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# Indian Psychiatric Interview Schedule (IPIS)*

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Summary. The paper discusses the advantages of the structured interview in psychiatric research and goes on to describe the details of development of a structured interview Schedule (IPIS) suitable for an Indian setting. The Schedule is described, as well as the results of inter-investigator reliability tests. Possible uses of the instrument and the necessary further developments are outlined.

In the last few years there have been a number of attempts to improve the reliability of the psychiatric interview as a research tool without sacrificing its essential clinical character. A number of structured interview schedules have been designed (Wittenborn, 1955; Lorr et al., 1963; Spitzer et al., 1968), but the Present State Examination by Wing et al. (1967) and Wing (1971) with over 600 items is perhaps the most comprehensive. Though these interview schedules differ in detail, they all have the following characteristics in common:

1. There is a standard check-list of symptoms.
2. The investigation is conducted through standard questions and cross examination, but additional questions may be asked to clarify doubts.
3. The decision whether a symptom is present or not is made by the investigator who is guided in his judgement by an instruction manual providing standard definitions for all the symptoms in the check-list.

The clinical approach is further simulated in some schedules through the provision of cut-off points, so that the detailed examination might be omitted if on preliminary inquiry the presence of a symptom or a group of symptoms seems unlikely.

The structured interview is an important advance over the "questionnaire" technique, which because of the rigidity of its questions, lack of provision for cross examination to clarify doubts and taking the judgement about the presence or absence of a symptom(s) out of the hands of the investigator loses in validity what it gains in reliability. However, the interview schedules developed to date suffer from some obvious shortcomings:

1. A clinician almost always tries to get information from a near relative or a friend to get a complete picture of the psychopathology. This information is especially useful for uncooperative psychotics. None of the interview schedules is designed to tap this information. Katz's Scales (Katz and Lyerly, 1963) are designed for information from the informant but are closer to a questionnaire approach in depending upon the "yes" and "no" response from the interviewee. Further, they make the mistake of depending only on the information from the informants.
2. None of the schedules has a section for systematic recording of historical information, so important in reaching a diagnosis.

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3. The schedules developed for use in the West appear less and less satisfactory as one moves away from the sociocultural context in which they were developed. For example, none of the schedules pays special attention to possession states, symptoms of sexual inadequacy, and the variety of somatic symptoms so commonly encountered in the Indian setting.

It was against this background that the authors felt a need to prepare a structured interview schedule suitable for the Indian setting. This paper reports the various stage in its development, its essential characteristics, the methods used to measure and increase its reliability and a discussion on the varieties of ways it can be put into use.

## Procedure

The Indian Psychiatric Interview Schedule (IPIS) was developed simultaneously in English and Kannada at the Bangalore Mental Hospital Out-patient Department. It passed through the following stages in its development:

### 1. Pilot I

Two hundred and eighty-four case records belonging to patients 15 years of age or above were analysed to find the range and frequency of "symptoms". A symptom at this stage was rather loosely defined and the definition in-

Table 1. Retrospective analysis of symptoms in 284 out-patients

| Sl. No. | Item | Frequency (%-age) | Sl. No. | Item | Frequency (%-age) |
|---|---|---|---|---|---|
| 1. | Sleeplessness | 32 | 22. | Disorientation | 7 |
| 2. | Talking, muttering, smiling to self | 24 | 23. | Self neglect | 6 |
| | | | 24. | Ideas of reference | 5 |
| 3. | Poor appetite | 23 | 25. | Poor concentration | 5 |
| 4. | Irrelevant | 21 | 26. | Palpitation | 5 |
| 5. | Headache | 18 | 27. | Pains and aches | 5 |
| 6. | Violence | 17 | 28. | Anxiety | 4 |
| 7. | Depression | 16 | 29. | Nightmares | 4 |
| 8. | Wandering | 16 | 30. | Sweating, tremors | 3 |
| 9. | Delusions | 15 | 31. | Fits | 3 |
| 10. | Hallucinations | 15 | 32. | Heat/burning in head/ chest/body | 3 |
| 11. | Loss of interest | 15 | | | |
| 12. | Forgetful | 11 | 33. | Mutism | 3 |
| 13. | Irritable, abusive | 11 | 34. | Bizarre behaviour | 3 |
| 14. | Overtalkative | 9 | 35. | Numbness/itching/ other pains | 2 |
| 15. | Fear | 8 | | | |
| 16. | Dizziness | 8 | 36. | Self injury | 2 |
| 17. | Weakness | 8 | 37. | Worries<br>Suicidal actions<br>Confusion<br>Dryness of mouth<br>Breathlessness<br>Guilt feelings<br>Antisocial<br>Depersonalisation<br>Obsessive-compulsive | 1 or less |
| 18. | Suicidal ideas | 8 | | | |
| 19. | Social withdrawal | 8 | | | |
| 20. | Dullness | 7 | | | |
| 21. | Brooding | 7 | | | |

