DEPARTMENT OF COMMUNITY HEALTH

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EVALUATION OF AN AMHARIC VERSION OF THE CIDI AND PREVALENCE ESTIMATION OF DSM-III-R MENTAL DISORDERS IN ARADA DISTRICT, ADDIS ABABA.

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Abstract

The feasibility, reliability, and acceptance of the Amharic version of the CIDI (Composite International Diagnostic Interview) was tested in Addis Ababa city using clinician and non clinician interviewers. In the first part of the study total of 64 subjects from three different sources (community, psychiatric inpatient and outpatient) were interviewed. The CIDI was judged to be acceptable by most clinician and non clinician interviewers. The few concerns about it include, the length of the interview and difficulties with a few of the items. For specific diagnoses made with frequency of five or more time, percent agreement and kappa ranged from 92.5%-100% and 0.78-0.92, respectively. The second part of the study determined the life time prevalence of specific DSM-III-R disorders using the Amharic CIDI modified after the reliability study, 502 community subjects selected from Arada district by systematic random sampling were interviewed. The most frequent specific diagnoses found were; Organic brain syndrome mild (14.1%), severe (4.4%), Agoraphobia without history of panic disorder (3.0%) and dysthymia (3.0%). The very high rate found for organic brain syndrome, compared to other studies, made the reliability of the CIDI for that diagnoses questionable. It is concluded that the Amharic version of CIDI is reliable, acceptable, and feasible for use in the country. Thus similar studies using CIDI with a better designs are recommended.

1. Introduction

Prevalence data on specific mental disorders have practical importance for two important purposes. First they are required for scientific understanding of a disease which will enable us to describe association, etiology, natural history and identification of new syndromes. Secondly they are also of vital importance for planning and evaluation of mental health programmes. Earlier studies done in several developed countries had estimated a total prevalence rate of mental illness greater than 20 %(1). Although earlier studies done to estimate prevalence of mental disorders in developing countries were few, recent studies have consistently shown a prevalence rate as high as those of the developed(1).

However, there is little information to be found about the prevalence of specific mental disorders in developing countries and Ethiopia is no exception. In Ethiopia morbidity reports from health institutions contained little information about specific mental disorders, leading to underestimation of several specific disorders. This is in part due to the low health service coverage, and reports made by health institutions using only gross classification of disorders as psychosis, psychoneurosis, retardation,

epilesy, somatic, and healthy only(2).

A few attempts were made in Ethiopia to get information on the magnitude of mental illness among patients in health institutions by conducting institution based studies using various methods. There were also a small number of community based studies which attempted to determine the prevalence of mental disorders in the general population. Both these community based and institution based studies did not go further to measure the prevalence of individual disorders constituting the total prevalence in accordance with a widely accepted classification system which allows comparison with prevalence results of other places, populations, and times. They only estimated the total prevalence of mental disorders with or without the prevalence for some disorder categories. The two psychiatric service-rendering hospitals and sporadic case reports were the only sources for data on specific psychiatric disorders in the country.

One of the problems in determining the prevalence of specific disorders throughout the world (and in Ethiopia) has been lack of an instrument which is reliable, acceptable and feasible in cross-cultural and community studies while at the same time is capable of making diagnosis according to generally accepted diagnostic classifications such as Diagnostic and

Statistical Manual of Mental Disorders and International Classification Diseases and Causes of Death. This study, in addition to assessing the reliability and acceptability of the Amharic translated CIDI core version 1.0. Nov.1990 at different settings in this culture, also has attempted to determine the prevalence of specific disorders in Arada awraja by administering the instrument to sampled respondents by non clinician interviewers.

2. Literature review

"For practical purpose, the term mental health is used to include emotional and social wellbeing as well as the mental state of the individual"(3). Many aspects of mental health problems are public health problems which can be dealt with most effectively through mental health programme using public action (3). Thus in its report the WHO expert committee for mental health recommended that "governments are urged to recognise mental disorders as problems of high priority for the individual, for the community and for national development." The Committee also indicated " that the needs for mental health care should not be regarded as separate from, but as integral part of the general health needs of every community" (4). When coming to the specific disorders, the emphasis it gave include; methods for case detection, standardisation of diagnosis and other components of mental health statistics required to facilitate research and international comparative studies(4).

This brings forward the question of reliability or the reliable assessment of psychiatric variables, with out which scientific progress can hardly be expected in mental health data as point of forefront consideration (5). Of the early studies which studied

reliability of techniques in data collection about mental disorders, Ward and his colleagues (in 1962) went further in identifying the reason for unreliability to be unclear criteria, unclear weighing of symptoms, too subtle distinction between diagnosis categories, and the fact that the clinicians were allowed to assign only one diagnosis(6). These reasons Ward found when put together were that of case definition (the delineation of criteria for regarding an individual as suffering from a disease) and case identification (the method used to identify members of a population who fulfil these criteria)(7).

Case difinition: Considering case definition it is said that it has been the single largest source of variability in prevalence rates reported in psychiatric epidemiology studies as it is a function of contrasting concepts of what constitutes a "case" (8). To emphasize the problem Williams in 1980 had put it as "the question is not so much "has he got it? as "how much of it has he got?... psychiatry epidemiology faces an even more fundamental problem, namely deciding what 'it' is" (7) and this is largely a matter of a psychiatrist's opinion since there is no observable and measurable physical representation of mental illnesses (9). The WHO expert committee suggested that " case be defined as a manifest disturbance of mental functioning

specific enough in clinical character to be constantly recognizable as conforming to a clearly defined standard pattern and severe enough to cause loss of working or social capacity or both, to a degree which can be specified in terms of absence from work or the taking of legal or other social action" (8).

In a gradual response to this problem two classifications which used explicit criteria were developed. The first is the Diagnostic and Statistical Manual of Mental disorders (DSM) which was first developed jointly by the American Psychiatrist Association and the United States Public Health Service in 1952 and is now in its third revised edition (10,11). The second is the International Classification of Disease (ICD) which includes a section on mental disorder developed by WHO and is now in its tenth revised edition (13). In addition to this, the use of operational criteria like "Feighner Criteria" developed by Feighner and his colleagues (14), and Research Diagnostic Criteria (RDC) (15) were also developed.

The nosological classification of psychiatric disorders (cases) and diagnostic criteria developed from information collected in clinical experience and other types of studies had been a very important step forward in the history of psychiatry. It was critical

not only for diagnosis of individuals but also for comparing studies carried out at different times, at different places, and among different populations(16).

Case identification: In psychiatric epidemiology unlike in other fields of epidemiology, identification of cases to estimate prevalence is mainly dependent on interview and observation (16). There has been diverse use of the techniques of interviewing by different investigators through out the world. The earlier studies prior to the second world war (studies known as the first generation of epidemiological studies) made use of records and key informants as a technique to define "cases" (17). In the following period (called the second generation studies) after World War II, the studies utilized greatly expanded nomenclature and were based for the most part on personal interviews by psychiatrists or groups headed by psychiatrists (17). The key methodological problems these studies faced were how to conceptualize and measure mental disorders in communities (17). The different concepts and methods used by different investigators in the first and second generation studies led to prevalence estimation of mental disorders that ranged from under one percent in some studies to fifty percent and more in others (17).

