr>
<td></td>
<td>(1.00)</td>
<td>(1.16)</td>
<td>(1.07)</td>
<td>(1.10)</td>
</tr>
<tr>
<td>Depression</td>
<td>3.31</td>
<td>3.61</td>
<td>3.81</td>
<td>3.56 *</td>
</tr>
<tr>
<td></td>
<td>(.97)</td>
<td>(1.07)</td>
<td>(.93)</td>
<td>(1.01)</td>
</tr>
<tr>
<td>Dependent pd.</td>
<td>3.26</td>
<td>3.67</td>
<td>3.99</td>
<td>3.64 *</td>
</tr>
<tr>
<td></td>
<td>(.97)</td>
<td>(.94)</td>
<td>(.92)</td>
<td>(.99)</td>
</tr>
</tbody>
</table>
* Significant difference between low and high ISC, $p < .01$
Table 15 indicates that the high ISC group rated individual goals in therapy significantly lower than did the low ISC group for schizophrenia and depression.

Independent goals in treatment were rated the highest for dependent personality disorder. Mean ratings thus differed significantly from those for panic disorder, schizophrenia, and depression.

Table 15
Means (and SD) for the Individual/family scale

<table>
<thead>
<tr>
<th></th>
<th>low ISC</th>
<th>mid ISC</th>
<th>high ISC</th>
<th>entire population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panic</td>
<td>3.09</td>
<td>2.93</td>
<td>2.77</td>
<td>2.93</td>
</tr>
<tr>
<td></td>
<td>(0.90)</td>
<td>(0.92)</td>
<td>(0.88)</td>
<td>(0.91)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>3.01</td>
<td>2.86</td>
<td>2.66</td>
<td>2.84 *</td>
</tr>
<tr>
<td></td>
<td>(0.74)</td>
<td>(0.90)</td>
<td>(0.83)</td>
<td>(0.84)</td>
</tr>
<tr>
<td>Depression</td>
<td>3.02</td>
<td>2.84</td>
<td>2.62</td>
<td>2.83 *</td>
</tr>
<tr>
<td></td>
<td>(0.83)</td>
<td>(0.79)</td>
<td>(0.86)</td>
<td>(0.84)</td>
</tr>
<tr>
<td>Dependent pd.</td>
<td>3.14</td>
<td>3.38</td>
<td>3.37</td>
<td>3.29</td>
</tr>
<tr>
<td></td>
<td>(0.94)</td>
<td>(0.88)</td>
<td>(0.87)</td>
<td>(0.90)</td>
</tr>
</tbody>
</table>

* Significant difference between low and high ISC, p < .01

Summary of evidence for hypothesis 1

The evidence supports the hypothesis that high ISC is associated with
a. greater belief in internal causes of illness with respect to dependent personality disorder and depression and
b. greater preference for participation in treatment.
However, the evidence does not support the hypothesis that high ISC subjects show greater preference for individual goals in treatment than low ISC subjects.

**Hypothesis 2**

This explores the relations between perception of control, autonomy, dependency, and interpersonal sensitivity on the one hand, and internality of causal beliefs and treatment preferences on the other hand. The dependent measures for this analysis were the average of mean ratings across all four disorders on the scales for causal belief and treatment preferences. Table 16 shows the correlations between psychological variables, causal beliefs, and treatment styles and goals.

**Table 16**

**Psychological Correlates of Causal attribution and treatment preferences.**

<table>
<thead>
<tr>
<th>Spheres of Control</th>
<th>Causation Internality</th>
<th>Treatment goals</th>
<th>Treatment styles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>.23**</td>
<td>.01</td>
<td>.14</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>.20**</td>
<td>-.03</td>
<td>.04</td>
</tr>
<tr>
<td>Political</td>
<td>-.01</td>
<td>-.08</td>
<td>.11</td>
</tr>
<tr>
<td>Autonomy</td>
<td>.06</td>
<td>.03</td>
<td>-.06</td>
</tr>
<tr>
<td>Dependency</td>
<td>-.06</td>
<td>.00</td>
<td>-.20**</td>
</tr>
<tr>
<td>Interpersonal sensitivity</td>
<td>-.18*</td>
<td>-.05</td>
<td>-.15*</td>
</tr>
</tbody>
</table>

* $p < .01$ ** $p < .001$
The evidence partially supports the hypothesis that self-report measures of control are positively correlated with internal causal attributions and with treatment. Specifically, perceptions of control in the personal and interpersonal spheres were significantly positively correlated with belief in internal causation of illness. Autonomy was not significantly associated with attributions or treatment preferences.

Goals of treatment (i.e., individual or family goal preferences) did not show any significant associations with any psychological constructs.

The evidence partially supports the second hypothesis. Specifically, dependency and interpersonal sensitivity were negatively associated with participation in treatment, implying the opposite relationship with directiveness. Interpersonal sensitivity was also significantly negatively correlated with belief in the internal cause of illness.

**Hypothesis 3**

This explores the relations between perception of control (socpers, socint, socpol) and autonomy (BAS) on the one hand, and dependency (DEQ) on the other. Table 17 below shows the intercorrelations between psychological measures. The correlations of interest to this hypothesis are underlined.

The evidence supports hypothesis 3 with one exception. That is, neither autonomy (BAS) nor the perception of control in the personal (socpers) and political (socpol) spheres are correlated significantly with dependency (DEQ). Dependency on
the other hand correlates negatively with the perception of interpersonal control.

The results in table 17 are important because they suggest that dependency, autonomy, and perception of control in certain spheres may be separate, independent constructs. The nature of the correlations also indicate that the measures have validity in this sample.

Table 17
Intercorrelations among psychological measures

<table>
<thead>
<tr>
<th>Correlations:</th>
<th>Accult</th>
<th>SOCPERS</th>
<th>SOCINT</th>
<th>SOCPOL</th>
<th>BAS</th>
<th>SCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accult</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCPERS</td>
<td>.14</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCINT</td>
<td>.01</td>
<td>.33**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCPOL</td>
<td>.11</td>
<td>.28**</td>
<td>.17*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAS</td>
<td>.04</td>
<td>.10</td>
<td>.15*</td>
<td>-.01</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>SCL</td>
<td>-.11</td>
<td>-.13</td>
<td>-.22**</td>
<td>-.14</td>
<td>.11</td>
<td>1.00</td>
</tr>
<tr>
<td>CSAQC</td>
<td>.01</td>
<td>-.07</td>
<td>-.10</td>
<td>-.16*</td>
<td>.06</td>
<td>.33**</td>
</tr>
<tr>
<td>CSAQS</td>
<td>.00</td>
<td>.01</td>
<td>-.04</td>
<td>-.12</td>
<td>-.07</td>
<td>.37**</td>
</tr>
<tr>
<td>SMEAN</td>
<td>.15*</td>
<td>.26**</td>
<td>.26**</td>
<td>.08</td>
<td>.15*</td>
<td>-.03</td>
</tr>
<tr>
<td>DEQ</td>
<td>-.12</td>
<td>-.13</td>
<td>-.18*</td>
<td>-.08</td>
<td>.01</td>
<td>.28**</td>
</tr>
</tbody>
</table>

Table 17 continued.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>CSAQC</th>
<th>CSAQS</th>
<th>SMEAN</th>
<th>DEQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSAQC</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSAQS</td>
<td>.63**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMEAN</td>
<td>.05</td>
<td>.04</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>DEQ</td>
<td>.25**</td>
<td>.21**</td>
<td>-.14</td>
<td>1.00</td>
</tr>
</tbody>
</table>

2-tailed significance * p < .01 ** p < .001
Hypothesis 4

This explores the association between education, acculturation, and the expression of anxiety. The composite index of social change is again used in this correlational analysis.

The correlation between somatic expression of anxiety and ISC was $r = -.13$. This was the same for the cognitive expression of anxiety. Thus the prediction that education and income would differentially affect the reporting of somatic and cognitive symptoms was not supported by the data.

Subsidiary analyses

Differences between ISC groups on psychological measures

A series of one-way univariate ANOVAs were run to assess significant differences between the three groups. The family-wise error rate was set at $p = .05$, and Bonferroni corrections made to control type I error. Thus a main effect for ISC was assumed only if $p < .006$. Tukey tests were then conducted to explore differences between low, medium and high ISC groups with alpha set at $p = 0.01$. See table 18 for means of psychological measures.
Table 18
Means and semi-interquartile (Q) ranges of the psychological measures

<table>
<thead>
<tr>
<th></th>
<th>low ISC</th>
<th>mid ISC</th>
<th>high ISC</th>
<th>entire population</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religiosity</td>
<td>1.79</td>
<td>1.68</td>
<td>1.72</td>
<td>1.73</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.90)</td>
<td>(0.92)</td>
<td>(0.88)</td>
<td>(0.91)</td>
<td></td>
</tr>
<tr>
<td>Spheres of control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>personal</td>
<td>34.96</td>
<td>35.94</td>
<td>36.75</td>
<td>35.88</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>(4.14)</td>
<td>(4.54)</td>
<td>(4.54)</td>
<td>(4.46)</td>
<td></td>
</tr>
<tr>
<td>interpersonal</td>
<td>33.49</td>
<td>34.16</td>
<td>35.89</td>
<td>34.51</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>(4.55)</td>
<td>(4.86)</td>
<td>(4.35)</td>
<td>(4.69)</td>
<td></td>
</tr>
<tr>
<td>political</td>
<td>31.39</td>
<td>32.48</td>
<td>33.36</td>
<td>32.40</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>(3.81)</td>
<td>(4.69)</td>
<td>(4.48)</td>
<td>(4.40)</td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>106.15</td>
<td>106.21</td>
<td>107.60</td>
<td>106.65</td>
<td>7.0</td>
</tr>
<tr>
<td></td>
<td>(12.83)</td>
<td>(12.54)</td>
<td>(10.74)</td>
<td>(12.05)</td>
<td></td>
</tr>
<tr>
<td>Dependency</td>
<td>66.91</td>
<td>63.14</td>
<td>60.26</td>
<td>63.44</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>(8.62)</td>
<td>(10.74)</td>
<td>(10.28)</td>
<td>(10.26)</td>
<td></td>
</tr>
<tr>
<td>Interpersonal sensitivity</td>
<td>23.13</td>
<td>22.12</td>
<td>20.74</td>
<td>21.99</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>(4.16)</td>
<td>(4.61)</td>
<td>(3.99)</td>
<td>(4.36)</td>
<td></td>
</tr>
<tr>
<td>CSAQ somatic</td>
<td>17.33</td>
<td>17.74</td>
<td>15.47</td>
<td>16.85</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>(4.33)</td>
<td>(8.61)</td>
<td>(3.95)</td>
<td>(6.08)</td>
<td></td>
</tr>
<tr>
<td>CSAQ cognitive</td>
<td>19.43</td>
<td>19.54</td>
<td>16.92</td>
<td>18.63</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>(5.07)</td>
<td>(6.66)</td>
<td>(5.46)</td>
<td>(5.88)</td>
<td></td>
</tr>
<tr>
<td>Emotional support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(mean)</td>
<td>10.91</td>
<td>11.56</td>
<td>11.74</td>
<td>11.40</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>(1.83)</td>
<td>(1.44)</td>
<td>(1.38)</td>
<td>(1.60)</td>
<td></td>
</tr>
</tbody>
</table>
Table 19 shows the results of the univariate ANOVAS. There were main effects for ISC on the Interpersonal control, Dependency, Interpersonal sensitivity and Emotional support scales.