cluded the presenting complaints from the patients and the informants, as well as the items of behaviour, speech, mood and thinking, observed by and labelled as symptoms by the clinician. A retrospective study of this kind was not expected to give complete and accurate details, but it was hoped that the information obtained would form the basis for preparing a "provisional" schedule which could then be improved in the subsequent prospective pilot studies.

Disturbance of biological functions like sleep and appetite and items of social withdrawal like talking, muttering and smiling to self are most commonly recorded. "Headache" has a high frequency and a number of other "physical" symptoms are recorded. The most notable feature, however, is that the range of recorded psychopathology is very wide and that if the interview schedule is to be exhaustive, it must cover a variety of symptoms as given in Table 1.

2. Formulation of Screening Questions in Kannada and English

A provisional check-list was prepared on the basis of Pilot I, and questions were designed to ascertain the presence of the various symptoms. Questions were formulated in both English and Kannada. Kannada questions were prepared by one of us (M. K. ) with the help of a noted Kannada author and professional colleagues who spoke the language. The comparability of the questions in the two languages was ensured through translation and retranslation by independent translators.

Only the Kannada schedule was used in the subsequent studies and improvements made were incorporated in the English version. [1]

3. Pilot II

The Schedule was tried out in a prospective study with 40 patients who were also given a routine "clinical" interview. The information obtained in the structured and unstructured interview was compared and the former was revised to include new items as well as to change the style of questions on the basis of the extra material obtained in unstructured interview.

4. Pilot III

The revised Schedule was tried out with another series of 40 patients, but this time a "clinical" interview was conducted with at least one informant accompanying the patient.

Table 2 compares the symptoms recorded from the patients and their informants in this exercise.

The majority of the symptoms recorded from the patients are those of subjective distress, mainly somatic, while the informants in the main report symptoms which cause nuisance to others. It is obvious that any schedule which concentrates on an interview with either the patient or the informant alone would provide a very incomplete description of the psychopathology.

5. A new interview Schedule was now prepared which had a section on standardised interview with the informant, another on a standardised interview with the patient, and another on observations by the investigator. The questions in the first two sections were accompanied by standard subsidiary questions for cross examination. The first two sections were preceded by a preliminary inquiry to ensure whether the informant and the patient respectively were in a position to give reliable information. An informant was to be given an interview only if he had been with the patient at least one hour a day during the preceding week. Interview with the patient was to be omitted if in the clinician's judgement the former could not be expected to cooperate in answering the questions because of his psychopathology. A manual of instructions was drawn up to give a standard definition for each of the symptoms in the three sections.

6. Reliability Study No. I

One of us (M. K. ) and a Kannada speaking professional colleague (Dr. S. M. Channabasavanna) took part in this Study which was carried out with 40 patients.

Twenty patients were interviewed by each of the investigators, and while one conducted the interview, both recorded the presence or absence of the symptoms for each patient. The aim of the exercise was to examine how far

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1 The English version was prepared with the hope that it would be used for preparing comparable interview schedules in other Indian languages - Kannada not being a familiar language in North India.

Table 2. A comparison of the "Symptoms" from 40 patients and their informants

| Sl. No. | Symptoms from the patients | Frequency (%-age) | Symptoms from the informants | Frequency (%-age) |
|---|---|---|---|---|
| 1. | Sleeplessness | 20 | Sleeplessness | 50 |
| 2. | Giddiness | 15 | Ununderstandable speech | 35 |
| | Headache | 15 | | |
| | Fear | 15 | Poor appetite | 28 |
| 3. | Pain in legs | 13 | Violent | 23 |
| | Burning sensations | 13 | Does not work | 23 |
| | Indigestion | 13 | | |
| 4. | Exhaustion | 10 | Wanders away | 18 |
| | Heaviness in head | 10 | Laughs to himself | 18 |
| | Forgetfulness | 10 | Abusive | 18 |
| | Muscular tension | 10 | Bizarre behaviour | 10 |
| 5. | Poor appetite | 8 | Withdrawn | 10 |
| | | | Poor memory, destructive | 8 |
| 6. | Backache, Palpitation, Sweating, Loss of interest, Numbness, Itching, Poverty of thought, Worries, Night emissions, Tremors, Depression, Dullness, Suicidal ideas, Irritability | 5 or less each | suspicions, self neglect | 8 |
| | | | Disorientation | 5 or less each |
| | | | Homicidal | |
| | | | Excessive drinking | |
| | | | Hallucinations | |
| | | | Delusions | |

the two investigators agreed or disagreed about the presence of symptoms.