Following the two generations of epidemiological

studies, there have been several new and promising developments in case identification. The most important of these is the attempt that has been made to formulate comparable methods of case identification and in achieving higher level of inter-rater reliability by asking each respondent the same question, in the same order using standard interview schedules. These interviews were diverse in their purpose (screening/diagnostic), diagnostic criteria they use, time period they cover in making diagnosis, reliability in cross-cultural use, type of personnel required for administration (training /qualification), time required for administration, type of subjects to whom they suit (Psychiatric patient/population survey), and wether they provide an input for computer diagnostic programme (18-25).

These interviews include the General Health Questioner (GHQ)(18), the Present State Examination (PSE)(19), the Schedule for Affective Disorder and Schizophrenia (SADS)(20), the Iowa Structured Psychiatric Interview (ISPI)(21), the Self Reporting Questionnaire (SRQ)(22), the Renard Diagnostic Interview (RDI)(23), the Diagnostic Interview Schedule (DIS)(24) and the latest of them, the Composite International Diagnostic Interview (CIDI)(25). Of these interviews, DIS and CIDI are of valuable

importance in epidemiological studies of specific psychiatric disorders because of their superiority over the others: 1. Can be used for both life time and current prevalence estimation 2. Make diagnosis according to the commonly used DSM classifications and 3. Can be administered by a lay interviewers.

DIS is a fully structured interview which can be administered by lay person after two weeks of training. It makes diagnosis according to three diagnostic systems namely the DSM-III-R, Feighner Criteria and the Research Diagnostic Criteria. It can be administered in 45-75 minutes. The result of the interview are analyzed by means of a computer programme prepared for this purpose (24). The instrument had been used in epidemiological studies around the world, the most prominent one of which is the National Institute of Mental Health Epidemiological Catchment Area Programme(ECA) (26).

The CIDI was tested and found reliable and acceptable at different settings around the world. It also surpassed DIS by enabling the comparability between transatlantic diagnostic systems (DSM vs ICD) possible (25). The Composite International Diagnostic Interview (CIDI) has been produced in the framework of a major project (the joint project in Diagnosis and Classification of Mental Disorders, and Alcohol and

Drug related problems) undertaken by WHO and the US Alcohol, Drug abuse and Mental Health Administration (ADAMHA). It is comprehensive, fully standardised diagnostic interview for the assessment of mental disorders according to the definition and criteria of ICD-10 (12) and DSM-III-R(10). The CIDI has been designed for use in a variety of cultures and settings. Although it is primarily intended for use in epidemiological studies of mental disorders, the CIDI can also be used for clinical and research purposes, and can be supplemented by modules for diagnosis not covered in the core version (25).

In the course of development (27), the instrument was subjected to a number of tests for feasibility, diagnostic coverage, test re-test reliability as well as procedural reliability (25,27). The CIDI interview can be administered by interviewers with no clinical background trained for five days following the specification for conducting the training. The instrument is designed for adult respondents who may be markedly different in education, cultural backgrounds and intelligence. The average administration time is about 75 minutes (28). After completion interviews have to be edited for completeness and accuracy by an editor with a medical background or access to a physician to consult (28). Data entry is made using

the CIDI data entry programme and this has to be followed by computer editing and consistency check before applying the diagnostic programme to it (29).

Estimation of prevalence of mental disorders

Global: Since 1950 studies have been using a single psychiatrist or a small team headed by a psychiatrist personally (although not done using standardized method or procedure) to estimate the prevalence of specific psychiatric disorders in the community. These studies showed median prevalences of schizophrenia(0.76%), affective psychosis(0.43%), neurosis(5.95%), personality disorder(4.19%), and overall functional disorder(14.05%) giving an aggregate rate of 25.38%(17).

Of the community based studies done worldwide after the second world war those which illustrate early community prevalence studies include: The Lundby Study started in 1947 in Sewden which used psychiatrists to interview 2550 children and adults of rural population in which total estimated prevalence of obvious psychopathology of 8.4% and probable cases of 28.2% was found (30). The second one, the Sterling County Study, was started in 1963; 1010 rural adults were interviewed using a structured questionnaire schedule; and investigators also interviewed general physicians

practising there about the same patient and produced a document to be evaluated finally by psychiatrist. This study estimated the prevalence in DSM diagnostic terminology to be 20% (31). The third, which was initiated in 1954 and known as the Midtown Manhattan study, used methods similar to the Sterling County Study and interviewed 1660 adults of Midtown Manhattan. In this study however, instead of using DSM diagnostic terminology, assembled material was rated by psychiatrists in terms of a continuum of symptoms form and severity. A 23.4% prevalence of typical clinical cases was found in this study (32).

The more recent ECA study which was done in 1948 to obtain prevalence data according to DSM III criteria using DIS in a large sample (20000 community and institutionalized residents) to enable detection of specific disorders with a rate as low as 1% in multiple sites. In this study an average total life time prevalence of 27% was found. The average rate of specific disorders for three different sites were (major depressive disorders = 5.3%, manic episode = 0.93%, schizophrenia = 1.5%, alcohol abuse/dependence = 13.6%, drug abuse/dependence=5.6% (32).

Africa: Only a few studies were done to study the prevalence rate of mental disorders in developing countries especially in Africa (1). Almost all these

studies attempted to estimate either total prevalence or only major categories like psychosis and neurosis. Dhadphale and his colleagues, using SRQ and psychiatric interview, found a prevalence of 28.6% at Kisu, Kenya in 1982 (1). De Jong and his colleagues, using SRQ and health staff rating found a prevalence rate of 12.0% in 1984 in Southern Guinea Bissau (1). Of the studies which went further to estimate prevalence of specific disorders, Orly and Wing in a study done in Uganda using PSE in 1972 found a total prevalence rate of 25.3%; the specific rates were hypomania (2% in males and 2.2 % in females), depressive disorders (14.3% in males and 22.6% in females) and anxiety state (3.1 % in male and 4.3% in females)(33).

The only study to date of the prevalence of specific disorders according to DSM criteria of classification is that of Gureje O; Obikayo B; and Ikuesan BA. In this study done in 1992 in Nigeria, the prevalence of specific disorders was estimated using the 12-item GHQ and modified version of CIDI in an urban primary setting of Ibadan. The investigators found a weighted prevalence of specific DSM-III-R diagnosis of 27.8% (excluding another 7.3% suffering from non specific disorders to which specific DSM-III-R diagnosis could not be assigned). The estimated

prevalence of specific DSM-III-R disorders in this study was major depression (3.7%), recurrent depression (3.9%), dysthymia (1.2%), total somatoform disorders (10.8%), and adjustment reactions (2.9%). The prevalence of non specific DSM-III-R diagnoses was depressive (2.9%), anxiety (2.7%) and somatoform disorders (3.4%)(34).

Ethiopia: In Ethiopia few studies using various methods and populations were conducted; most of them in health institutions almost, all by expatriates. Giel and Van Luijk conducted few studies by using Kessels methods, which is a four point classification of psychological disorders. They found a 18.5% prevalence in out patient attendants of a teaching hospital in Addis Ababa and a 19% prevalence in out patient attendants of Bong health centre in Western Ethiopia in 1967 (35). Jacob using the same method, found 18% prevalence of psychiatric morbidity in patients attending Nekemt hospital (36). Using Kessel's method of classification, Giel and Van Luijk found a prevalence rate of 8.6% in a community survey they did in Bonga town in 1968 (37).