Table 19
ANOVA on psychological measures

<table>
<thead>
<tr>
<th>Effect measure</th>
<th>MS</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spheres of control</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal</td>
<td>19.31</td>
<td>2.63</td>
<td>2, 558</td>
<td>**</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>20.18</td>
<td>9.04</td>
<td>2, 558</td>
<td>**</td>
</tr>
<tr>
<td>Political</td>
<td>18.48</td>
<td>4.39</td>
<td>2, 558</td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>148.12</td>
<td>0.44</td>
<td>2, 558</td>
<td></td>
</tr>
<tr>
<td>Dependency</td>
<td>88.49</td>
<td>9.90</td>
<td>2, 558</td>
<td>**</td>
</tr>
<tr>
<td>Interpersonal sensitivity</td>
<td>18.67</td>
<td>9.20</td>
<td>2, 558</td>
<td>**</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>2.38</td>
<td>8.62</td>
<td>2, 558</td>
<td>**</td>
</tr>
</tbody>
</table>

** p < .0001

Post-hoc tests showed significant differences between high and low ISC groups on interpersonal control, dependency, interpersonal sensitivity, and emotional support. The mid ISC group did not differ significantly from either high or low groups on interpersonal control and interpersonal sensitivity. The medium group however differed significantly from the low ISC group but not the high ISC group on dependency and emotional support.
Range of scores

Table 18 shows the semi-interquartile range (Q) of the psychological measures for the entire sample. Q for the acculturation scale was 4.5. The narrow ranges on all scales suggest that most respondents had a tendency to choose responses in the middle of each scale. This was also true of responses on the causal attribution and treatment preference scales. Q values ranged between .75 and .50 for the internal/external and style scales, and between .25 and .50 for the goal scales. These narrow semi-interquartile ranges of scores may be responsible for the low correlations observed between variables, and may be indicative of a general response style of preference for the middle values of a scale among this sample.

Perceived severity of disorders

A 3 (groups) by 4 (repeated measures) ANOVA was run to examine if the three ISC groups perceived the disorders differently with respect to severity, and to determine if the different types of disorders themselves were perceived as being of varying severity. The dependent measure was rating for severity for each disorder on a 5-point scale. Table 20 shows the mean ratings of severity by each group.
Table 20

Means (SD) for the severity of illness scale

<table>
<thead>
<tr>
<th></th>
<th>low ISC</th>
<th>mid ISC</th>
<th>high ISC</th>
<th>entire population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panic</td>
<td>4.37</td>
<td>4.61</td>
<td>4.65</td>
<td>4.54</td>
</tr>
<tr>
<td></td>
<td>(0.83)</td>
<td>(0.79)</td>
<td>(0.86)</td>
<td>(0.84)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>4.38</td>
<td>4.55</td>
<td>4.69</td>
<td>4.57</td>
</tr>
<tr>
<td></td>
<td>(0.90)</td>
<td>(0.81)</td>
<td>(0.69)</td>
<td>(0.81)</td>
</tr>
<tr>
<td>Depression</td>
<td>4.26</td>
<td>4.49</td>
<td>4.62</td>
<td>4.50</td>
</tr>
<tr>
<td></td>
<td>(1.12)</td>
<td>(0.82)</td>
<td>(0.73)</td>
<td>(0.91)</td>
</tr>
<tr>
<td>Dependent pd.</td>
<td>3.46</td>
<td>4.01</td>
<td>3.88</td>
<td>3.82</td>
</tr>
<tr>
<td></td>
<td>(1.30)</td>
<td>(1.01)</td>
<td>(1.12)</td>
<td>(1.16)</td>
</tr>
</tbody>
</table>

The ANOVA results indicated significant main effects for ISC $F(2, 294) = 8.26, p < .01$, and type of illness $F(3, 882) = 52.55, p < .01$. There were no interaction effects. Table 20 shows that the high ISC group consistently rated the disorders as more severe than the low ISC groups. The mean ratings for the mid ISC group lay consistently between these two.

Dependent personality disorder was rated as least severe by the entire sample ($p < .01$). The severity ratings for schizophrenia, depression and panic disorder did not differ significantly.
Healer of choice.

If given a choice of healers, which type of healer would subjects choose? Open-ended responses of subjects to this question were classified into four categories: traditional healer, medical personnel (physicians, nurses), mental health personnel (psychologist /psychiatrist / social workers) and orthodox religious (priest, imam, etc). Tables 21-23 show the frequency of choices for type of healers by ISC, and results of the Chi-square analyses.

Tables 21 to 24 below indicate that choice of healer was significantly associated with the index of social change and the type of illness. Thus low ISC subjects were more likely to choose a traditional healer for depression and dependent personality disorder, than high ISC subjects. On the other hand, high ISC subjects were significantly more likely to choose a mental health professional for depression, dependent personality disorder and panic disorder.

Significantly more people chose a mental health professional for depression, schizophrenia, and dependent personality disorder than for panic disorder, for which they were more likely to chose medical personnel.
Table 21:
Choice of Healers for Depression and Chi-square values for low/high ISC comparison.

<table>
<thead>
<tr>
<th>Type of healer</th>
<th>low ISC</th>
<th>med ISC</th>
<th>high ISC</th>
<th>Row Total</th>
<th>chi square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>12</td>
<td>6</td>
<td>2</td>
<td>20</td>
<td>7.84 *</td>
</tr>
<tr>
<td>Medical</td>
<td>23</td>
<td>10</td>
<td>12</td>
<td>45</td>
<td>4.38</td>
</tr>
<tr>
<td>Mental Health</td>
<td>44</td>
<td>68</td>
<td>72</td>
<td>184</td>
<td>13.64 *</td>
</tr>
<tr>
<td>Orthodox religion</td>
<td>27</td>
<td>23</td>
<td>22</td>
<td>72</td>
<td>0.79</td>
</tr>
</tbody>
</table>

* Significant difference between low and high ISC, p < .01

Table 22:
Choice of Healers for Panic Disorder and Chi-square values for low/high ISC comparison.

<table>
<thead>
<tr>
<th>Type of healer</th>
<th>low ISC</th>
<th>med ISC</th>
<th>high ISC</th>
<th>Row Total</th>
<th>chi square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>16</td>
<td>5.62 *</td>
</tr>
<tr>
<td>Medical</td>
<td>80</td>
<td>80</td>
<td>67</td>
<td>227</td>
<td>3.26</td>
</tr>
<tr>
<td>Mental Health</td>
<td>13</td>
<td>13</td>
<td>31</td>
<td>57</td>
<td>13.64 *</td>
</tr>
<tr>
<td>Orthodox religion</td>
<td>7</td>
<td>6</td>
<td>8</td>
<td>21</td>
<td>0.08</td>
</tr>
</tbody>
</table>

* Significant difference between low and high ISC, p < .01
Table 23
Choice of Healers for Schizophrenia and Chi-square values for high/low ISC comparison.

<table>
<thead>
<tr>
<th>Type of healer</th>
<th>low ISC</th>
<th>med ISC</th>
<th>high ISC</th>
<th>Total</th>
<th>chi squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>13</td>
<td>16</td>
<td>6</td>
<td>35</td>
<td>3.05</td>
</tr>
<tr>
<td>Medical</td>
<td>16</td>
<td>6</td>
<td>14</td>
<td>36</td>
<td>0.22</td>
</tr>
<tr>
<td>Mental Health</td>
<td>61</td>
<td>67</td>
<td>76</td>
<td>204</td>
<td>3.45</td>
</tr>
<tr>
<td>Orthodox religion</td>
<td>16</td>
<td>19</td>
<td>13</td>
<td>48</td>
<td>0.46</td>
</tr>
</tbody>
</table>

Table 24
Choice of Healers for Dependent Personality Disorder and Chi-square values for low/high ISC comparison.

<table>
<thead>
<tr>
<th>Type of healer</th>
<th>low ISC</th>
<th>med ISC</th>
<th>high ISC</th>
<th>Total</th>
<th>chi squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>7</td>
<td>3</td>
<td>0</td>
<td>10</td>
<td>7.38 *</td>
</tr>
<tr>
<td>Medical</td>
<td>18</td>
<td>7</td>
<td>1</td>
<td>26</td>
<td>17.08*</td>
</tr>
<tr>
<td>Mental Health</td>
<td>64</td>
<td>80</td>
<td>93</td>
<td>237</td>
<td>19.09*</td>
</tr>
<tr>
<td>Orthodox religion</td>
<td>15</td>
<td>16</td>
<td>12</td>
<td>43</td>
<td>0.45</td>
</tr>
</tbody>
</table>

* Significant difference between low and high ISC, p < .01
**Table 25**

**Summary of results**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Effect of ISC on</td>
<td></td>
</tr>
<tr>
<td>a. Internality</td>
<td>XX</td>
</tr>
<tr>
<td>b. Participation in treatment</td>
<td>XX</td>
</tr>
<tr>
<td>c. Individual/family goals</td>
<td>-X</td>
</tr>
<tr>
<td>2. Predicted correlations between control and</td>
<td></td>
</tr>
<tr>
<td>a. Internality</td>
<td>XX</td>
</tr>
<tr>
<td>b. Participation</td>
<td>--</td>
</tr>
<tr>
<td>c. Individual/family goals</td>
<td>--</td>
</tr>
<tr>
<td>2d. Predicted correlations between external beliefs and dependency</td>
<td></td>
</tr>
<tr>
<td>interpersonal sensitivity</td>
<td>--</td>
</tr>
<tr>
<td>2e. Predicted correlations between directiveness and dependency</td>
<td></td>
</tr>
<tr>
<td>interpersonal sensitivity</td>
<td>XX</td>
</tr>
<tr>
<td>2f. Predicted correlations between individual/family goals and dependency</td>
<td></td>
</tr>
<tr>
<td>interpersonal sensitivity</td>
<td>XX</td>
</tr>
<tr>
<td>3. Predicted correlations between control and dependency</td>
<td>X</td>
</tr>
<tr>
<td>4. ISC and somatization of illness</td>
<td>--</td>
</tr>
</tbody>
</table>

XX fully supported
X partially supported
-X opposite to what predicted
-- not supported
DISCUSSION

This study sought to determine the effects of social change among a group of educated Ghanaians. The results indicated that the higher the index of social change, the more subjects believed in an internal cause for depression and dependent personality disorder, the more participation subjects recommended in the healing process, and the less they leaned towards striving for individual goals when compared with low index subjects.

The results also indicated that subjects across all groups were sophisticated in their beliefs regarding etiology in mental illness. They believed in multiple causal factors in illness, drawing from the biological, social/interpersonal and spiritual models of illness. Subjects also weighted these causes differently according to illness. For example, dependent personality disorder and schizophrenia were rated on opposite ends of the continuum of internality, with dependent personality disorder attributed to a character weakness, and schizophrenia to uncontrollable forces such as witchcraft. This, however, did not exclude the belief that schizophrenia, like panic disorder, could also have a biological basis, as shown by the high ratings on the biogenetic attribution scale. Gender differences were apparent only on the belief that mental disorder may be caused by family conflict, with women giving higher endorsement to this scale than men.

Furthermore, the higher the index of social change, the more likely it was that subjects reported greater control of
their interpersonal life, less dependency and less interpersonal sensitivity. They also reported more emotional support from their social network. Interestingly, all groups of subjects endorsed both somatic and cognitive symptoms equally.

Dependency and autonomy did not show a significant linear relationship, suggesting them to be independent constructs. Except for interpersonal control, none of the control scales were significantly correlated with dependency. Thus among this sample of research participants, dependency appeared to be specific to the area of interpersonal control and not to personal achievement or to other less related spheres of control.