Only 36 informants were interviewed. Three patients had come without an informant and one was accompanied by people who had been with the patient less than one hour a day during the preceding week. Only 22 patients were interviewed. The others could not cooperate because of their psychopathology, but the "observation" section was completed for all the 40 patients.

Table 3 gives the results of this reliability study:

Positive agreement refers to the number of times the two investigators agreed about the presence of a particular symptom.

Negative agreement refers to the number of times the two investigators agreed about the absence of a particular symptom.

Disagreement refers to the number of times the two investigators disagreed about the presence of a particular symptom, one claiming it to be present and the other marking it as absent.

Disagreement proportion is the number of disagreements divided by total number of ratings, positive or negative.

Disagreement index is the number of disagreements divided by the number of times positive ratings were made by one or both the investigators. This index is similar to that used for the Present State Examination used by WHO research workers (Sartorius et al., 1971).

The disagreement is extremely low for Section I (inquiry with the informant) and Section II (inquiry with the patient). It is, however, very high for Section III (observation by the investigator).

7. The items for which the disagreement between raters was more than the positive agreement were excluded from the Schedule. Questions and definitions for other items with high disagreement were improved, and a new provisional Schedule was framed.

## 8. Reliability Study No. II

Another reliability study was conducted with 40 patients. Dr. S. M. Channabasavanna could not join and in his place another trained psychiatrist (Dr. Sayeed Ahmed) took part in the study.

Only 35 informants could be interviewed. Only 22 patients could co-operate in completing Section II. Section III (observation) could not be completed for our patient since she was too excited to stay in the interview room. Table 4 shows the results.

Table 3. Reliability Study I. Measure of agreement of two raters' judgement of the presence or absence of symptoms in 40 patients

| | Section I Interview with informant | Section II Interview with patient | Section III Observation |
|---|---|---|---|
| | (N = 36) No. of ratings | (N = 22) No. of ratings | (N = 40) No. of ratings |
| Positive agreement (a) | 462 | 228 | 125 |
| Negative agreement (b) | 766 | 1471 | 1030 |
| Disagreement (c) | 32 | 61 | 205 |
| Total no. of ratings (d) | 1260 | 1760 | 1360 |
| Disagreement proportion[a] | 0.025 | 0.034 | 0.150 |
| Disagreement index[b] | 0.067 | 0.210 | 0.623 |

[a] Disagreement proportion = Total disagreements divided by total no. of ratings, i.e. (c)/(d).

[b] Disagreement index = Total disagreements divided by total no. of ratings where at least one rater recorded the symptom to be present, i.e. (c)/(c) + (a)

Table 4. Reliability Study II. Measure of agreement of two raters' judgement of the presence or absence of symptoms in 40 patients

| | Section I Interview with informant | Section II Interview with patient | Section III Observation |
|---|---|---|---|
| | (N = 35) No. of ratings | (N = 22) No. of ratings | (N = 39) No. of ratings |
| Positive agreement (a) | 280 | 157 | 60 |
| Negative agreement (b) | 882 | 1447 | 752 |
| Disagreement (c) | 28 | 46 | 46 |
| Total (d) | 1190 | 1650 | 858 |
| Disagreement proportion | 0.020 | 0.028 | 0.053 |
| Disagreement index | 0.090 | 0.226 | 0.434 |

Differences are low for Section I and II. The disagreement in Section III is still high, but much lower than that in the first reliability study.

9. Pilot IV

Another pilot study was carried out with 40 patients in order to identify and to frame understandable questions for those items of historical information which seemed crucial, so as to confirm the diagnosis and to provide a coherent picture of the course of the illness. Questions were designed for these items, and these were introduced as an additional section in the Schedule (see later).

## A Description of the Indian Psychiatric Interview Schedule (IPIS)

IPIS, as it stands at present, is a research instrument designed to explore the presence of 124 psychiatric symptoms and inquire about 10 items of historical information. A list of these symptoms and history items is given in Appendix I.