Kortman carried out an urban community study in Addis Ababa and found a prevalence of 12 % using SRQ in 1985 (38). In a study in rural kembata/hadeya awraja using SRQ, Solomon found a prevalence of 17.2%

(psychosis 6% and neurosis 11.2%) in 1988 (39). However, no community based prevalence study was conducted up to now to find out the prevalence of individual disorders (according to diagnosis made in DSM or ICD classification) constituting the total prevalence of mental disorders using appropriate diagnostic instrument (40). Diagnosis made or morbidity data reported by health institutions including the two psychiatric hospital in Addis Ababa do not go further than specifying psychiatric morbidity as psychosis, neurosis, somatic, or organic brain syndrome (2).

3.Objectives

The general objective of the study was to evaluate the Amharic version of the CIDI in small adult population of urban Ethiopian setting.

Specific objectives

1. To evaluate the reliability, acceptability and feasibility of an Amharic version of the CIDI.
2. To estimate the prevalence of specific mental disorders made according to DSM-III-R criteria using the CIDI in an urban district in Addis Ababa.

4. Methods

The study was conducted between September 1992 and May 1993 in Addis Ababa. The CIDI instrument used for this study was purchased from the Department of Psychiatry, University of Washington, Seatle Washington. The following instruments were obtained; Researcher's copy (41), Interviewer's copy (42) User's manual (28), Training manuals I-III (43) Computer manual(29) and CIDI discs (installation, data entry and diagnostic). Appropriate formats (interviewers and observers) were prepared locally (see Annex I&II).

The CIDI English version, core version 1.0 (42) was translated into Amharic by the principal investigator whose first language is Amharic the Addis Ababa dialect and was revised and checked by a psychiatrist and an epidemiologist (both with first language Amharic). Interactive back translation or multiple independent translation and back translation could not be applied due to time and logistic problems. In this study a non clinician interviewer was defined as a person who completed 12th grade with no clinical experience and unable to make diagnosis in the absence of CIDI interview (42). A clinician interviewer was defined as a medical doctor who studied the DSM-III-R criteria (10) for the specific diagnosis made by CIDI

and is able to make the specific diagnosis in the absence of CIDI interview.

Nine males and nine females non clinicians were recruited to serve as interviewers using a number of criteria believed to be relevant for CIDI interview(28).

This criteria were:

1.Ability to read Amharic smoothly and conversantly.

2.Good clerical skills needed for accurate coding and legible entry of responses.

3.Empathy and skill at listening carefully to determine whether questions were correctly understood.

4.Willingness to follow instructions precisely. Training of clinician and non clinician interviewers was conducted in Amharic for five days using the standard training manuals (43). Evaluation at the end of the five days training using live interviews and other specific questions to assess how interviewers understood and executed the interview, showed some deficiency in more than half of the non clinician interviewers. Thus an additional four days of supplementary training was conducted for all interviewers. Re-evaluation done after this supplementary training showed satisfactory performance in administering the interview. After training, to

keep the degree of experience comparable, both clinician and non clinician interviewers were made to conduct seven live interviews each.

Pretest: To pretest the Amharic CIDI, 15 subjects 18 years old or above from one of the kebeles in the awraja not chosen for the main study were interviewed. For this 15 households were selected by choosing every nth household (n=total household in the kebele divided by 15.). From each household one respondent was randomly selected. When a refusal was encountered the alternate house number next chosen was in the order of +1,-1,+2,or-2 of the original house number chosen. The Amharic version of the CIDI core version 1.0 -Nov.1990 was used for interview. CIDI responses were edited and entered into the CIDI computer programme. From the pretest a number of problems were identified. In addition important information were gathered for use in conducting the reliability and major prevalence study.

Reliability, Acceptability, and feasibility : This is done to assess the reliability and acceptability of the Amharic translated CIDI to clinician and non clinician interviewers, psychiatric patients and the general population of the particular culture in which the study is going to be launched and to get information on possible modification of the interview

or the translated version.

The procedure was expected to: (1) Assess the ability of the non clinician interviewers to give the interview approximately the same way that the clinician interviewers would. (2) To detect problem questions that may require revision in the interview or the translated version.

Sampling of subjects: Respondents for the reliability interview were inpatients and out patient attendants of a psychiatric hospital (Amanuel Hospital) who reside in Addis Ababa and subjects randomly selected from ten of the kebeles out side of the study Kebeles in the Awraja. Exclusion criteria were; (1) Inability to communicate in Amharic. (2) Refusal to give the interview. (3) Age below 18 years old and (4) Respondents residing outside Addis Ababa. Some 20 admitted patients were selected based on diagnosis made by psychiatrists to include the commonest disorders diagnosed by psychiatrist and accommodated also by the CIDI diagnostic range. Another 24 patients were selected from outpatient similarly to include milder psychiatric disorders covered by CIDI and possible non psychiatric diagnosis. The remaining 20 respondents were selected randomly from the ten kebeles.

The 18 non clinician interviewers and 3 clinician interviewers (all which are males) participated in the

interview. Each clinician interviewer was first randomly paired with one of the non clinician interviewers. The pairs formed, which contained male non clinician interviewers were randomly assigned to 36 male respondents and the pairs which contained female non clinician interviewers to 28 female respondents. Each clinician interviewer was made to act alternatively as an interviewer or observer. The activities an interviewer performed when assigned the role of interviewer were: (1) To administer the CIDI interview and code or write down responses. (2) Note questions which he/she thought were not understood by the respondent and leave the respondent for the observer pair at the end. (3) Write down the questions not understood by the respondent after the interview in his own way in a format prepared for this purpose without changing the meaning. (4) Administer the questions he/she wrote in that format and record the response found in the format prepared for this purpose.

The activities an interviewer performed when assigned the role of observer were: (1) Listen to the responses to the questions administered by the interviewer pair and code or write down responses in his interview schedule independently. (2) Note questions incorrectly probed by his interviewer partner and skip them without coding. (3) Perform similar

activities to that of the interviewer listed in 2,3 and 4 above. (4) Probe again the questions he/she skipped due to incorrect probing by interviewer partner and code the new response in his/her interview.

After each interview, interview sheets were collected and edited by clinicians trained in CIDI. Problems and mistakes found were discussed with the concerned interviewer or observer and re-interviewing of a particular part was done as required. Results of both clinician and non clinician interviewers were entered into computer independently, edited and consistency check was done. In addition, third time interview was done as required when problems similar to the above one were encountered. From the additional formats: (1) questions which interviewers and observers believed were not understood. (2) The way these questions were administered after modification and (3) The responses to these were compiled. These were analyzed and used for modifying the Amharic CIDI. To assess the agreement between clinician and non clinician interviewers, kappa and percent agreement for presence or absence of diagnosis and major specific diagnosis were calculated.

The results and difficulties were discussed, with clinician interviewers to make the necessary revision and change in the CIDI or the Amharic version before

launching the community survey. After this, the final modified Amharic version of CIDI was prepared and both clinician and non clinician interviewers were given a one- day orientation on the new changes in the interview and other problems encountered in administering the interview.

