The subjective experience of cognitive disturbances in chronic schizophrenia.

Welli Yeh

University of Massachusetts Amherst

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THE SUBJECTIVE EXPERIENCE OF COGNITIVE DISTURBANCES IN CHRONIC SCHIZOPHRENIA

A Thesis Presented

By

WELLI YEH

Submitted to the Graduate School of the University of Massachusetts in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

February, 1987

Department of Psychology
THE SUBJECTIVE EXPERIENCE OF COGNITIVE DISTURBANCES IN CHRONIC SCHIZOPHRENIA

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By
WELLI YEH

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Thought disorder has long been considered one of the major classical symptoms of schizophrenia. Previous research has demonstrated through objective measures that thought disorder may be linked to disturbances in cognitive processes such as vigilance, selective attention, and memory. However, surprisingly little is known about the schizophrenic patient's subjective experience of these cognitive disturbances. The purpose of this study was to gather information about how cognitive disturbances affect the day-to-day life of schizophrenic patients and whether they have strategies for coping with these disturbances. Fifteen schizophrenic patients and ten normal control subjects were interviewed with a 90-minute semistructured interview asking them about their concentration, selective attention, and memory. Contrary to expectations, schizophrenic patients and normal controls did not differ in their subjective reports of the frequency, severity and nature of cognitive disturbances. However, they did differ in the actions taken when such disturbances occur. Specifically, patients tend to give up on tasks when they have difficulty concentrating and attending, whereas controls perseverate. Both groups report similar coping strategies to
deal with their perceived cognitive disturbances.
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CHAPTER 1
INTRODUCTION

Thought disorder, in the form of "incoherence, marked loosening of associations, markedly illogical thinking, or marked poverty of content of speech," is one of the major symptoms of schizophrenia (American Psychiatric Association, 1980). This thought disorder is believed to be the result of disturbances in the processes of sensation, perception and conception, such as attention, discrimination, information processing and information retrieval (Ellis and Hunt, 1983).

The disturbances in these cognitive processes in schizophrenia have been the subject of much research. The majority of studies have used objective measures of attention and memory to compare performance of a schizophrenic population to that of a psychiatric or nonpsychiatric control group. Researchers have uncovered a vast array of deficits in vigilance, selective attention, and memory in individuals at high risk for schizophrenia, in actively symptomatic schizophrenics, and in remitted schizophrenics (Nuechterlein and Dawson, 1984).
In contrast to the quantity of literature on objective measures of
cognitive disturbances in schizophrenia, much less is known about the
schizophrenic patients' subjective experience of these disturbances.
Published autobiographical accounts written by schizophrenic patients
(e.g. Cecil, 1964; Jefferson, 1948; MacDonald, 1964; Perceval, 1961;
Sechehaye, 1951) far outnumber published systematic studies by
researchers. The earliest study examining the subjective experience
of cognitive disturbances was conducted by McGhie and Chapman
(1961), who interviewed 26 schizophrenic patients in the early stages
of their illness, asking them about recent changes in their
experiences, particularly in the categories of attention, perception,
motility, and thinking. Patients were encouraged to describe their
experiences in their own words, and the interviewing time for each
patient ranged from 2 to 12 hours. The patients reported increased
disturbances in attention characterized by greater distractibility,
decreased ability to focus attention, and decreased ability to screen
out irrelevant stimuli; increased disturbances in perception
characterized by changes in sensory quality, perception of speech and
perception of movement; changes in motility and bodily awareness
characterized by decreased ability to initiate and carry out motor responses without conscious deliberation; changes in thinking characterized by decreased ability to control and direct thoughts; and changes in affect such as increased anxiety, panic and feelings of depersonalization. As a result of their findings, McGhie and Chapman hypothesized that the primary disorder in schizophrenia is a deficit in the selective and inhibitory functions of attention which gives rise to other symptoms. According to these investigators, inadequate selection and screening of sensory stimuli results in perceptual aberrations and heightened bodily awareness. The inability to screen incoming information also makes it difficult for patients to concentrate and direct their thoughts in a logical fashion, and the affective changes are thought to be reactions to the cognitive disturbances. Unfortunately, as other researchers have pointed out (Freedman and Chapman, 1973), defects in the McGhie and Chapman (1961) study, namely the lack of a control group, as well as the failure to utilize a standard set of interview questions or a standard rating system for scoring responses, detract from the credibility and generalizability of their conclusions.
Some years later, Bowers (1968) also explored the subjective experience of schizophrenia, but without focusing specifically on cognitive disturbances. He interviewed 15 inpatients suffering from "acute schizophrenic reaction, meaning... an acute delusional process with no known organic or toxic cause and usually treated with phenothiazines." In the interview, he asked them to describe the onset and progression of their experiences. The patients reported feelings of heightened awareness, ideas of reference and influence, and the experience of identity dissolution, but they did not report specific disturbances in attention and memory. One explanation for the differences between the results of Bowers' study and those of McGhie and Chapman (1961) is that Bowers was more concerned with developing a general picture of the course of schizophrenic psychosis than with specific aspects of symptoms, and perhaps his more general focus prevented him from reporting specific deficits in attention and memory. Another possible explanation is that the patients he interviewed may not have been considered schizophrenic by more standardized diagnostic criteria. Patients with paranoid disorder and acutely manic patients can often present with an "acute delusional
process" as well as schizophrenic patients. As in the McGhie and Chapman (1961) study, the lack of a control group in Bowers' study severely limits the interpretability of his findings.