The above interpretations of the data are based on the relative significant differences among the three ISC groups, and significant correlations between variables at the .01 level. With respect to absolute scores however (see tables 11, 13, and 14), all groups clearly reported belief in internal causes of illness, and preferences for individual goals and participatory style in treatment as shown by scores above 2.5 on the five-point scales. The interquartile range lay between 2.5 and 4.0 for all the belief and treatment preference scales, indicating that subjects tended to use a very narrow spectrum of the scale and tended to agree more often than not with statements. This response style may therefore have led to the low correlations obtained. For example, between dependency and participatory style, $r = -0.2$, $p < .001$, accounting for only 4% of the variance. The interquartile range for the dependency subscale
was 58 to 70, indicating that 50% of scores fell within this range. The full range of the scale however, is 20 (minimum) to 100 (maximum). For participatory style, 50% of scores fell between 3.0 and 3.8, while its full range is 1 to 5.

Although continuous or ordinal scales are more powerful tools for data analysis, perhaps for such a population with the tendency to score in the mid range, it might be more useful to use dichotomous response formats, such as "yes" or "no" formats, or to have in-built controls such as reversed items. The latter method is however difficult to implement within cultures which have English as a second language. Thus for the current study, it is important that more emphasis be paid to the relative differences between the groups than to the absolute scores themselves.

The Index of Social Change.

The combination of income, acculturation, and education to form an index of social change is conceptually sound. Formal education in Ghana has been very much based on the British model, and has closely followed until a decade ago, the same curriculum. It is therefore the milieu in which many children make their first contact with the culture of the Western world, hence beginning the life-long 'acculturation' process. For the older members of this sample (ages 40-55 years) this would be especially true, having grown up with little exposure to the electronic media of today. Further education thus means greater interaction with international culture, and therefore greater
acculturation. Certainly this is supported by data cited by Berry et al. (1986) of the James Bay Cree Indians, and of the acculturation literature generally.

Thus the combination of the three variables yields the effects which formal education lends to the acculturation process, the cultural and societal mores which are acquired outside the classroom (which the acculturation scale contributes), and the income level which adds the economic potential of the person.

The argument for combining these three variables in the present study is further strengthened with regard to the process of subject selection. The three variables of income, education, and acculturation were very much linked with the type of community: urban, rural and transitional. For example, it was thought that in selecting the top level of teachers in each type of community, we would be selecting more acculturated individuals with higher levels of education and higher incomes from the urban communities than top level teachers in the rural communities. This was generally true for education and acculturation, but not necessarily so for total income.

The reason may be because income, as reported here, reflects the official salary scale of the Ministry of Education, hence the high correlation between income and level of education. Most teachers, however, earn more by giving private lessons in the urban communities, or from other private businesses and farming in transitional and rural societies. It is therefore conceivable that a teacher with a minimum level of
education could earn as much or more than one with university education, outside of the teaching profession. Subjects were moreover inconsistent in the manner of reporting total income, and perhaps this may have arisen due to lack of clarity in the manner in which the question was framed, or because of a discounting of the worth of monies earned outside of the profession as 'income'. Total income is also affected by earnings of spouses or partners. Unfortunately, subjects seemed to know little about how much money their spouses earned.

It is thus no wonder that income and acculturation did not show a relationship in this study. With hindsight, greater attention could have been paid to total income, and that used instead of salaries. In that case, I would predict that total income would correlate better with acculturation, but less with education.

The acculturation scale had an interquartile range of 64 to 73 (i.e. 50% of all scores lay within this range). Since subjects were forced to choose from a set of alternatives for each item, this narrow interquartile range may reflect less a response style, and more the possibility that the subjects have similar tastes and values, or that the response alternatives offered are not easily available in Ghana; e.g. Western foods are expensive and available only in a few restaurants, plays and concerts are usually Ghanaian, and unfortunately, there is not much interaction with other African countries. Thus the acculturation scale utilized here may not be as discriminating a measure of acculturation as desired. The inclusion of the
effects of education and income therefore, should increase the sensitivity of the composite score or index.

The index of social change may have better predictive power in longitudinal research than any of its individual composites. This is because although level of education may remain constant after a certain point, the acculturation process may continue in either direction, i.e., towards greater preferences for cosmopolitan values, or greater identification with traditional values. Income levels also may change with time. Thus the composite score may yield more interesting information regarding shifts in the lifetime of the individual. The index would also yield interesting information in longitudinal work with communities. It may be used for instance to assess the impact of development projects, educational programs, etc.

Belief in witchcraft.

With respect to the literature, it comes as a surprise that subjects gave such low ratings to belief in the external supernatural cause of illness. Mullings's (1986) study showed that this belief system cut across the entire fibre of Ghanaian society. Perhaps the low ratings reflect the results of acculturation on this educated sample.

It is however probable that attributions to powerful spiritual forces are 'indirect' attributions rather than 'direct'. An indirect attribution may be conceptualized as one which is given to explain a more direct attribution. For example, schizophrenia may be attributed to biogenetic causes.
But how does one explain why it runs in one's own particular family? Thus biogenetic or socio/interpersonal explanations may be considered direct explanations of observed occurrences and may be more strongly held or more readily recalled. Spiritual attributions may become more salient with chronicity or personal misfortune. Hence direct explanations may comfortably coexist with indirect spiritual attributions.

Perhaps what Neki, Joinet, Ndosi et al. (1986) meant by their comparison between witchcraft beliefs and psychoanalysis was that the two go beyond the observed, into the realm of the inferred. Therefore if the evidence at hand sufficiently explains a disorder, witchcraft attributions need not be invoked. Mullings (1984) alluded to this about the Ga in Accra, Ghana, when she said that witchcraft was invoked as a cause for illness or misfortune only after the condition had shown itself to be chronic.

Alternatively, Sow (1980) explains that belief in the supernatural helps to rule out the possibility of chance occurrences, which is important in a schema where chance may be associated with a risk of chaos, which is thought to be the basis of mental illness. Thus a willingness to tolerate chance occurrences or a change in attitudes towards perception of chance as chaos, could lead to less strongly held attitudes about witchcraft. This change might come about by increasing acculturation.

Mullings's analyses would suggest however, that belief in the supernatural could be on the wane in this sample largely
because economic strength may no longer be invested in the extended family, and there may be more economic independence. Our subjects have more direct control over their economic resources than others who rely on the family for sustenance, and therefore could be expected not to have as much conflict with the extended family. They therefore have less need to locate or displace (Sefa-Dedeh, 1990) conflict in the realm of the 'mesocosm'.

This reduced reliance on the family should therefore be associated with less collective living and therefore with less interpersonal sensitivity. Indeed the results show a significant difference between low and high ISC groups on the interpersonal sensitivity scale. Low ISC subjects reported more interpersonal sensitivity than did high ISC subjects. However, for depression and schizophrenia, low ISC subjects recommended more individual goals in treatment, i.e., less striving for strengthening family bonds than did high ISC subjects. Perhaps with less identification with traditional norms, and less reliance on the lineage for sustenance, one becomes less afraid of damaging interpersonal relationships, and therefore ceases to be as watchful and sensitive. And in losing this fear, one may be more able to value and cherish family relationships and wish to strive for their improvement as a matter of choice rather than economic need. It is also possible that the goal scale was not a conceptually cohesive scale. That is, one may wish to strive for both individual goals in treatment and the strengthening of family bonds. In fact there were no significant correlations
between responses on individual goal and family goal scales. In the future, these scales should be separately analyzed. Perhaps the choice should be whether or not to have family involved in treatment, and whether to look into one's self, or to only seek relief from suffering.

The prediction that high ISC subjects would prefer more participation in therapy than low ISC subjects was borne out. This was consistent for all disorders. However it is interesting to note that the low ISC group also preferred participation in treatment over directiveness on the part of the therapist. This is contrary to the generalizations in the literature and may again be an indication of the dynamic cultural change in progress within the country.

On the other hand, it is possible that low ISC subjects regardless of the acculturation process, prefer participation but in everyday life have little choice in the matter. Health professionals are so overwhelmed by numbers of patients, that there is rarely time to involve the patient in decision-making. Professionals also generally work by the old hierarchical patriarchal model, and assume complete charge of patients. Patients, on the other hand, may be too overwhelmed or intimidated to state a wish to participate.

Autonomy, perception of control, and dependency

The literature abounds with reports that traditional peoples are dependent and have an external locus of control, which has been associated with a low need for achievement (Doob,
The results indicate that living in a collective society is not necessarily synonymous with the lack of individuality. The Autonomy scale did not differentiate between groups and showed mean scores in the upper third of the scale. These are very much comparable with Western norms for the scale, as reported by Beck et al. (1987). The items (see Appendix 1) describe a preference for solitude and for not being influenced by the opinions or wishes of others, and a disregard for social acceptability. There are also items which suggest a need for achievement and of internal locus of control (items 2, 8, 16, 17, 20, etc). High agreement on this scale would therefore be in conflict with communal living.

The moderately high scores on the Autonomy scale across groups suggest an appreciation for individuality which need not conflict with living in a collective or semi-collective society. This is supported by the absence of a significant correlation between the autonomy scale and the dependency scale.

The average score on the dependency scale was 63.44, which is comparable to Western norms (compare with a mean of 62.1 for Canadian and 60.7 for African subjects in the pilot study after conversion of their mean scores to a 20 item five-point scale). This adult Ghanaian population therefore reports equivalent levels of dependency to more highly educated Western and African samples.

Of the three psychological control scales used in the study, the only one which correlates with the dependency scale is interpersonal control. This shows the very specific nature of
dependency as referring mainly to the interpersonal sphere, and not necessarily to loss of drive or personal achievement, as has been alluded to in the literature.

Furthermore, although interpersonal and personal control are positively correlated with belief in internal causality of illness as predicted, dependency is not correlated with belief in an internal cause of illness. Thus people from collective societies do not necessarily suppress autonomy, nor do they lack personal achievement motivation or personal control; indeed it would seem that autonomy and personal control are not inherently inimical to collective living in moderate doses. Alternatively, the concept of autonomy may be meaningless among this population. This is an interesting hypothesis and deserves more exploration.

Psychological control, attributions, and treatment preferences

The results support the multidimensional nature of locus of control. The personal and interpersonal spheres of control scales, but not the political, were positively correlated with internal belief in illness causation (r=.23 and .20 respectively, \( p < .001 \)). This is empirical evidence in support of the validity of the internal/external scale. Apart from the narrow semi-interquartile ranges (see table 18) of the three scales, the low correlations may also be attributed to averaging the scores across all disorders, attributions being significantly associated with type of disorder.
The Political Control Scale has no conceptual relationship with illness beliefs and shows no significant relationship. The correlation between perception of personal control and preference for participation in treatment narrowly missed significance, although the trend of the relationship is in the right direction.

Dependency and interpersonal sensitivity were significantly negatively associated with participation in treatment, that is, they were both associated with a preference for directiveness in therapy. This also provides evidence for the validity of the participation/directiveness scale.

Cognitive and somatic expressions.

It would appear that reports in the literature concerning the somatization of illness were not supported by the results of this study. All groups of subjects equally endorsed cognitive and somatic manifestations of distress. I believe that the assumption of somatization of illness among Africans arises because the literature on somatization is written by clinicians in hospital settings. Patients arriving at such a setting would respond to questions about illness with answers regarding the somatic manifestations of illness. They could also provide such answers based on the type of questions asked them by professionals with a primarily biological model of illness. This is supported by results from a field study (Lamensdorf, 1985) in rural Ghana where a traditional healer's register indicated that a fair proportion of his patients requested 'protection from
misfortune', a blanket term for feeling unsure of one's ability to control events, or feeling stressed and needing help. There were also reports of unhappiness.