Data collection

Study area: The study was done in Arada Awraja Addis Ababa administrative region which is the capital city of Ethiopia. Arada awraja has 27 kebeles with a total population of 102263, and male to female ratio of 96:100.

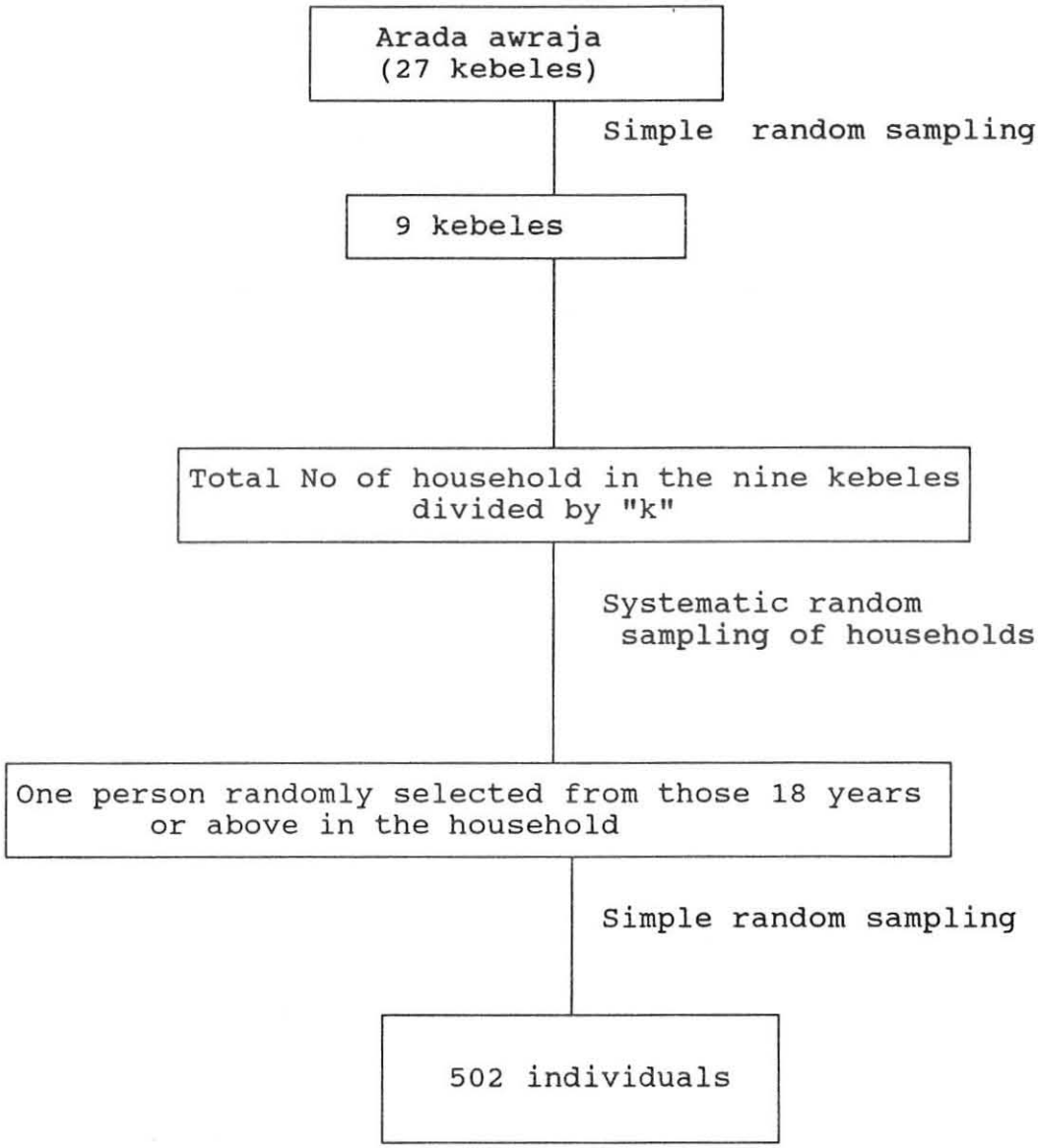
Sampling: The source population was the total adult population of Arada awraja and sampling units were households in the awraja. Since a sample size which is large enough to detect the prevalence of most specific psychiatric disorders could not be met, due to financial, logistic, and time problems it was decided to do the study in about 500 respondents living in the awraja. To get this sample size nine kebeles in the awraja were randomly selected. For household selection the total number of the house holds in the nine kebeles was divided by 500 to get the value "k" (the sampling interval). Households from each kebele were chosen by starting from a randomly selected household in the kebele and continuing with every "kth" household.

Individual respondents from each house hold were also selected randomly. Exclusion criteria were: (1) Age less than 18 years old. (2) Inability to communicate in Amharic and (3) Refusal to participate. In these cases replacements were in the order of +1,-1,+2,-2 from the original house hold number selected.

After a study subject was identified, interviewers first gave or read out a not to inform subjects the purpose of the study, the type of the interview, the way it is to be conducted and the benefit the respondent gets and request his/her consent. After getting consent, the interviewers conduct the interview immediately or arrange an appointment which is convenient to the respondent. Respondents were interviewed by interviewer of similar sex in the presence of the respondent only. All interviews were collected from the interviewers and edited by editors who are medical doctors and had training in CIDI. After editing the necessary corrections were done in discussion with the interviewer and re-interviewing parts done as required. Finally, responses to the CIDI interview were entered in to a computer using the CIDI data entry programme, by which they were edited and their consistency checked. Mistakes or inconsistencies found were discussed with interviewers and re-interviews done as required. Computation of diagnosis

was done using the CIDI DSM-III-R programme(29). Additional analysis was done using the SAS statistical programme.

Schema of the sampling procedure



5.Results

Subjects interviewed for the pretest were 7 males and 8 females. The average number of households visited to obtain a volunteer respondent was 2. The average number of visit made to finish one interview was 1.6. The average duration of time required for an interview was 180 minutes. The major problems encountered were the difficulties to get respondents at home (especially males) and interruption of the interviews due to problems of the respondents.

Evaluation of the Amharic version of CIDI: Of the 64 subjects rated by clinician and non clinician interviewers and observers,(using the pre tested CIDI) only 59 (19 from inpatients, 19 from community, and 21 from outpatients) were eligible for analysis. The remaining five interviews could not be analyzed due to incomplete coding and difficulty to trace and re-interview respondents when inconsistencies, incomplete sections and mistakes of coding were found which made the application of diagnostic programme impossible.

The mean age of the respondents was 28.8 years; 57.6 % were males and 42.4% females. With respect to marital status 64.4 % were married, 1.7 % widowed, 1.7 % separated, 3.4 % divorced and 28.8 % never married.

As for education, 15.3 % had no formal education, 22.0 % had primary or junior secondary level education and the remaining 62.7 % had attended secondary or higher level of training. Some 30.5% were currently employed.