A symptom is defined as an item of behaviour, speech, mood, thinking, attitude and sensorium which (a) represents a change from the usual pattern for the individual, and (b) is distressful to the individual or those around him or both. The subject or the informant must be able to describe a point in time, since when the distressful item has been present; a life-long pattern, be it odd or distressful, is not taken as a symptom. Unless otherwise specified, the symptom is recorded only if it is present at the time of interview and/or during the preceding week.

A symptom is recorded as present or absent; no attempt is made to estimate its severity. The judgement whether a symptom is present or not is made by the investigator after he has asked the required question(s), conducted the necessary cross-examination and checked the information so gathered against the definition given in the manual which accompanies the Schedule. Symptoms are recorded individually. No overall symptom score is computed.

IPIS has four sections:

I Interview with the informant.

II Interview with the patient.

III Observations by the investigator.

IV Historical information.

Sections I and II have subsections on preliminary inquiry designed to record presenting complaints without leading questions and to judge whether the detailed inquiry is to be carried out or not. An informant is not given a detailed interview unless he has spent at least one hour a day with the patient during the preceding week and the patient is not given a detailed interview if he denies symptoms or is uncooperative because of his psychopathology or other reasons.

A search for some of the symptoms is made from more than one source. For example, inquiry about sleep is made both from the patient and the informant. For restlessness, questions are asked both from the patient and the informant; also the investigator is expected to look for its presence during the interview. Such symptoms are scored as present if their presence is ascertained from at least one source (i.e. from the patient, informant, or observation).

Many questions have cut-off points, a detailed inquiry being made only when the preliminary inquiry warrants it. Because of these cut-off points the inquiry is flexible: the interview takes only 10-15 min if no symptom is present and 45 min to 90 min if many symptoms are present. Appendix II gives an example of how cut-off points are used for questions on sleep, and the criteria for recording the presence of various sleep abnormalities.

## Discussion

IPIS is a structured instrument for investigating psychopathology in an Indian setting, developed and improved through a number of pilot studies conducted at Bangalore Mental Hospital Out-patient Department.

It is similar to other structured interview schedules in the following respects:

a) It has standard questions with standard cross examination.

b) Flexibility of approach is permitted through cut-off points and additional questions when required.

c) Decision about the presence of symptoms is made by the investigator with the help of standard definitions in the instruction manual.

It differs from other schedules in the following respects:

a) The symptoms in the check-list are those commonly reported in the Indian setting. Somatic symptoms, sexual symptoms, possession states and delusions of supernatural persecu-

tion are, for example, specially dwelt upon. For each of these items, operational criteria are given to guide the rater's decision as to whether it should be counted as a psychiatric symptom.

b) No attempt is made to estimate the severity of the symptoms. Firstly, the villagers did not understand the subtleties involved in reporting various grades of severity. Secondly, it is the authors' contention that the severity of a symptom is very often a function of other dimensions, such as the degree of distress experienced by the patient or his close relatives and the disturbance in social functioning resulting from the psychopathology, and these dimensions need separate lines of inquiry.

c) IPIS has standard questions on historical information. The interinvestigator reliability for these questions and their usefulness in reaching diagnosis are still to be fully examined, but the section has been retained in the present version of IPIS since on impressionistic basis it appears useful.

d) Perhaps the most important difference from other schedules is the importance given to interview with the informant. Such inquiry is especially useful in Indian hospitals and outpatient departments where most patients come at so late a stage that they cannot cooperate.

## Reliability of the Instrument

The disagreement index as used by Sartorius et al. (1971) appeared on common sense grounds a suitable index of association for the dichotomously scored data of the kind obtained with this schedule. Disagreement proportion is another way of examining the degree of agreement, and takes the negative agreements also into consideration while computing. It can be seen that after the two reliability studies the agreement is very good for sections on interview with the patient and the informant. Agreement on observations by the "expert" investigators, though much improved in the second reliability study, is still not fully satisfactory. It seems that a period of training where the investigators learn to observe similarly through joint interview followed by discussion and by observing together movie films of the patients is essential for increasing the agreement. Such period of training is essential if the Schedule is to be used at more than one centre in India.