Furthermore, the manner in which grief or distress is recognized and expressed in Ghana and especially among the Akan (a large ethnic group in the mid-south of the country) is metaphorical. The metaphors are vivid, and in the main, somatic. For instance, the expression for anger in the Akan language, literally translated, is "eye red"; being frightened out of one's wits is "my soul took off"; and being unable to eat from a loss of appetite, or the loss of taste and enjoyment in eating is a normal occurrence in bereavement. On the other hand, the subjects in this study were not patients and were not in distress. It is therefore possible that they might respond differently under illness conditions. It would be interesting to test this hypothesis among patients.

Choice of Healers

The results indicated that the preference for certain healers was affected by ISC and by type of illness (See tables 21 to 24). For instance for depression, significantly more low than high ISC subjects chose a traditional healer (12 vs 2) while more high ISC subjects chose mental health professionals than did low ISC subjects (72 vs 44). The significant effect of ISC on choice of healer suggests that had the sample been less educated, it is possible that there would have been more choices made for traditional healers. The results however, also indicate
that there is greater awareness of the role played by mental health professionals in mental disorder than has hitherto been acknowledged in the literature. More than two thirds of the sample chose medical personnel for panic disorder and mental health professionals for dependent personality disorder, depression, and schizophrenia. This split in choice suggests that subjects perceived the predominance of somatic symptoms present in the vignette describing panic disorder and reacted accordingly.

All three ISC groups were equally likely to choose a priest or imam. This supports the finding that there were no significant group differences on religiosity. The choice of a priest or imam was most likely to occur for depression and least likely to occur for panic disorder.

There is the possibility that subjects' choices of healer were influenced by their knowledge that the experimenter is a mental health professional. This is especially salient since subjects were aware that the experimenter would go over the assessment of beliefs and treatment preferences questionnaire in the validity check.

The Transitional Communities

Subjects in the second tercile of the ISC correspond to individuals from communities which retain both urban and traditional lifestyles. There is a blend of the old with the new in such communities and it is really only in this way that they are referred to as transitional, being otherwise relatively
stable. The dynamic process of acculturation, that is integration of both new and old, is reflected in the results from the psychological measures. The mean scores of this middle group consistently lie between the two extreme groups. They are similar to the high ISC group in perception of emotional support and in interdependency, and do not differ significantly from either group on interpersonal control or interpersonal sensitivity. This perhaps is the strongest evidence that the third element of acculturation, that of psychological change, is occurring.

**Dispelling the myth of the Cultural personality: clinical implications and models of therapy**

The results show that among different groups of Ghanaians, there are different causal beliefs for illness and different preferences in styles and goals of therapy. There is also different assignment of healers to different types of illness. Understanding of mental disorder is therefore sophisticated and multifaceted.

The results suggest that the personality and therapy models proposed by Varma (1988) and Oyewumi (1986) may not be appropriate across all groups in the country. The assumption that people expect directiveness from the therapist is not supported by the data even among the low ISC group, and even less so among the high ISC group. All subjects expressed a preference for participation in therapy over directiveness.
Similarly, the assumption of a collective personality and mode of thinking across all groups was not supported by the data, as evidenced by high ratings on autonomy scales across all groups, the independence of autonomy and dependency, and for high ISC subjects, lower interpersonal sensitivity. Furthermore, there was a slight preference for individual goals in therapy over strengthening family bonds, and this was significantly more so among the low ISC group.

Thus the results would suggest that a more appropriate approach in therapy for a culture in flux would be to keep the dynamic nature of cultural change ever in focus, and to expect different issues, styles and goals to fit different individuals at different levels of cultural and personal change.

If a heuristic is needed, then the results would suggest that among a community of mainly low ISC residents, such as nurses, clerks, etc., or in predominantly rural settings, issues of interdependence and interpersonal sensitivity might be of importance. These however do not imply the absence of autonomy or personal control. In fact, there might be a pressing need for at least partial separation from family since as the data indicate, more individual goals in therapy are endorsed by low ISC subjects.

Although it has been assumed that there is more social support in low ISC communities, this is not perceived by the low ISC subjects who report significantly less emotional support, and who also rate independent goals in therapy more highly than high ISC subjects.
Thus for low ISC subjects, striving for individual goals in therapy, and a balance between participation and directiveness in therapy is suggested by the results. For high ISC groups, a balance between striving for personal goals and the strengthening of family goals is called for. Participation in therapy is very much expected by this group. These recommendations cut across different kinds of healers. However the results suggest that less participation and more a striving for family goals is deemed appropriate in schizophrenia relative to the other disorders.

Belief in witchcraft, as noted above, could be likened to a need to infer beyond the obvious and observable. If this is so, then the possibility of insight-oriented approaches in therapy need not be ruled out. Although the experimental design did not explore the issue of insight as a tool in therapy within a culture that is considered externally oriented, it would appear that the culture is not as simple or as external in locus of control as previously speculated. Thus self-exploration need not be ruled out as a therapeutic tool.

Measurement and design issues

Methodological issues which arise concern the equivalence of the measures across groups, validity, and the generalization of results.
a. Equivalence of measures to all groups

The goal of the changes made to the protocol was to ensure that all subjects found the materials easily readable. However, as with all studies which employ questionnaires, there is no assurance that understanding or familiarity with the mode of questioning was equal across groups. As it is to be expected, more highly educated individuals were more familiar with test materials completed questionnaires faster than teachers with less education. Serious unfamiliarity with test materials was however averted by employing subjects with a minimum standard of teacher-training education.

For this study it may be inferred that subjects who had difficulty understanding, or who were unfamiliar with the response format, gave responses which failed to pass the validity check and were thus eliminated. The proportions eliminated were equivalent across all groups. This equivalence was achieved by the use of verbal instructions filled with examples from teaching, and on the relative meaning of the anchors on the rating scales.

A much used example was 'please imagine that you have two essays to mark, one which you like very much and one which you do not like so much. If you rated your favorite essay 4 out of 5, what grade would you give the one you did not like so much? And if asked to choose between the two, which would you choose?". This helped to make the task of rating seem more familiar. As well, validity checks were made when questionnaires
were returned, and teachers made corrections when they realized discrepancy of choice and rating. For a few cases, such as those sent via mail, or for teachers not present, these checks could not be made, and hence the results, if inconsistent with the validity check, were eliminated from the analyses.

It would be possible to extend the research to subjects who have received little formal education. Instead of using written vignettes, short skits in local languages could be enacted, and a structured interview conducted immediately afterwards to obtain beliefs regarding illness, and preferences in treatment. These skits could be video- or audio-recorded.

b. Validity and reliability

Would changing the wording of items on the questionnaires reduce the validity of the psychological constructs? The interrelationships among constructs were as expected, as were the relationships between psychological constructs and the Assessment of Beliefs and Treatment Preferences Scale. The wording was changed in accordance with suggested cross-cultural principles (Berry et. al. 1986; Brislin, 1986; Gutherie & Lonner, 1986) and made more suitable for Ghana specifically. Perhaps in the process internal consistency of measures was reduced in order to gain greater meaning or construct validity in a different culture. For instance there was a reduction of the internal consistency of the Acculturation Scale from .88 to .70. But this could be partly accounted for not only by the rewording of questions, but by the fact that the originally
reported alpha by Suinn et al. was calculated for the measure used with first generation individuals in a different culture. In this study however, the measure was used trans-generationally. Better internal consistency and external validity could be gained for all constructs by generating items in local languages to describe a construct, as compared with translating from a measure already constructed in a different culture. This, however, is an expensive proposition and requires a careful and long term research plan.

In having to reword items so as to avoid double negatives, and to provide simplicity, control for response style was minimal. Thus it is not possible to determine if response style differentially affected the three groups.

c. Sensitivity of Instruments

To estimate appropriate sample sizes, power was set at 80% and alpha at .05. With this, it was estimated that a minimum of 104 subjects would be required in each group, in order to significantly detect effect sizes as small as .35 -.40 standard deviations. However, most differences between groups were tested at far below $p = .05$, in a bid to control the possibility of type I error. The statistical decisions adopted therefore were very conservative.

Restricted ranges of scores (see table 18) on all questionnaires across groups led to very low correlations among measures. Restricted ranges could have occurred because of a common response style among a relatively homogeneous group of
subjects. Although they came from different environments and from all over the country, they all practiced teaching, were highly thought of in their communities, and were all economically independent adults. They could perhaps be characterized as having a greater perception of personal control and internality than the general population. Significant differences among groups should therefore be considered important, in spite of the small effect sizes observed.

d. Limits to generalization of results
Although the choice of teachers as subjects for this study had many positive advantages such as a literate sample, homogeneous in profession, and available throughout all types of communities in Ghana, there are serious limitations to the generalizability of results. Low ISC teachers have a level of education equal to thirty five percent of their age group, while high ISC teachers represent approximately two percent of their age group (World Bank Report, 1990). Mid ISC teachers represent a percentage which lies between these two. Thus possibly sixty-five percent of the Ghanaian population has less education than the present sample.

The results convincingly show the association between social change, causal beliefs and treatment preferences among a specific group of people in Ghana; i.e., teachers. It is tempting to conclude that this indicates the effects of acculturation on the thirty-five percent of Ghanaians who are educated. However such generalization can be made only after
replication of the results with more representative samples of educated Ghanaians. This study constitutes the first step in a long program of research along these lines.

The caution of generalizability of results is especially important because the results of the study may actually reflect the nature of the population studied, rather than the pure effects of social change. For instance the specialness of the sample may explain the general absence of gender differences in the results. Female teachers are in a non-traditional role, in that they have gone above the basic level of education required by law. They therefore probably show more autonomy than the average Ghanaian woman, and are also more economically independent. As well, they may play leadership roles in their communities, roles which are not easily or generally accorded women in Ghanaian traditional society. It is thus possible that had the sample been of similarly educated women in different occupations, (i.e., those without leadership roles), there might have been significant gender effects. On the other hand, it is also possible that the absence of gender differences might have been maintained had a wider selection of occupations been made since men of non-leadership occupations would also have been included.

What the results do suggest is that for the thirty-five percent of educated Ghanaians, there may be similar issues related to different levels of acculturation, which need to be addressed in health planning. The results also should alert caregivers in the health field that process issues such as
participation in treatment are important to their acculturated clientele. On the other hand, given that most mental health patients are brought to health centers for help by their non-ill relatives, it may be assumed that the secondary users of such services are not the mentally ill. The concerns of people without a mental disorder therefore also need to be considered in health-care planning. The results of this study are therefore important because they do provide such important information.

**Future directions.**

This research comes at a time when there exist no psychological or mental health clinics in Ghana, and only three institutions which are more correctly called hospices than hospitals for the chronically mentally ill. It also comes at a time when exclusively biological models in health care delivery are being questioned, and developing countries are being encouraged to develop national mental health policies by the World Health Organization.

A possible direction for the future is the validation of the ISC combined variable as a predictor of therapy preferences, or as a clinical screening device. A repetition of this study among chronic care mental and non-mental patients would address generalization concerns of the results to real patients.

Other goals for research would be to study the effects of incorporating preternatural beliefs into therapy, versus using strictly psychoeducational techniques. It would be challenging
and rewarding to consult with a traditional healer and a priest on these projects.