Nine (50%) of non clinician interviewers judged the CIDI interview as being good, 6 (33.3%) as moderate and 3 (16.7%) as poor, while all clinician interviewers judged it to be good. CIDI was rated as appropriate for in patient and community setting but inappropriate for out patient setting by all clinician interviewers. The degree of acceptability of the instrument was measured during the reliability study. Concerns expressed about the interview by both clinician and non clinician interviewers and item related problems collected from the format for this purpose were: (1) The length of the interview (especially the substance abuse part which included several locally unknown drugs and substance). (2) The repetitiveness of the probing, recency and onset questions. (3) Difficulty in administering item 18 of section D, item 48 of section E, item 25 of section F, item 1 of section I, and the whole section L, due to complexity of sentence (4) Difficulty in administrating, item 20 and 32 of section D, item 1 and 6 of section K due to the length of sentences. The

response of interviewed subjects to possible future interview was: Eager (20.3%), receptive (40.7%), no reaction (16.9%), reluctant (11.9%) and refusal (10.1%). The average duration of interview was 150 minutes the longest 285 minutes and the shortest 60 minutes. Average number of interruption per interview was 0.59.

The number and percentage of subjects fulfilling diagnostic criteria according to CIDI DSM-III-R for both clinical and non clinical interviewers is shown in Table 1. A total of 34 (57.6%) subjects were classified as having no DSM-III-R diagnosis both by clinician and non clinician interviewer's scoring. The most frequent life time diagnoses made by non clinicians were: simple phobia (16.9%), organic brain syndrome definitely mild (15.3%), agoraphobia without history of panic disorders (13.6%) and somatoform pain disorder (13.6%). The most frequent life time disorders made by clinicians were: Organic brian syndrome definitely mild (18.6%), dysthymia (11.9%), agoraphobia without history of panic disorders (11.9%), simple phobia (11.9%), and somatoform pain disorder (11.9%).

Those respondents who were from inpatients had the highest mean number of life time diagnosis per patient 2.5, followed by those from outpatient and community

who respectively had mean number of life time diagnosis per patient of 1.3 and 0.05.

The kappa values and percent agreement for presence of diagnosis and specific DSM-III-R diagnoses diagnosed with absolute frequency of five or more are showen in table 2. Percent agreement for any diagnosis was 93.2 and kappa value 0.86. The lowest kappa value was for that of simple phobia (0.78). The highest kappa (1.0) was for dysthymia.

Table.1. Comparison of proportions of life time DSM-III-R diagnoses by non clinician and clinician interviewers using the Amharic version of the CIDI,Addis Ababa,Ethiopia,1993.(n=59).

Diagnosis	By non clinician number(percent)	By clinician number(percent)
Total number of respondents	59(100)	59(100)
Organic brain syndrome		
Definitely severe	1(1.7)	1(1.7)
Definitely mild	9(15.3)	11(18.6)
Any depressive disorder	15(25.4)	15(25.4)
Dysthymia	7(11.9)	7(11.9)
Major depression single episode	6(10.2)	6(10.2)
Majordepression reccurent	2(3.4)	2(3.4)
Bipolar disorder I (manic)	3(5.1)	4(6.8)
Bipolar disorder II(depressed)	2(3.4)	1(1.7)
Obsessive compulsive disorder	1(1.7)	1(1.7)
Panic disorder	5(8.5)	5(8.5)
Generalized anxiety disorder	2(3.4)	3(5.1)
Any phobic disorder	25(42.4)	19(32.2)
Agoraphobia without history of panic disorder	8(13.6)	7(11.9)
Social phobia	7(11.9)	5(8.5)
Simple phobia	10(16.9)	7(11.9)
Somatization disorder	4(6.8)	3(5.1)
Somatoform pain disorder	8(13.6)	7(11.9)
Schizophrenia	7(11.9)	8(13.6)
Schizophrenic disorder	4(6.8)	3(5.1)
Schizophreniform disorder	3(5.1)	5(8.5)
Substance abuse and dependence	8(8.5)	8(8.5)
Alcohol dependence	3(5.1)	3(5.1)
Alcohol abuse	1(1.7)	1(1.7)
Cannabis abuse	1(1.7)	1(1.7)
Amphetamine or similar acting sympathomimetic(chat)	3(5.1)	3(5.1)

* A subject can have more than on diagnoses
* A total of 35 subjects (57.6%) had no diagnosis both by clinician and non clinician interviewers.

The community based study: In sampling selection made to get the 502 respondents, 15 (2.9%) interviews started could not be finished, and 28(5.6%) refusal to the interview were encountered. The socio-demographic characteristic of the sample population is shown in Table.3. The sample consists larger percentage of males (51.2%), younger age group (56.4% between 18-34 years), never married (42%), subjects with some form of education (82.3%), and unemployed (62.9%).

As shown in table 4, a total of 23 different specific DSM-III-R diagnoses were made. The most frequent specific DSM-III-R diagnoses were; organic brain syndrome definitely mild (14.1%), severe (4.4%), panic disorder (3.0%), and dysthymia (3.0%). The specific DSM-III-R diagnoses made with lowest frequency were; schizophrenic disorder (0.2%), major depression single episode sever without psychotic features (0.2%), major depression recurrent mild (0.2%), major depression recurrent (0.2%), bipolar disorder mixed with psychotic features (0.2%), and alcohol dependence (0.2%).

Table 2. Inter-rater reliability for DSM-III-R diagnoses with absolute frequency of five or more using the Amharic version of the CIDI, Addis Ababa, 1993.

Diagnosis	2x2 table clinician +ve	clinician -ve	kappa	% agreement
	non clinicians +ve A	B		
	non clinicians -ve C	D		
Any diagnosis	21	2	0.87	93.2
	2	34		
Organic brain syndrome	10	0	0.88	97.0
	2	47		
Dysthymia	7	0	1.0	100
	0	33		
Agoraphobia w/o history of panic disorder	6	2	0.83	95.0
	0	32		
Social phobia	5	2	0.81	95.0
	0	33		
Simple phobia	7	3	0.78	92.5
	0	30		
Somatoform pain disorder	7	1	0.92	97.5
	0	32		
Schizophrenic disorder	3	0	0.82	95.0
	2	35		

Table 3. Socio-demographic characteristics study subjects mental health survey using the Amharic version of the CIDI, Arada district, Addis Ababa, 1993.

Variable		Number	Percent
Total		502	100
Sex	Male	257	51.2
	Female	245	48.8
Age	18-24 year	165	32.9
	25-34 year	118	23.5
	35-44 year	96	19.1
	45-55 year	73	14.5
	> 55 year	50	10.0
Marital status			
	Married	192	38.2
	Widowed	50	10.2
	Separated	22	4.4
	Divorced	26	5.2
	Never married	212	42.2
Years of education			
	None	89	17.7
	1-6 grade	122	24.3
	7-11 grade	117	23.3
	12 grade & above	174	34.7
Employment			
	Employed	186	37.1
	Not employed	316	62.9

Table.4. Life time prevalence of specific DSM-III-R diagnoses obtained using the Amharic version of CIDI, Arada district, Addis Ababa, 1993.