## Possible uses of IPIS:

IPIS is a research tool and as such is chiefly recommended for systematically recording and comparing symptomatology at different centres in India. IPIS should also prove useful in examining the phenomenology of commonly reported but yet vaguely understood syndromes like possession states and acute undifferentiated psychosis. It is often suggested that the symptom pattern of well known syndromes like schizophrenia and depression might differ in different cultures. IPIS can be used for examining the patterns of various psychiatric syndromes in Indian setting.[2]

## Further developments:

Further work is necessary,

a) to further improve the questions and judgement criteria for the section on observation so as to increase its inter-investigator reliability;

b) to carry out inter-investigator reliability tests for the section on historical information;

c) to translate the schedule into other Indian languages after finding correct idioms and equivalents;

d) to conduct inter-investigator reliability studies between workers who are going to use the schedule at different centres;

e) to examine if with the available information on the range of symptoms and the historical data a standard method of reaching conventional diagnoses could be established.

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2 Copies of IPIS and the instruction manual may be obtained by writing to Dr. R. L. Kapur, University Department of Psychiatry, Royal Edinburgh Hospital, Morningside Park, Edinburgh EH10 5HF.

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## Appendix I

Symptom Check-list in IPIS

1. Physical symptoms:
   Pain, Burning, Itching, Numbness, Other odd sensations — in — Head, Chest, Anogenital region, Rest/whole body.
   Dizziness, Indigestion, Weakness, Nausea, Wind, Epileptic fits, Hysterical fits.
   Hysterical paralysis/parathesia/ataxia/blindness/deafness/aphonia/other conversion features.
2. Sleep:
   Over-sleeping, Sleep delay, Early waking, Generalised sleeplessness, nightmares.
3. Appetite:
   Increased appetite, Decreased appetite.
4. Worries, Feelings of inferiority.
5. Situational anxiety, Free floating anxiety, Panic, Phobias, Suspiciousness.
6. Muscular tension, Restlessness, Fugitive impulse, Running away, Wandering tendencies.
7. Subjective forgetfulness, Poor concentration, Pressure of ideas, Poverty of thought, Flight of ideas, Ideas of references, Loss of memory, Disorientation, Delirium.
8. Obsessive ideas, Compulsions.
9. Irritability, Abusiveness, Violence.
10. Depression, Dullness, Loss of interest, Feelings of incompetence, Suicidal feelings, Suicidal attempt, Guilt feelings, Self blame, Elation, Grandiose ideas.
11. Sexual preoccupation, Masturbation worries, Night emission worries, Loss of sexual desire, Impotence, Premature ejaculation, Other sexual problems, Painful menstruation.
12. Bizarre behaviour, Excitement, Slowness, Stupor, Preoccupation, Distractibility, Catatonic features (echopraxia, negativism, ambitendence, flexibilitas cerea, echolalia), Blunted affect, Incongruous affect, Hostile irritability, Hypomanic mood, Histrionic, Too much speech, Too little speech, Mutism, Incoherent speech, Irrelevant speech.
13. Delusions of persecution:
    Human/Supernatural, Grandeur, Guilt, Possession, Other delusions, Systematisation of delusions, Acting out of delusions.
14. Hallucinations:
    Auditory/Visual/Olfactory/Gustatory/Other.
15. Possession state.
16. Excessive alcohol, Other antisocial habits.

## Appendix II

Sub Section ... Sleep ...

Q. 4. How is your sleep these days? Do you sleep well?

If no:

Q. What is wrong with your sleep? ...
Is it that you take a long time to go to sleep?
... or is it that you wake up too early?
... or is it that your sleep is disturbed through the night?

If sleep delay:

Q. Since when? How often during the last week?
(How long do you take to sleep once you are in bed? ... and before?)
(Once asleep, do you sleep through the night quite well?)

If early waking:

Q. Since when? How often during the last week?
(What time do you get up in the morning? ... and before?)

If disturbed sleep throughout the night:

Q. Since when? How often during the last week?
(How long do you keep awake during the night? ... and before?)
(Do you sleep at all?)
(Do you have to get up a number of times?)

SLEEP DELAY ☐ GENERALISED SLEEPLESSNESS ☐

EARLY WAKING ☐

Definitions

These symptoms should be recorded, only (a) if they have been reported to have occurred at least twice during the preceding week, and (b) the respondent can specify a point in time since when he is distressed by these. They should not be recorded if the respondent complains of "always" having had them. Sleep delay should be recorded if the respondent definitely takes longer to sleep than before. Early waking should be recorded if the respondent definitely wakes up earlier than he used to.

Generalised sleeplessness should be recorded if the wakefulness is not of the nature of sleep delay or early waking, but is definitely more than it used to be before the respondent felt distressed by it.

Sleep delay and early waking may be recorded for the same person. However, if the sleep is disturbed during the rest of the night also, record only generalised sleeplessness.