In Ghana, by October 1992, there will be three Clinical Psychologists. To set up treatment protocols to be administered by psychologists would thus not be feasible in a country of approximately 15 million inhabitants. Thus a small group of health care personnel made up possibly of psychiatric nurses and aides, community health care nurses, and social workers, could be co-opted into a short training program to run a protocol for therapy. Lessons learned in the psycho/social aspects of mental health care could be incorporated into the training program of the School of Nursing for community health nurses.

Another branch of this line of research would be to focus on dispelling other 'myths' concerning African beliefs or practices in health care. For example, during data collection for this research, I noticed that there were no mental patients in the streets of the villages I visited. In the larger towns and cities however, this was not the case. This observation seemed to confirm the common belief that due to the slower pace of life and more collective living in rural settings, mental patients are better cared for and therefore do not live in the streets. On enquiring however, I was told in several villages that the mentally ill tended to migrate to the towns and cities, perhaps to avoid the shame their illness brought to their family, or because the extended families could no longer support them.
Because of the myth that the extended family (usually thought of as those left in the villages) takes care of its own, African governments have neglected to develop mental health care, and donor countries and granting agencies such as the World Bank have placed little importance on Mental Health care. This would therefore be a useful and challenging line of research and health care planning.

One issue common to the research programs outlined above is the development of assessment instruments with high indices of validity and reliability and cultural relevance. Research in a developing country such as Ghana needs to be action oriented, and considered to provide a service to be affordable to that country. It also needs to advocate for social change for the expense to be justified (Moghaddam, 1990; Pareek, 1990). The program of research outlined above fits these stipulations; it would provide clinical services, as well as training opportunities for existing and future health care personnel with greater emphasis on process and cultural issues, and would advocate the importance of including mental health care in health care planning.

Conclusion

The sound clinical practice of careful assessment of each individual as he or she walks through the door, is as necessary for Ghanaian society as it is for Western society. The essence of this study is that the assessment of social change in individuals is important both at the individual level of
therapy, and at the level of conception of health policy. There are also aspects of personality assumed in the literature to be stable traits which are better conceptualized as situation specific, such as dependency and locus of control. As more culturally sensitive and careful quantitative analyses of different sub-cultures occurs, the barriers to understanding will gradually be let down, and fewer 'trait' or stereotypic explanations made about observed phenomena. Perhaps this will occur in my lifetime... , perhaps!
REFERENCES


Rogers, T.M. (1990). Proverbs as psychological theories...Or is it the other way around? Canadian psychology, 31, 195-205


APPENDIX 1: Research Protocol for Pilot Study 1

Demographic Questionnaire

Dear participant, we have attempted as much as is possible to exclude very personal questions. However, we do need some information of a personal nature to help us in our analysis. We therefore ask you to please answer all questions. Please be assured that we will consider all information completely confidential. Thank-you very much.

1. How old are you? __________________________

2. How many years of education have you had in total __________________________

3. Please put a check-mark beside which institution you have attended, and say how many years you spent in these settings.

   a. Primary school _______ years
   b. Middle school _______ years
   c. Secondary/high school _______ years
   d. Vocational/technical school _______ years
   e. University/college _______ years
   f. Other (please specify) _______ years

4. Country and town/city where you were raised __________________________

5. Please estimate of the number of people in the town/city where you were raised __________________________

6. What is your religion? __________________________

7. How often do you take part in religious activities per year?

   1. Daily
   2. Once a week
   3. Monthly
   4. Seasonally
   5. Yearly
   6. Not at all
Acculturation Scale

Write the number that describes you best in the corresponding space. Please answer all the questions.

1. What languages do you speak?
   1. African only
   2. mostly African, some English
   3. African and English about equally well
   4. Mostly English
   5. Only English

2. What language do you prefer to speak among family and friends
   1. African only
   2. mostly African, some English
   3. African and English about equally well
   4. Mostly English
   5. Only English

3. How do you identify yourself?
   1. African
   2. African-Canadian
   3. Canadian

4. Which identification does (did) your mother use?
   1. African
   2. African-Canadian
   3. Canadian

5. Which identification does (did) your father use?
   1. African
   2. African-Canadian
   3. Canadian

6. What was the ethnic origin of the friends and peers you had as a child up to age 6?
   1. All were African
   2. They were mostly African
   3. About half were African and half were Canadian
   4. They were mostly English, Hispanics, or other non-African groups
   5. All were Anglo, Hispanics and other non-African ethnic groups.

7. What was the ethnic origin of the friends and peers you had as a child from 6 - 18?
   1. All were African
   2. They were mostly African
   3. About half were African and half were Canadian
   4. They were mostly of Anglo, Hispanics, or other non-African groups
   5. All were Anglo, Hispanics and other non-African ethnic groups.
8. Whom do you now associate with in the community?
   1. All are African
   2. They are mostly African
   3. About half are African and half are of Anglo-Canadian groups
   4. They were mostly of Anglo, Hispanics, or other non-African groups
   5. All were Anglo, Hispanics and other non-African ethnic groups.

9. If you could pick, whom would you prefer to associate with in the community?
   1. All African
   2. Mostly African
   3. About half African and half of Anglo-Canadian group
   4. Mostly of Anglo, Hispanic, or other non African groups
   5. All Anglo, Hispanics and other non-African ethnic groups.

10. What is your music preference?
    1. Only African music
    2. Mostly African music
    3. Equally African and North-American
    4. Mostly North-American
    5. North-American only

11. What is your movie preference?
    1. Movies only about Africa
    2. Movies mostly about Africa
    3. Movies equally about Africa and Canada
    4. Movies mostly about Canada
    5. Movies only about Canada

(Items 12-18 were eliminated)

19. Where were you raised?/Where did you spend most time growing up?
    1. In Africa only
    2. Mostly in Africa, and some in Canada
    3. Equally in Africa and Canada
    4. Mostly in Canada, some in Africa
    5. In Canada

20. What contact have you had with Africa?
    1. Raised one year or more in Africa
    2. Lived for less than one year in Africa
    3. Occasional visits to Africa
    4. Occasional communications (letters, phone calls, etc) with people in Africa
    5. No exposure or communication with people in Africa
21. What is your food preference at home?
   1. Exclusively African food
   2. Mostly African, some North-American food
   3. About equally African and North-American
   4. Mostly North-American food
   5. Exclusively North American food

22. What is your food preferences in restaurants?
   1. Exclusively African food
   2. Mostly African, some North-American food
   3. About equally African and North-American
   4. Mostly North-American food
   5. Exclusively North American food

23. Do you read
   1. Only (an) African languages
   2. (an) African language(s) better than English?
   3. both African language(s) and English equally
   4. English better than (an) African language(s)
   5. only English

24. Do you write
   1. Only (an) African language(s)
   2. (an) African language(s) better than English?
   3. both (an) African language(s) and English equally
   4. English better than an African language
   5. only English

25. If you consider yourself to be a member of an African ethic group, (or African-Canadian), how much pride do you have in this group?
   1. Great pride
   2. Moderate pride
   3. little pride
   4. no pride but do not feel negative toward group
   5. no pride but feel negative toward group

26. How would you describe yourself
   1. Very African
   2. Mostly African
   3. Bi-cultural
   4. Mostly Anglicized
   5. Very Anglicized

27. Do you participate in African holidays, traditions, etc?
   1. Nearly all
   2. Most of them
   3. Some of them
   4. A few of them
   5. None at all
(CSAQ)

Please rate the degree to which you generally or typically experience this symptom when you are feeling anxious by circling a number from 1 through 7 with 1 representing "not at all", and 7 representing "very much so".

1. I perspire
2. I feel like I am losing out on things because I can't make up my mind soon enough.
3. I nervously pace
4. I can't keep anxiety provoking pictures out of my mind
5. I get diarrhea
6. I worry too much over something that doesn't really matter
7. My heart beats faster
8. I find it difficult to concentrate because of uncontrollable thoughts
9. I imagine terrifying scenes
10. I feel jittery in my body
11. I become immobilized
12. I can't keep anxiety provoking thoughts out of my mind
13. I feel tense in my stomach
14. Some unimportant thought runs through my mind and bothers me.

SCL-90

Please indicate how you generally feel about others by circling the number which refers to how true the statement is about your feelings, with 1 representing " not at all true", and 7 representing "very true".

1. I feel others are to blame for most of my troubles
2. I feel that most people cannot be trusted
3. I feel that I am watched and talked about by others
4. I have ideas or beliefs that others do not share
5. Others do not give me proper credit for achievements
6. I feel that people will take advantage of me if I let them
7. I feel others do not understand me or are unsympathetic
Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree and to what extent. If you strongly agree, circle 7; if you strongly disagree, circle 1. If you feel somewhere in between, circle any one of the numbers between 1 and 7. The midpoint, if you are neutral or undecided is 4.

1. Without support from others who are close to me, I would be helpless
2. I tend to be satisfied with my current plans and goals, rather than striving for higher goals
3. When I am closely involved with someone, I never feel jealous
4. I urgently need things that only other people can provide
5. The lack of permanence in human relationships doesn't bother me
6. If I fail to live up to expectations I feel unworthy
7. I seldom worry about being criticized for things I have said or done
8. I don't care whether or not I live up to what other people expect of me
9. I become frightened when I feel alone
10. I would feel like I'd be losing an important part of myself if I lost a very close friend
11. I have difficulty breaking off a relationship that is making me unhappy
12. I often think about the danger of losing someone who is close to me
13. I am not very concerned with how other people respond to me
14. No matter how close a relationship between two people is, there is always a large amount of uncertainty and conflict
15. I am very sensitive to others for signs of rejection
16. Often, I feel I have disappointed others
17. If someone makes me angry, I let him (her) know how I feel
18. I constantly try, and very often go out of my way, to please or help people I am close to
19. I find it very difficult to say "no" to the requests of friends
20. I never really feel secure in a close relationship
21. Even if the person who is closest to me were to leave, I could still "go it alone"
22. I am very sensitive to the effects my words or actions have on the feelings of other people
23. I often blame myself for things I have done or said to someone
24. I am a very independent person
25. I worry a lot about offending or hurting someone who is close to me
26. Anger frightens me
27. I can easily put my own feelings and problems aside, and devote my complete attention to the feelings and problems of someone else
28. If someone I cared about became angry with me, I would feel threatened that he (she) might leave me
28. I feel uncomfortable when I am given important responsibilities.
29. After a fight with a friend, I must make amends as soon as possible.
30. After an argument, I feel very lonely.
31. I rarely think about my family.
32. Being alone doesn't bother me at all.

Spheres of control
Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree and to what extent. If you strongly agree, circle 7; if you strongly disagree, circle 1. If you feel somewhere in between, circle any one of the numbers between 1 and 7. The midpoint, if you are neutral or undecided is 4.