Diagnoses	Frequency	percent
Total population	502	(100)
Organic brain syndrome		
Definitely sever	22	(4.4)
Definitely mild	71	(14.1)
Schizophrenic disorder	1	(0.2)
Schizophreniform disorder	5	(1.0)
Major depression single episode	2	(0.4)
Major depression single episode mild	2	(0.4)
Major depression single episode moderate	2	(0.4)
Major depression single episode sever w/o psychotic features	1	(0.2)
Major depression recurrent	1	(0.2)
Major depression recurrent mild	1	(0.2)
Bipolar disorder mixed with psychotic features	1	(0.2)
Bipolar disorder not otherwise specified	3	(0.6)
Panic disorder with out agoraphobia	4	(0.8)
Generalized anxiety	9	(1.8)
Panic disorder with agoraphobia	1	(1.2)
Agoraphobia without history of panic disorder	15	(3.0)
Social phobia	13	(2.6)
Simple phobia	8	(1.6)
Dysthymia	15	(3.0)
Alcohol dependence	5	(1.0)
Alcohol abuse	1	(0.2)
Nicotine dependence	2	(0.4)
Somatoform pain disorder	10	(2.0)
No diagnosis found	366	(72.9%)

6.Discussion

Evaluation of the Amharic version of the CIDI: The result of this study indicates that the Amharic version of CIDI has good acceptance not only by clinician and non clinician interviewers but also by respondents from different settings in the particular culture. The only major problem with it was its inappropriateness for the out patient attenders, who had difficulty in staying long enough to complete the relatively long interview. Furthermore, the fact that it could be used by non clinician interviewers with high level of agreement indicated the reliability of the instrument. Also, the use of general practitioner (who are far more numerous in this country than the few available psychiatrists) that was made possible in the reliability study further enhanced the feasibility of the instrument.

The inter-rate Reliability study:- There are several characteristics of this study which limit comparability of its results with those of other studies of inter-rater reliability of the CIDI.

These include:- (1) The use of non mental health clinicians unlike elsewhere. (2) Inclusion of respondents from the general population. (3) Low base rate of specific disorders and small number of interviewers used. (4) Size and composition of the

sample used. (5) Mode of translation which was not as strict as in other studies by applying interactive back translation or multiple independent translation and re-translation back.

Although there are some differences in methodology, of the inter-rater reliability studies using CIDI, the multi-site field trial by Wittchen et al is close to the present one. In their study conducted in 18 centres around the world, the percent agreement for all diagnoses were over 90% and the kappa value was greater than 0.90 except for three diagnoses (44,45). These are slightly higher than ours where percent agreement as low as 92.5% and kappa value as 0.78 are found. In the specific DSM-III-R diagnosis, the Wittchen study found lowest kappa values for somatization (0.67) schizophreniform disorders (0.89) and anorexia nervosa(0.80), while in our case the lowest kappa was found for simple phobia (0.78) and social phobia (0.81) excluding those diagnosis with frequency less than five. The only kappa value of our study which is higher than that of Wittchen is the one for dysthymia which was (1), for all other diagnoses they found higher kappa values. Although low base rate is to be blamed in both these studies, this is particularly so in our study even for other specific diagnosis with a better kappa probably explaining the

difference.

Other studies which used CIDI very differently from ours reported lower kappa values and percent agreement. In test-retest reliability of the German version of the CIDI on RDC diagnoses and symptom levels in 60 psychiatric inpatients, Semler found percent agreement ranging from 82-95% and kappa from 0.19 to 0.81. In the specific disorders he found lower agreement for simple phobia (0.19), social phobia, (0.44) panic disorder (0.40) and schizoaffective disorder depressed (0.47), while getting the highest degree of concordance in Alcoholism (0.79) and drug abuse (0.81) (45). Aleksnadar found overall diagnostic kappa of 0.77 and for specific diagnosis, anxiety/phobic disorders (0.73), depressive disorders (0.78) and psychoactive substance abuse (0.83) in an inter-rater reliability while scoring ICD-10 research criteria check list or administrating CIDI interview(46).

Although the finding of good inter-rater reliability of the Amharic version of CIDI in this study is partly attributable to attempts that have been made in improving the CIDI interview (45, 47, 48), it can also be the result of several characteristics of the methodology used. These are:- (1) The administration of it in one session by two raters which

may decrease source of variance which occurs as result of change in the patient status & recall problems in other studies which used two raters at two different time (46, 47). (2) The susceptibility of the design to (and the difficulty of controlling) any violation to which interviewer pairs may be tempted to. This is less of a problem for studies which conduct inter-rates reliability using two raters at two different times. (3) The fact that our sample (unlike other studies) included, milder outpatients and the general population. (4) The lack of audio visual technology for supervision and control of the interview (as practised elsewhere).

In the first part of the study, (where CIDI was successfully administered to 59 respondents from three different sources), the most frequent DSM-III-R diagnoses by non clinician were simple phobia (16.9%), organic brain syndrome definitely mild (15.3%), Agoraphobia without history of panic disorder (13.6%), and by clinicians, organic brain syndrome definitely mild (18.6%), Dysthymia, agoraphobia without history of panic disorder, simple phobia and somatoform pain disorder each (11.9%). In Wittchen et al's study, the most frequent diagnoses found were generalized anxiety (50.3%), major depression (31.0%), tobacco use disorder (30.3%), and agoraphobia (30.1%). The commonest

specific diagnoses are different from our's, comprise the serious ones, and are higher in proportion. A plausible explanation for this difference is their use of only inpatient and outpatient respondents, unlike in our study where respondents from general population were included.

In the case of general anxiety the reason of the difference may be the fact that although it was diagnosed in a larger frequency in our study it was excluded by presence of other diagnosis of higher hierarchy. No mention of this was made in the Wittchan et al study. This is also evident in similar study of the German translated CIDI which used inpatients only and found a higher percent of serious psychiatric disorder, schizophrenia (30%) and affective psychosis (18.3%) (46).

The Nigeria study by Guraje found lower estimates than ours, the commonest being somatoform pain disorder (4.7%), recurrent major depression (3.9%) and major depressive episode 3.7% (33) probably due to the fact that unlike ours and the other two studies it did not use subjects from a psychiatric hospital.

The community-based study: In general, when considering the aggregate prevalence of specific disorders found in our study (13.1%), excluding Alcohol or Nicotine abuse/dependence and organic brain syndrome

(which is of doubtful validity) the result approximates that of other studies done using different instrument and methods. To mention few these include that of kortman in an urban community in Addis Ababa (12%)(37), Solomon in a rural community of Kembata & Hadeya (17.2%) (38) and there is a bit larger difference with the pioneering one done using very crude instrument by Giel & Van in small town in Western Ethiopia (8.6%) (36).

Any comparison with other studies or conclusions about prevalence of specific psychiatric disorders on the basis of the results of this study should be made with caution because of the design of the study in general and the size of the sample which is too small to accurately measure prevalence of specific disorders with prevalence below 1%. Therefore it will be appropriate to make comparison in prevalence rate only with those studies which used the same or closely similar design.

Many similar studies before the recent introduction of CIDI didn't estimate prevalence of specific DSM-III-R disorders and community studies which used CIDI are not available. Of the studies which closely resemble this one, the Epidemiologic Catchment Area study conducted in the U.S using DIS by lay interviewers at three different sites made

estimates which are similar to ours for aggregate rate of schizophrenia and schizophreniform disorders (1.1-2.02%). They found higher estimates for major depressive episode (3.7-6.7%), phobia (7.8-23%), Alcohol abuse & dependence (11.5-15.7%), while finding lower estimates for somatization disorder (0.1%), panic (1.4-1.5%) and sever cognitive impairment (1.0-1.3%) (44). Lumping of other specific disorders as major depression, and phobia may explain the higher rates while the higher estimate of somatization disorders may be the result of conversion into physical symptom of emotional problems in which is common in the culture of most developing countries.