1. When I get what I want it is usually because I worked hard for it.
2. When I make plans I am almost certain to make them work.
3. I prefer games involving some luck over games requiring pure skill.
4. I can learn almost anything if I set my mind to it.
5. My major accomplishments are entirely due to my hard work and ability.
6. I usually don't set goals because I have a hard time following through on them.
7. Bad luck has sometimes prevented me from achieving things.
8. Almost anything is possible for me if I really want it.
9. Much of what happens in my future is beyond my control.
10. It's pointless to keep working on something that's too difficult for me.
11. Even when I'm feeling self-confident about most things, I still seem to lack the ability to control social situations.
12. I have no trouble making and keeping friends.
13. I'm not good at guiding the course of a conversation with several others.
14. I can usually establish a close personal relationship with someone I find attractive.
15. When being interviewed I can usually steer the interviewer toward the topics I want to talk about and away from those I wish to avoid.
16. If I need help in carrying off a plan of mine, it's usually difficult to get others to help.
17. If there's someone I want to meet I can usually arrange it.
18. I often find it hard to get my point of view across to others.
19. In attempting to smooth over a disagreement I usually make it worse.
20. I find it easy to play an important part in most group situations.
21. By taking an active part in political and social affairs we, the people, can control world events.
22. The average citizen can have an influence on government decisions
23. It is difficult for people to have much control over the things politicians do in office
24. Bad economic conditions are caused by world events that are beyond our control
25. With enough effort we can wipe out political corruption
26. One of the major reasons we have wars is because people don't take enough interest in politics
27. There is nothing we, as consumers, can do to keep the cost of living from going higher
28. When I look at it carefully I realize it is impossible to have any really important influence over what big businesses do
29. I prefer to concentrate my energy on other things rather than on solving the world's problems
30. In the long run we, the voters, are responsible for bad government on a national as well as a local level

Assessment of Causal Beliefs and Treatment Preferences

Instructions. Please read each of the following stories carefully. After each story, answer the questions that follow before you start reading the next story. Please complete each page before you go onto the next, and do respond to all questions, leaving no questions unanswered.

(Panic disorder)

A and B are students at your university. Imagine that you know them well and that they sit next to you in class. One day they reported to you that they both had recently, with no forewarning, experienced a sudden feeling of intense fear and impending doom, which had lasted several minutes. They had experienced shortness of breath, and had felt that their heart was racing. They also had felt dizzy, faint, and then sweated profusely. After that initial experience, they had experienced these same sudden, unexpected set of feelings several times a week.

Please read the following questions which refer to the story you have just read, and indicate on the number-line, your opinion about the case in the story.
Example 1: Is this an interesting case:

not          1----2----3----4----5----6----7 very interesting

where 1 indicates that this is not a very interesting story, and 7 indicates that it is very interesting. In the above example the author thinks it is very interesting.

1. The wording of the story is clear and easy to understand
   I disagree 1----2----3----4----5----6----7 I agree

2. How serious do you think are the experiences which A & B told you about.
   not serious1----2----3----4----5----6----7 very serious

3. Do you think A & B's experience would disrupt their social life in any way?
   not at all 1----2----3----4----5----6----7 very much

4. How would you briefly describe this experience

5. What do you think could be the major cause of A & B's experience?

6. Imagine yourself as A & B, and write a brief description of the treatment you would find acceptable. e.g the use of medication, being prayed for, seeing a counselor, etc.

On the number lines, please indicate how much you agree with each of the following statements

7. The experience is caused by
   i. witchcraft/possession by evil spirits.
      agree  1----2----3----4----5----6----7 disagree
   ii difficulties/stress at school/work/
      agree  1----2----3----4----5----6----7 disagree
   iii problems with family members
      agree  1----2----3----4----5----6----7 disagree
   iv something genetic/chemical/hormone imbalance
      agree  1----2----3----4----5----6----7 disagree
(Depression)
C and D are students at your university. Imagine that you know them well and that they sit next to you in class. One day they reported to you that they both had recently, experienced daily feelings of sadness which lasted weeks at a time. They had felt and shown little interest in events around them, nor had they felt pleasure in any activities. They had felt worthless, and blamed themselves for every bad thing that occurred around them. They reported that they found themselves unable to concentrate on anything and wished to die.

(Same questions as above follow each story)

(Dependent Personality Disorder)
I and J are students at your university. Imagine that you know them well and that they sit next to you in class. One day they reported to you that they both recently, experienced difficulty in doing things alone, and avoided being on their own. They had difficulty in making every day decisions without relying excessively on others for advice, were afraid to show disagreement even when they believed that others were wrong, and were easily hurt by criticism. They were afraid of being abandoned and took trouble to get people to like them.

(Schizophrenia)
K and L are students at your university. Imagine that you know them well and that they sit next to you in class. One day they reported to you that they both had recently, become very withdrawn from friends and family. They had heard voices and seen things when there was no one and nothing present, and had felt that they were in direct communication with powerful forces, had shown marked impairment in personal hygiene, and talked to themselves in public. Sometimes, their speech was made up of words which made little sense to people.

Approach to Therapy

Instructions
In this second section of the research, we describe various approaches to therapy. Some people prefer to take charge of their health, others prefer to leave this in the hands of experienced professionals. Some prefer to have their families undergo treatment with them, and others prefer to do it alone. Please read the following short essays about therapy approaches very carefully. The approaches refer to different goals and styles of therapy, and not to the type of treatment, i.e. the approaches refer to the manner in which people like to be treated in a therapeutic situation. We would like to know what you think about these styles and goals.
The word **client** in each story refers to the person who has been identified as the person with the problem. The word **therapist** refers to anyone who is a recognized and qualified helper (e.g., psychologist, medical doctor, traditional healer, priest, etc). The word **therapy** refers to the helping situation.

**Directive Style**

In this approach to treatment, after the client has reported what the problem is, the therapist suggests what the goal of treatment should be, and presents the clients with the best possible solution to the problem. The therapist directs the client on what to do both within and outside treatment on the basis of the therapist's expertise, and the problems presented by the client. The client's main responsibility is to do as told. That is, in this approach, the therapist takes complete charge of therapy, and also determines the goals and direction of therapy.

**Participant Style**

In this approach to treatment, after the client has reported what the problem is, the client states what the goal of treatment should be, and the therapist presents the client with several possible solutions to the problems, and states the advantages and disadvantages of each possible solution. The client and therapist both decide on the most appropriate techniques and solutions based on the therapist's expertise and the client's wishes. That is, this particular style of therapy encourages the client to participate with the therapist in taking decisions concerning therapy goals and direction.

**Individual Responsibility**

The goal of treatment should be that the individual should learn to take responsibility for their own life and decisions. The individual should be encouraged to take charge of events in their life and should be helped to be more independent, assertive, and more in control. That is, the goal of such an approach is to make the individual more responsible, independent, assertive, and to help him or her take more control over his or her own life.

**Family togetherness**

The goal of treatment should be to strengthen and heal the bonds between family members so that there is increased reliance on, and sharing among family members. Family members and clients should be encouraged to nurture each other and help each other, and be there in time of need. That is, the goal for this approach is to strengthen family ties, and increase sharing, reliance on, and nurturing among family members.
Instructions
In this section of the research, we would like you to imagine that you are being consulted on the imaginary cases which you read about earlier. Your task in this section is to indicate how beneficial each treatment approach is to each case. Each story is being presented again. First read the story. Then read through the provided summary of each therapy choice. As you read about each approach, indicate on the number-line how suitable you think that approach is for the case you have just read. Your honest opinion will be very much appreciated here since there are no right or wrong answers, and whatever you choose will be considered a valuable choice. Please note that you are not being asked to choose between approaches, but to rate each approach separately.

It is very important that you read the stories in the same order as they appear in your booklet.

This is the story of A and B who reported to you that they both had recently, and with no forewarning, experienced a sudden feeling of intense fear and dread which had lasted several minutes. They had experienced shortness of breath, and had felt that their heart was racing. They also had felt dizzy, faint, and then sweated profusely. After that initial experience, they had experienced these same sudden, unexpected set of feelings several times a week.

1. A and B would benefit from an approach which helped them be more responsible, independent, assertive and to take more control over their own life.
   I agree 1 2 3 4 5 6 7 I disagree.
2. A and B would benefit from an approach which helped them to strengthen family ties, and to increase sharing, reliance on, and nurturing among family members.
   I agree 1 2 3 4 5 6 7 I disagree.
3. A and B would benefit from an approach in which they participated with the therapist in taking decisions concerning therapy goals and direction.
   I agree 1 2 3 4 5 6 7 I disagree.
4. A and B would benefit from an approach in which the therapist took complete charge of therapy, and also determined the goals and direction of therapy.
   I agree 1 2 3 4 5 6 7 I disagree.
5. A and B would benefit most from an approach which focuses on medication and on A and B's compliance with the therapist's prescriptions.

I agree 1---2---3---4---5---6---7 I disagree.

(The other three vignettes follow in exactly the same format)

Most appropriate approach

Finally recollect in your mind all you know about mental illness, and then think how you would like our mental health therapies to be structured. This applies to hospitals, religious and traditional centers of healing, or any other therapeutic situations in the mental health field which you know about. With this in mind, now respond to the following statements, and indicate on the number-line your agreement or disagreement.

a. In my opinion, it is best if the therapist controls the whole therapy situation

disagree 1----2-----3------4------5------6------7 agree strongly strongly

b. In my opinion, it is best if the client controls the whole therapy situation

c. I prefer the client and therapist to share control of the therapy situation

d. I would prefer the client and family to control the therapy situation.

e. The family and therapist should control the therapy situation.
APPENDIX 2: AMENDED PROTOCOL FOR PILOT STUDY 2

Demographic Questionnaire

Added items are:

What is your occupation?
How much money do you make per month?
How many years have you been earning a living?

ACCUltURATION SCALE

*1. What languages do you speak at work?
   1. most of the time, a Ghanaian language
   2. most of the time, a Ghanaian language, and a little English
   3. half the time, a Ghanaian language and half the time English
   4. Mostly English
   5. Only English

2. What language do you prefer to speak with your family?
   1. most of the time, a Ghanaian language
   2. most of the time, a Ghanaian language, and a little English
   3. half the time, a Ghanaian language and half the time English
   4. Mostly English
   5. Only English

3 What language do you prefer to speak among friends
   1. most of the time, a Ghanaian language
   2. most of the time, a Ghanaian language, and a little English
   3. half the time, a Ghanaian language and half the time English
   4. Mostly English
   5. Only English

4. What would you call yourself?
   1. An Akan, Ewe, Hausa, Fulani, Ga, etc
   2. Ghanaian
   3. African
   4. English, North American, European, Asian etc

5. What does your mother call herself?
   1. An Akan, Ewe, Hausa, Fulani, Ga, etc
   2. Ghanaian
   3. African
   4. English, North American, European, Asian etc
6. What does your father call himself?
   1. An Akan, Ewe, Hausa, Fulani, Ga, etc
   2. Ghanaian
   3. African
   4. English, North American, European, Asian etc

7. What was the ethnic origin of the friends you had as a child up to age 6?
   1. All were from my ethnic group
   2. Most of them were from my ethnic group, and a few from other ethnic groups
   3. About half were Ghanaian and half were from other countries
   4. They were mostly from other countries.
   5. All were from other countries

8. What was the ethnic origin of the friends you had as a child from 6 until 12 years of age?
   1. All were from my ethnic group
   2. Most of them were from my ethnic group, and a few from other ethnic groups
   3. About half were Ghanaian and half were from other countries
   4. They were mostly from other countries.
   5. All were from other countries

9. With whom do you now associate in the community?
   1. All are from my ethnic group
   2. Most of them are from my ethnic group, and a few from other ethnic groups
   3. About half are Ghanaian and half come from other countries
   4. Most of them come from other countries
   5. All are from other countries

10. If you could choose, with whom would you prefer to associate in the community?
    1. only with people from my ethnic group
    2. people from my ethnic group and from other ethnic groups
    3. about half Ghanaians and half other nationalities
    4. mostly other nationalities
    5. All from other nations

11. What is your music preference?
    1. Only traditional Ghanaian music
    2. Traditional, Highlife, and other African music
    3. Equally African and North-American/international
    4. Mostly North-American/international
    5. North-American/international only
12. What plays, concerts, and films do you prefer?
   1. Those written only about Ghana
   2. Those written mostly about Ghana and Africa
   3. Those equally about Ghana, Africa, and the rest of the world
   4. Mostly about the rest of the world
   5. Only about the rest of the world

13. Where did you live during ages 1 - 6 years old?
   1. Mostly in a village
   2. Mostly in a town
   3. Mostly in a city
   4. Mostly outside Ghana, in other places in Africa
   5. Mostly outside Africa, e.g. in England, Europe, North America, etc

14. Where did you live during ages 7 - 12 years old?
   1. Mostly in a village
   2. Mostly in a town
   3. Mostly in a city
   4. Mostly outside Ghana, in other places in Africa
   5. Mostly outside Africa, e.g. in England, Europe, North America, etc

*15. Where did you live during ages 13 - 18 years old?
   1. Mostly in a village
   2. Mostly in a town
   3. Mostly in a city
   4. Mostly outside Ghana, in other places in Africa
   5. Mostly outside Africa, e.g. in England, Europe, North America, etc

16. What is your food preference at home?
   1. Exclusively Ghanaian food
   2. Mostly Ghanaian, some international food
   3. About equally Ghanaian and International
   4. Mostly International food
   5. Exclusively International

17. What are your food preferences when you eat outside your home?
   1. Exclusively Ghanaian food
   2. Mostly Ghanaian, some International food
   3. About equally Ghanaian and International
   4. Mostly International food
   5. Exclusively International
18. Do you read
1. mostly in a Ghanaian language
2. better in a Ghanaian language(s) than in English?
3. both Ghanaian language(s) and English equally
4. English better than (a) Ghanaian language(s)
5. only English

19. Do you write
1. mostly in a Ghanaian language
2. better in a Ghanaian language(s) than in English?
3. both Ghanaian language(s) and English equally
4. English better than (a) Ghanaian language(s)
5. only English

20. How much pride do you have in being identified as a Ghanaian?
1. Great pride
2. Moderate pride
3. little pride
4. no pride but do not feel negative toward Ghanaians
5. no pride but feel negative toward Ghanaians

21. How would you describe yourself
1. Very Ghanaian
2. Mostly Ghanaian
3. Bi-cultural
4. Mostly Anglicized/international
5. Very Anglicized/international

22. Do you participate in the traditional festivals of your ethnic group?
1. Yes, I participate in all of them
2. Most of them
3. Some of them
4. A few of them
5. No, none at all

*23. During festivals (Odwira, Homowo, etc.) do you personally contribute to, or help prepare festive foods (e.g. Kpoi Kpoi, etc)
1. Yes, I actively contribute and help prepare almost every year
2. Sometimes I actively contribute and prepare foods
3. I only contribute financially
4. I do not contribute but enjoy food prepared by others
5. I do not contribute, and I do not eat festival food.
24. I pour libation or ask that it be poured for me.
   1. All the time
   2. Seasonally
   3. Once a year
   4. once or twice in my life
   5. never

25. I believe that witches exist
   1. yes, very much so
   2. yes, sometimes I do and sometimes I don't
   3. I am not sure whether I believe or not
   4. No, I do not believe in witches.
   5. No, I very strongly do not believe in witches

26. I look after the following family members on a daily basis
   1. All my extended family members (parents, brothers, sister and their children, etc)
   2. Some of my extended family members (nephews, parents)
   3. My immediate family (spouse, children) and one or two of my extended family members
   4. Only my spouse, and/or children
   5. no family members

27. I live with
   1. All my extended family members (parents, brothers, sister and their children, etc)
   2. Some of my extended family members (nephews, parents)
   3. My immediate family (spouse, children) and one or two of my extended family members
   4. Only my spouse, and/or children
   5. no family members

28. I eat in wayside chop bars
   1. all the time
   2. almost all the time
   3. sometimes
   4. hardly
   5. never

29. I participate in fitness exercises such as jogging, swimming, etc,
   1. never
   2. once or twice a year
   3. mostly on national holidays
   4. monthly
   5. weekly

*new items. Item 20 from the original was deleted.
SCL-90-R

No changes were made, therefore items are the same as in Appendix 1

DEQ

The short form of the DEQ was used. The items were 1, 5, 6, 8, 9, 10, 11, 12, 13, 15, 18, 19, 21, 23, 25, 26, 28, 30, 31, 33. The wording of 4 items were changed. These were items 5, 6, 26, and 30.

5. I am not bothered by the lack of permanence in human relationships
6. If I fail to live up to what people expect of me I feel unworthy
28. If a loved one became angry with me, I would be afraid that he (she) might leave me
30. After a fight with a friend, I must make up as soon as possible

Spheres of Control Scales
All items were used in their original form except item 30 which was changed to

30. In the long run we, the people, are responsible for bad government on a national as well as a local level

Autonomy Scale
All items were used in their original form, see Appendix 1.

Assessment of Causal Beliefs and Treatment Preferences

Instructions. Please read each of the following stories carefully. After each story, answer the questions that follow before you start reading the next story. Please complete each page before you go onto the next, and respond to all questions. If you are unsure about your response, please choose the response which is closest in meaning to yours. Please answer all questions.

Panic Disorder
Imagine that you know a person called B very well. One day, with no forewarning, B experienced a sudden feeling of intense fear and dread, which lasted several minutes. B felt unable to breath, and felt that his or her heart was racing. B also felt dizzy, faint, and sweated profusely. After that initial experience, B has experienced these same sudden, unexpected set of feelings several times a week.
1. How problematic is B's experience?

2. Do you know any one who has had this experience? yes--- no---

3. I believe that the major cause of B's experience is

On the number lines, please indicate how much you agree with each of the following statements

4. The experience is caused by

   i. witchcraft/possession by evil spirits.
   ii difficulties/stress at school/work/
   iii problems with family members
   iv something genetic/chemical/hormone imbalance
   v a basic character weakness in the individual

3. What could be done about B's problem?

Imagine that you are being consulted on B's case. Read through the different ways in which B can be helped and indicate on the number-line, the suitability of each kind of help for B. Please rate each approach.

The word healer refers to anyone who is a recognized and qualified helper (e.g., traditional healer, priest, nurse, psychologist, medical doctor or psychiatrist, etc.

1. B would benefit from an approach which helped him or her to be more responsible, independent, and assertive

   I disagree 1---2---3---4---5---6---7 I agree.

2. B would benefit from an approach which strengthened family ties, and increased sharing and nurturing among family members

   I disagree 1---2---3---4---5---6---7 I agree.

Now choose between 1 and 2: I prefer number_____

3. B would benefit from an approach in which B participated with the healer in taking decisions concerning the healing process.

   I disagree 1---2---3---4---5---6---7 I agree.

4. B would benefit from an approach in which the healer took complete charge of the healing process.

   I disagree 1---2---3---4---5---6---7 I agree.

Now choose between 3 and 4: I prefer number____
Depression

Imagine that you know a person called C very well. One day, C experienced feelings of sadness which have lasted weeks at a time. C often feels and shows little interest in events around him or her, and feels no pleasure in any activities. C feels worthless, blames him or her self for every bad thing that occurs, and is unable to concentrate on anything. C wishes to die.

(Same questions follow as above)

Dependent Personality Disorder

Imagine that you know a person called J very well. J experiences difficulty in doing things alone, and avoids being alone. J has difficulty in making every day decisions without relying excessively on others for advice. J is afraid to show disagreement even when others are wrong, and is easily hurt by criticism. J is afraid of being abandoned and takes trouble to get people to like him or her.

Schizophrenia

Imagine that you know a person called K very well. K has become very withdrawn from friends and family. K hears voices and sees things when there is nothing present. K also feels that he or she is in direct communication with powerful forces. K neglects his or her personal appearance, and talks to him or herself in public. K's speech is made up of words which make little sense to people.
Most appropriate approach

Finally recollect in your mind all you know about mental illness, and then think how you would like our mental health therapies to be structured. This applies to hospitals, religious and traditional centers of healing, or any other therapeutic situations in the mental health field which you know about.

1a. I think the healer alone should be in control of the healing process.

disagree 1----2-----3------4------5------6------7 agree strongly

1b. I think the troubled person should participate with the healer in deciding how the healing process should proceed.

disagree 1----2-----3------4------5------6------7 agree strongly

2a. I think the troubled individual should strive for independence, assertiveness, and increased responsibility during the healing process.

disagree 1----2-----3------4------5------6------7 agree strongly

2b. I think the healing process should focus on the strengthening of Family ties, increased nurturing, and sharing among family members.

disagree 1----2-----3------4------5------6------7 agree strongly
APPENDIX 3: PROTOCOL FOR THE MAIN STUDY

Introductory note to subjects.

Thank-you very much for your time. The goals of the survey are two-fold;

1. to find out what you believe are the causes of certain mental experiences, and
2. what styles of treatment you would prefer to encounter in health professionals.

The survey is in two parts. The first part consists of questions which some people find rather personal. These questions will help us to understand the preferences you state. Please be assured that all your answers will be confidential. Your name never appears on any of the sheets, and the research results will be presented only as group information.

The second part is a kind of market survey about your preferences for treatment in the health care system. We would like to know if you think people should participate with their healers in making relevant decisions concerning their health, or whether you think they should leave the decision making to the healer. We would also like to know whether you think families are an important part of mental health and so should be included in the healing process, or whether you think individual goals are more important.

Thank-you very much for your time and effort. What you write will be deeply appreciated and will help to build a model of mental health care which will be acceptable to most people in the country. Thank-you again.

If you decide not to participate, please return this to the experimenter. We thank-you for reading this far. If you agree to participate, then please begin. We have a small present for you on completion of this questionnaire. Thank-you once again.

Written instructions regarding rating scales.

In the following pages, there are a number of statements concerning personal characteristics and traits. Please show the degree to which you agree with the statement as it applies to you by circling the relevant number. For example, if you strongly agree with a statement, circle 5. If you strongly disagree, circle 1. If you just agree, then 4 would be a good choice, and if you just disagree then 2 would be a good choice. The midpoint, if you are neutral or undecided is 3.
i.e.

1 = Strongly disagree
2 = disagree
3 = neutral or undecided
4 = agree
5 = strongly agree.

Here is an example of how you can use the numbers to show how much you agree with a statement.

Mrs Mensah believes in the existence of God without question and she feels that Ghana leads Africa in political thinking. She is neutral about capitalism, being neither capitalist nor communist. She does not like fufu. She also thinks that her in-law is a witch. Hence these are Mrs Mensah's responses to the following questions.

<table>
<thead>
<tr>
<th>Statement</th>
<th>disagree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I believe in God</td>
<td>1-2-3-4-5</td>
<td></td>
</tr>
<tr>
<td>I like my in-law very much</td>
<td>(1)-2-3-4-5</td>
<td></td>
</tr>
<tr>
<td>I believe capitalism is the way to go</td>
<td>1-2-(3)-4-5</td>
<td></td>
</tr>
<tr>
<td>I like fufu</td>
<td>1-(2)-3-4-5</td>
<td></td>
</tr>
<tr>
<td>Ghana is ahead in political thinking in Africa</td>
<td>1-2-3-(4)-5</td>
<td></td>
</tr>
</tbody>
</table>

Often it is a difficult task to quantify your feelings along any dimension. We appreciate the effort you will be making. Now please tear out this page and refer to it as you continue with the survey.

Demographic Questionnaire
New items included were

What is the combined income of the members of your family who live with you, and with whom you share living expenses? e.g. your spouse, partner or relative?