With respect to cognitive impairment, it is difficult to speculate on plausible explanation for the very high rate in
our study because of the relative small size of our sample.

7.Conclusions

In this study, it has been found that the Amharic version of CIDI core version 1.0 can be administered both by clinician and non clinician interviewers after short period of the standardized training. It has also been shown that, the instrument has good reliability as confirmed by the statistical level of agreement of high kappa and percent agreement levels between clinician and non clinician interviewers for all diagnoses (kappa= 0.86 & percent agreement=93.2%) and wide range of DSM-III-R diagnoses (Kappa=0.78-1.0 & percent agreement 93.2%-100%). The acceptability and appropriateness of the instrument, for the population in Addis Ababa is also satisfactory. The most important problems found with the instrument are; its length and irrelevancy of most question of substance abuse section to our situation. In addition to this, we have found that it can be administered at different settings; clinical (inpatients and outpatients) and the general population for clinical or epidemiological studies.

The commonest DSM-III-R diagnoses found in the community survey were, Organic brain syndrome mild (14.1 %) and sever (4.4 %), agoraphobia without history of panic disorder (3.0%) and dysthymia (3.0%). Although our sample size restrict the generalization of the

study result to larger urban groups or any other population, the similarity in magnitude found with other studies in disorders like schizophrenia indicates specific disorders are as common in the studied population as elsewhere. In the case the extreme difference found in organic brain syndrome the reliability of this part of CIDI questionable requiring further study requiring further study to refute or confirm this.

The result of this and other similar study will be definitely important initiative steps for mental health programme in addition to the use they will have in planning and evaluating it after commencement of such programme. Finally this study has opened the door for standardization of our diagnoses and mental health statistics with other countries to facilitate research and international comparative study in mental health.

8.Recommendations

On the basis of our findings the following recommendations are forwarded:

1. There is convincing evidence from this study that the prevalence of specific mental disorders is as common in the population studied as elsewhere that intervention should be made on those which have priority in their magnitude and seriousness.

2. The results of this and other studies done in the prevalence of mental disorders should be used not only as initiative for mental health programme but also for further planning and evaluation of such a programme.

3. The area of research recommended on the basis of this study are:

3.1. Replication of this study using CIDI or parts of it in a better design to further modify and increase its appropriateness, reliability, and acceptability (especially **the organic brain section** and the drug section)

3.2. Use of CIDI in an epidemiological and clinical studies locally. Especially the use of parts (sections) of CIDI to conduct epidemiological and clinical studies of individual or group of specific priority disorders.

3.3. Use of CIDI in studying the reliability and validity of other psychiatric screening and diagnostic instruments.

3.4. Assessment of the reliability, acceptability, and appropriateness of CIDI in to other local languages and cultures.

9. Reference

1. Paltiel, F.L. Women and Mental Health: A post Nairobi Perspective. World Health Statistics Quarterly, 1987, 40, 233-266.
2. Mesfin Araya, Frances E.Aboud. The Ecology of Health and Disease in Ethiopia.Westview Press. Chapter, 38, 1993, 495-496.
3. Green & Anderson, Community Health, fourth edition, 1982, 119 -120
4. Organization of Mental Health Services in Developing Countries. Sixteenth Report of The WHO Expert Committee on Mental Health. Technical Report Series 1975, 564, 31-36.
5. John J. Bartko & William T. Carpenter; On The Methods & Theory of Reliability. The Journal of Nervous & Mental Disease 1975 163, 5, 307.
6. Ward, C.M., Beck, A.T., Medelson, M., Mock, J.E., and Erbaugh, J.K. The Psychiatric Nomenclature: Reasons for Diagnostic Disagreement. Arch. Gen. Psychiatry 1962,7:198-205.
7. Paul William, Alex Tarnopolsky and David Hand; Case Definition and Case Identification in Psychiatric Epidemiology. Review and assessment, Psychological Medicine, 1980, 10, 101-114.
8. World Health Organization. Epidemiology of Mental Disorders. WHO Technical Report series 1960, NO

18. 12-13.

9. Birtchnell, J. Is There a Scientifically Acceptable Alternative to the Epidemiological Study of familial Factors in Mental Illness ? Social Science and Medicine. 1974, 8, 335-350.

10. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. (Third Edition - Revised). . Washington D.C 1987.

11. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (First Edition) Washington D.C 1952

12. World Health Organization. Manual of The International Classification of Disease, Injuries and Causes of Death (Revision 6), World Health Organization, Geneva,1984.

13. World Health Organization Geneva. Manual of The International Classification of Disease, Injuries and Causes of Death (Revision 10) Geneva:1990.

14. Feighner, J.P., Robins, E., Guze, S.B., Woodruff, R.A., Wonokur, G.,and Munoz, R. Diagnostic Criteria for Use in Psychiatric Research. Arch. Gen. Psychiat. 1972,29:57-63.

15. Spitzer, R.L., Endicott, J., and Robins, E. Research Diagnostic criteria. Rationale and Reliability, Arch Gen Psychiat. 1978,35:773-782.

16. Ming T.Tsuag. Maurcio Tohen Jane M.Murphy,

18. 12-13.

9. Birtchnell, J. Is There a Scientifically Acceptable Alternative to the Epidemiological Study of familial Factors in Mental Illness ? Social Science and Medicine. 1974, 8, 335-350.

10. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. (Third Edition - Revised). . Washington D.C 1987.

11. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (First Edition) Washington D.C 1952

12. World Health Organization. Manual of The International Classification of Disease, Injuries and Causes of Death (Revision 6), World Health Organization, Geneva,1984.

13. World Health Organization Geneva. Manual of The International Classification of Disease, Injuries and Causes of Death (Revision 10) Geneva:1990.

14. Feighner, J.P., Robins, E., Guze, S.B., Woodruff, R.A., Wonokur, G.,and Munoz, R. Diagnostic Criteria for Use in Psychiatric Research. Arch. Gen. Psychiat. 1972,29:57-63.

15. Spitzer, R.L., Endicott, J., and Robins, E. Research Diagnostic criteria. Rationale and Reliability, Arch Gen Psychiat. 1978,35:773-782.

16. Ming T.Tsuag. Maurcio Tohen Jane M.Murphy,

Psychiatry Epidemiology, Chapter 38, The new Harvard guide to psychiatry, Ed, N.Armond.M, Nicholi.Jr, Cambridge Massachusetts. The Balknap Press of Harvard University Press.

17. Bruce P. Dohronivend & Barbara. Snell Dohrenwend: Perspectives on the Past & Future of Psychiatric Epidemiology, American Journal of Public Health, Nov. 1982, 72, 11,1271-1279.

18. Goldberg, D.P , The Detection of Psychiatric Illness by Questionnaire London. Oxford University Press. 1972,34-50

19. Kendell, R.E., Everitt, B., & Cooper, J.E. Reliability of the Present State Examination. Social Psychiatry 1968,3, 123-129.