For how many years have you been a teacher?
Acculturation scale
(Items 10 and 14 from pilot study 2 deleted. Most items were modified somewhat, and one new item added at the end.)

1. What language(s) do you speak at work?
   1. most of the time, a Ghanaian language
   2. most of the time, a Ghanaian language, and a little English
   3. half the time, a Ghanaian language and half the time English
   4. Mostly English
   5. Only English

2. What language(s) do you speak with your family?
   (same response options as above)

3 What language(s) do you speak among your friends
   (same response options as above)

4. What would you call yourself?
   1. An Akan, Ewe, Hausa, Fulani, Ga, etc
   2. Ghanaian
   3. African
   4. English, North American, European, Asian etc

5. What does your mother call herself?
   (same response options as in 4)

6. What does your father call himself?
   (same response options as in 4)

7. Up to the age of 12 years, my childhood friends
   1. were all from my tribe
   2. came from my tribe and from other tribes.
   3. About half were Ghanaian and half were from other countries
   4. They were mostly from other countries.
   5. All were from other countries

8. Where do your friends come from now?
   (same response options as in 7)

9. What is your favourite kind of music?
   1. Only traditional Ghanaian music
   2. Traditional, Highlife, and other African music
   3. Equally African and North-American/international
   4. Mostly North-American/international
   5. North-American/international only
10. What plays and concerts do you like best?

1. Only plays and concerts about my tribe.
2. Plays and concerts about mine and other tribes in Ghana
3. Those equally about Ghana, Africa, and the rest of the world
4. Mostly about the rest of the world
5. Only about the rest of the world

11. Where did you live during ages 1 - 12 years old?

1. Mostly in a village
2. Mostly in a town
3. Mostly in a city
4. Mostly outside Ghana, in other places in Africa
5. Mostly outside Africa, e.g. in England, Europe, North America, etc

12. Where did you live during ages 13 - 18 years old?
(same response options as in 11)

13. What is your food preference at home?

1. Exclusively Ghanaian food
2. Mostly Ghanaian, some international food
3. About equally Ghanaian and International
4. Mostly International food
5. Exclusively International

14. What foods do you like to eat when you eat out, e.g. in a restaurant or chop bar?

1. Exclusively food from my tribe.
2. Ghanaian food from my tribe and other tribes
3. About equally Ghanaian and International
4. Mostly International food
5. Exclusively International

15. Which language do you read best?

1. a Ghanaian language
2. better in a Ghanaian language than in English?
3. both a Ghanaian language and English equally
4. English better than a Ghanaian language
5. only English

16. Which language can you write best?
(same response options as in 15)
17. How much pride do you have in being identified as a Ghanaian?

1. Great pride
2. Moderate pride
3. Little pride
4. No pride but do not feel negative toward Ghanaians
5. No pride but feel negative toward Ghanaians

18. How would you describe yourself

1. Very traditional
2. Mostly traditional
3. Bi-cultural
4. Mostly non-traditional
5. Very non-traditional

19. Do you participate in any of the Ghanaian traditional festivals?

1. Yes, I participate in all of them
2. Most of them
3. Some of them
4. A few of them
5. No, none at all

20. During festivals (Odwira, Homowo, etc.) do you personally contribute to, or help prepare festive foods (e.g. Kpoikpo, etc)

1. Yes, I actively contribute to and participate in preparation almost every year
2. Sometimes I actively contribute and prepare foods
3. I only contribute financially
4. I do not contribute but enjoy food prepared by others
5. I do not contribute, and I do not eat festival food.

21. I pour libation/I ask for it to be poured for me.

1. All the time
2. Seasonally
3. Once a year
4. Once or twice in my life
5. Never

22. I believe that witches exist

1. Yes, very much so
2. Yes, sometimes I do and sometimes I don't
3. I have no opinion about the existence of witches
4. No, I do not believe in witches.
5. No, I very strongly do not believe in witches.
23. I look after the following family members on a daily basis

1. All my extended family members (parents, brothers, sister and their children, etc) as well as my own children and partner
2. Some of my extended family members (nephews, parents) and my own children and spouse
3. My immediate family (spouse, children) and one or two of my extended family members
4. Only my spouse, and/or children
5. no family members

24. I live with

1. All my extended family members (parents, brothers, sister and their children, etc)
2. Some of my extended family members (nephews, parents)
3. My immediate family (spouse, children) and one or two of my extended family members
4. Only my spouse, and/or children
5. no family members

25. I eat food from wayside chop bars

1. all the time
2. almost all the time
3. sometimes
4. hardly
5. never

26. I participate in fitness exercises such as jogging, swimming etc

1. never
2. once or twice a year
3. mostly on national holidays
4. monthly
5. weekly

27. I visit my hometown (or family home)

1. most week-ends (or you live in your hometown)
2. at least once a month
3. every three or four months
4. once or twice a year
5. rarely
SCL-90
Items were used in their original form. Please see appendix 1.

DEQ
The short form was again used and eight items were reworded. They were
1. I am helpless without support from people who are close to me
5. I am bothered that human relationships are no longer permanent
6. If I don't live up to what people expect of me, I feel unworthy
8. I care about the respect that people will give me if I achieve what is expected of me
13. I am concerned with how other people respond to me
15. I watch out constantly for signs that people do not want to be near me.
18. I constantly try to please or help people with whom I am close
21. Even if the person who is closest to me were to leave, I could still survive on my own

(CSAQ)
Seven items were reworded and item 15 was added, but not scored.
3. I nervously walk up and down a room
4. I can't keep pictures which frighten me out of my mind
6. I worry too much over things that do not really matter
10. I feel nervous in my body
11. I become unable to move or act in any way
12. I can't keep worrying thoughts out of my mind
14. Some thoughts which are not important run through my mind. This bothers me.
15. Any other symptoms that you feel which are not listed above please write what this symptom is

Spheres of Control Scales
Three items were slightly changed:

15. When being interviewed I can usually direct the interviewer toward the topics I want to talk about. I can also direct him or her away from those I wish to avoid

27. There is nothing we can do to keep the cost of living from going higher

30. In the long run we the people, are responsible for government at both the national and local levels
Autonomy Scale
Items 2 and 29 were slightly reworded.

2. It is important that I know I've done a good job
29. If I ever went to jail, the worst part would be that I would not be able to move around freely

Emotional Support Scale
The instructions were shorted and the items reworded.

Please write down the initials of up to 8 people who are supportive of you and are close to you emotionally. You may list less than 8 people. Please include your spouse or partner if you have one. Try to include up to 3 family members, and up to 3 friends. You may also include a supervisor at work.

How much does this person make you feel she or he cares about you? Show how much each person cares about you using the scale below.

Show how much you trust and confide in each person

How ready is this person to help you when you need him or her?

Assessment of Causal beliefs regarding mental illness

Instructions. In the following pages, you will read short stories about people with different problems. Some of these problems will be familiar to you and others will not be. We would like your opinions about what causes the difficulties that these people have, and how best you think they can be helped. We are interested in how much you think people should be involved in the healing process when it concerns them. We also want to know if you think families should be involved or if the person should strive for individual goals.

Imagine that you know each person very well, and that the person can be either a man or a woman.

Please read each story carefully. After each story, answer the questions that follow before you start reading the next story. Please complete each page before you go onto the next, and respond to all questions.
Panic Disorder

4 or 5 times a week, B suddenly feels afraid for no clear reason. B feels unable to breath, and his or her heart beats very fast. B also feels dizzy, faint, and sweats profusely. These feelings last several minutes at a time.

1. Please rate the seriousness of this problem.
   not at all very
   serious 1---2---3---4---5 serious

On the number lines, please indicate how much you agree with each of the following statements (in items 2, 4, 5, 6, and 7)

2. The experience may be caused by
   i. witchcraft/possession by evil spirits.
      disagree 1---2---3---4---5 agree strongly
       strongly
   ii difficulties at work
   iii problems with family members
   iv something genetic/chemical/hormone imbalance
   v a basic character weakness in the individual

In the following statements, the word healer refers to anyone who is a recognized and qualified helper (e.g, traditional healer, fetish priest, herbalist, nurse, psychologist, medical doctor, psychiatrist, imam or reverend father, etc.

3. If you were B, which kind of healer would you go to?

4. B would benefit from an approach which helped to make him or her more responsible and independent of others.

5. B would benefit from an approach which strengthened family ties, i.e one which increased sharing and caring among family members

Choose between the approaches in statements 4 and 5: I prefer --

6. B would benefit from an approach in which B participates with the Healer in taking decisions concerning the healing process.

7. B would benefit from an approach in which the healer takes complete charge of the healing process.

Choose between the approaches in statements 6 and 7. I prefer --
Depression
C experiences feelings of sadness which last for weeks. C feels no pleasure in anything, and feels worthless. C blames him or her self for every bad thing that occurs, and weeps often. C cannot concentrate on anything and wishes to die.

(Same questions as those after story B follow all stories or vignettes)

Dependent Personality Disorder
J does not like being alone. J has difficulty making decisions without always asking others for advice. J is afraid to disagree with others even when they are wrong, and is easily hurt by criticism. J will do anything to be liked.

Schizophrenia
K keeps away from people and hears voices when nobody is present. K feels that he or she communicates directly with powerful forces. K does not bathe and talks to him or herself in public. K's speech makes little sense to people.

Most appropriate approach
Finally recollect in your mind all you know about mental illness, and then think how you would like our methods of healing to be structured. This applies to all kinds of healers

(The following items were rated on a 1 to 5 scale.
1a. I think the healer alone should be in control of the healing process.

1b. I think the troubled person should participate with the healer in deciding how the healing process should proceed.

Choose between the approaches in statements 1a and 1b: I prefer

2a. I think the troubled individual should strive for independence, assertiveness, and increased responsibility during the healing process.

2b. I think the healing process should focus on the strengthening of Family ties, increased nurturing, and sharing among family members.

Choose between the approaches in statements 2a and 2b: I prefer
## APPENDIX 4: COMMUNITIES SAMPLED

<table>
<thead>
<tr>
<th>REGION</th>
<th>URBAN</th>
<th>TRANSITIONAL</th>
<th>RURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashanti</td>
<td>Kumasi</td>
<td>Konongo</td>
<td>Asankare</td>
</tr>
<tr>
<td>Brong Ahafo</td>
<td>Sunyani</td>
<td>Techiman</td>
<td>Tanoso</td>
</tr>
<tr>
<td>Central</td>
<td>Adisadel</td>
<td>Saltpond</td>
<td>Gomoa Assin</td>
</tr>
<tr>
<td>Eastern</td>
<td>Aburi</td>
<td>Aburi town</td>
<td>Wrenkyiren</td>
</tr>
<tr>
<td>Greater Accra</td>
<td>Achimota</td>
<td>Madina</td>
<td>Oyarifa &amp; Abokobi</td>
</tr>
<tr>
<td>Northern</td>
<td>Tamale</td>
<td>Savleugu</td>
<td>Bole</td>
</tr>
<tr>
<td>Upper East</td>
<td>Bolgatanga</td>
<td>Kongo</td>
<td>Bongo</td>
</tr>
<tr>
<td>Upper West</td>
<td>Wa</td>
<td>Wa town</td>
<td>Vieri</td>
</tr>
<tr>
<td>Volta</td>
<td>Ho</td>
<td>Tsito</td>
<td>Tegbui</td>
</tr>
<tr>
<td>Western</td>
<td>Sekondi</td>
<td>Tarkwa</td>
<td>Beposo</td>
</tr>
</tbody>
</table>