20. Endicott, J., and R.L. Spitzer. A Diagnostic Interview: Schedule for Affective Disorder & Schizophrenia. Archives of General Psychiatry 1978: 837-844.

21. Tsuang, M.T., R.F. Woolson, and J.C. Simpson. The Iowa Structured Psychiatric Interview: Rationale, Reliability and Validity. Acta Psychiatrica Scandianavica. Supplement 283,1980,45-56.

22. Harding, T.W., De Arango, M.V., Baltazar, J., Climent, C.E., Ibrahim, H.H.A., Ladrido-Ignacio, L., Marthy, R.s., & Wig, N.N. Mental disorders in Primary Health Care. A Study of Their Frequency

and Diagnosis in Four Developing Countries. Psychological Medecine 1980, 10, 231-241.

23. Helzer, J.E., L.N. Robins, J.L. Croughan, and A. Welner. Renard Diagnostic Interview: Its Reliability and Procedural Validity With Physicians and Lay Interviewers Archives of General Psychiatry 1981,38: 393-405.

24. Robins, L.N., J.E. Helzer, J.L. Croughn, and K.S. Ratcliff. 1981. National Institute of Mental Health Diagnostic Interviewer Schedule: Its History Characteristic and Validity. Archives of General Psychiatry 1981, 38: 381-389

25. Robins, L.N., Wing, J., Wittchen. HV., Helzer, J.E., Babor, T.F., Burk, J.,Farmer, A., Jablenski, A., Dickens, R., Regier, D.A., Sartoriw, N., & Towle, L.H. The Copomsite International Diagnostic Interview. Archives of General Psychiatry, 1988,45, 1069-1077.

26. Reger, D.A., J.K. Myers, M.Karmer, L.N. Robins, D.G. Blazer, R.L.Hongh, W.W. Eaton, and B.Z. Locke. The NIMH Epidemological Catchment Area (ECA) Program; Historical Context, Major Objectives and Study Population Characteristics. Archive of General Psychiatry 1984, 41: 934-941.

27. U. Witkhen, L.N. Robins, L.B. Cottler, N. Sartorius, J.D. Bruce. D. Reger and Participants

in the Multicenter WHO/ADAMHA Field Trials; Cross-Cultural Feasibility, Reliability and Source of Variance of CIDI; British Journal of Psychiatry 1991; 159, 645-653.

28. Division of Mental Health World Health Organization, CIDI User's Manual Core Version 1.0 - Nov 1990, 7-9.

29. Division of Mental Health World Health Organization, CIDI Computer Manual Core Version 1.0 - Nov 1990 1-30

30. Essen-Moller, E. Individual Deaths and Morbidity in a Swedish Rural Population. Acta Psychiaterica Scandinavica Supplement 1956,100.101-120.

31. Leighton, D.C., J.S. Harding, D.B. Macklins C.C. Mughes, A.M. Leighton. Psychiatric Findings of the Stirling County Study. American Journal of Psychiatry 1963,119: 1021-1026.

32. Lost Doctrine. Archives of General Psychiatry 1982,37:209-221.

33. Orly, J.H. & Wing, J.K. Psychiatric disorders in two African Vilage. Archives of General Psychiatry 1979, 36, 513-20.

34. O. Gureje, B. Obikoya and B.A. Ikvsan. Prevalence of specific psychiatric disorders in an urban primary care setting. The East African Medical Journal. 1992, 69, 5, 282-287.

35. Dormar M. Giel, R. Van Lurjk J.N. Psychiatric Illness in Two Contrasting Ethiopian outPatient Populations. Soc. Psychiat. 1974, 9, 155-161.

36. Jacobson L. Psychiatric Morbidity and Psychosocial Background in outpatient Population of a General Hospital in Western Ethiopia. Act. Psychiat. 1985, 71:417-426.

37. Giel R. and Van Luijk J.N. Psychiatric morbidity in a Small Ethiopian Town Br. J. Psychiat. 1969, 115, 149-162.

38. Kortman F. Problems in Practising Psychiatry in Ethiopia Ethiopian Medical Journal 1988,26: 77-83

39. Taferi, Solomon, F.E. Aboud and C.P, Larson. Determinants of Mental Illness in a Rural Ethiopian Adult Population. Soc. Sci. Med. 1991; 32; 197-201.

40. Kloos.H & Zein Ahmed Zein Health and Disease in Ethiopia A Guide to the literature 1940-1985. Ministry of Health 1988.

41. Division of Mental Health, World Health Organization CIDI Researchers Copy Core Version 1.0 Nov 1990.

42. Division of Mental Health, World Health Organization. CIDI Interviewers Copy. Core Version 1.0 Nov 1990.

43. Division of Mental Health, World Health

organization. CIDI Training Manuals I-III. Core Version 1.0 Nov 1990

44. Lee N.Robin, John.Helzer, Myrna M.Weissman, Helenorvaschel, Ernest.G. Life time prevalence of specific psychiatric disorders. Arch.Gen. Psychiatry.1984.41,949-958.

45. Gert Semler ,Hans -Ulrich Wittchen & M. Zaudig. The test re-test reliability of the German version of Composite International Diagnostic Interview on RDC symptom levels.Ininternational classification in psychiatry, unity and diversity. London Cambridg University Press.1988,221-234.

46. Aleksander Janca, Lee n.Robins , Linda B.cottler & S.Early Clinical Observation of assessment using The Composite International diagnostic Interview CIDI. British Journal of Psychiatry,1992, 160, 815-818.

47. Farmer , A.e., Katz, R., McGiffin, P., et al A comparision between a present state examination and the composite international diagnostic interview. Archive of general psychiatry,1987 26,56-63.

48. Wittchen,H-U.,Burk,J.D.,Semler,G.,et al Recall and dating reliability of psychiatric interview (CIDI/DIS), Archive of General Psychiatry 1989,46,437-443.

Annex I

Format for interviewer

Section Y: Interviewers note.

Questions which the interviewer believed not understood by respondent.

Question No	Modified Question of the interviewer.	Response
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Respondants name:_____

Interviewers name:_____

Annex II

Format for observer

Section Z: Observers note.

Questions which the observer believed not understood by respondent.

Question No	Modified Question of the observer	Response
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Respondents name:_____

Observers name:_____

List of abbreviations and definitions.

1.DSM:Diagnostic and Statistical Manual of Mental Disorders.

2.ICD:International classification of diseases.

3.WHO:World Health Organization

4.GHQ:General Health Questionnaire.

5.PSE:Present State examination.

6.SADS:Schedule for Affective Disorder and Schizophrenia.

7.ISPI:Iowa Structured Psychiatric Interview.

8.SRQ:Self Reporting Questionnaire.

9.CIDI:Composite International Diagnostic Interview.

10.Kebele: Lowest local administrative and communal unit.

11.Awraja:district

12.I.D.R.C: International Development Research Center.

Declaration

I, the undersigned declare that, this thesis is my work and that all sources of material used for these have been duly acknowledged.

Name: Eskindir Rashid,MD

Signature: 

Place: Addis Ababa, Ethiopia

Date of submission: May, 1993.

This thesis has been submitted for examination with my approval as University advisor.

Dr. Derege Kebede

Advisor.