Tucker, Harrow, Detre, and Hoffman (1969) administered a self-report inventory to newly admitted schizophrenic and nonschizophrenic inpatients during their third to fifth week of hospitalization. Diagnoses in the nonschizophrenic group included depression, character disorder, and organic brain syndrome. The inventory consisted of 14 statements about disturbances in perception and attention selected from the McGhie and Chapman (1961) findings and from other descriptive literature on the subjective experience of schizophrenia. Tucker et al. (1969) failed to find more reports of disturbances by schizophrenic patients than nonschizophrenic patients, and at least three explanations may be given. One possibility, noted by Freedman and Chapman (1973), is that the statements in the inventory were too idiosyncratic to discriminate between schizophrenic and nonschizophrenic groups, since rates of endorsement were low for both groups. Another possibility is that schizophrenic patients may only report such symptoms when they are
acutely psychotic. The third possibility is that the nonschizophrenic subjects could have also suffered from some cognitive disturbances. Recent literature has reported cognitive deficits in forms of severe psychopathology other than schizophrenia (Andreasen, 1979; Harrow and Quinlan, 1977; Harrow, Grossman, Silversteen & Meltzer, 1982).

In 1973, Freedman and Chapman devised a more systematic approach to the issue of subjective experience of cognitive disturbances in early schizophrenia addressed previously by McGhie and Chapman (1961). Freedman and Chapman first reviewed approximately 50 published autobiographical accounts of schizophrenia in order to obtain an idea of the range of subjective experiences of cognitive disturbances. (This review was subsequently published by Freedman in 1974.) Based on the information gathered, they constructed a standardized interview schedule comprised of 54 questions, many followed by additional probes. The questions were grouped into three sections: introductory and demographic questions, questions about recent changes and problems in general functioning, and questions about recent changes and problems in cognitive and perceptual functioning. Twenty schizophrenic patients and 20
nonschizophrenic psychiatric patients were interviewed on their first
day in the hospital. The nonschizophrenic patients had diagnoses of
neuroses, situational disturbances, and personality disturbances. The
groups were matched for age and socioeconomic status. The
interviews were rated for the presence or absence of changes in 46
specific subjective experiences grouped into 10 categories: (a)
quality, clarity, and speed of thinking, (b) sensory awareness, (c)
concentration, (d) memory, (e) language usage, (f) word comprehension,
(g) perception of speech, (h) visual perception, (i) auditory perception,
and (j) perception of body temperature. Out of these 10 categories,
differences were found between schizophrenic and nonschizophrenic
patients on the presence of disturbances in quality, clarity or speed of
thinking, changes in visual perception and changes in perception of
speech. Schizophrenic patients also showed a tendency to report more
disturbances in their concentration, particularly in their ability to
focus attention selectively and to screen out irrelevant stimuli or
thoughts—similar to the McGhie and Chapman (1961) findings. About
fifty percent of the schizophrenic patients interviewed experienced an
attentional deficit like the one hypothesized by McGhie and Chapman,
and Freedman and Chapman suggested that individual differences in this deficit might identify subvarieties of patients.

Past studies of schizophrenia, both objective and subjective, attempt to draw conclusions about the nature of the illness or the nature of the deficits caused by the illness from samples of patients who are on psychotropic medications. The problem is that the effects of these medications on the phenomena being studied are unclear. The present study differs in approach from these earlier reports. Rather than focusing on understanding schizophrenia as an illness, it looks at how schizophrenia and the various factors associated with schizophrenia, such as medication and institutionalization, affect a person's day to day functioning overall. The subject under study is not the illness itself, but the person with the illness.

An important question that emerges from this approach is how schizophrenic patients cope with the symptoms of their illness over time and whether they have particular coping strategies they find useful. A study that addressed this question in severely disturbed psychiatric patients was reported by Breier and Strauss (1983). Their study looked at the role of self-control in a range of psychotic
disorders. They interviewed 20 discharged psychiatric patients with a variety of diagnoses to see if any of them used self-control mechanisms to deal with their psychotic symptoms. Seventeen of them reported that they felt that they could control their symptoms to some extent and that they used specific strategies to do so. Two of the three schizophrenic subjects interviewed used self-control strategies to cope with thought disorder, which they identified as one of their core symptoms. The third schizophrenic subject used self-control to cope with hallucinations. All three used strategies which required them to focus their attention on a particular task. It should be noted that while the subjects reported that their coping strategies were effective, there were no objective criteria to evaluate the effectiveness of the strategies. There was also no control group in this study. These results demonstrate the need for further studies of coping strategies for psychopathology. Greater knowledge of these coping strategies and their effectiveness could be extremely helpful in developing treatments for psychiatric patients.

The primary aim of the present study was to gather information about the schizophrenic patient's subjective experience of cognitive
disturbances and the ways in which he copes with these disturbances. Subjects participated in a 90-minute semistructured interview asking about their functioning in concentration, selective attention, and memory. Specifically, one of the questions the study wishes to answer is whether schizophrenic patients report cognitive disturbances after the initial phase of their illness or when they are not acutely psychotic. Objective tests show that schizophrenic patients are characterized by their cognitive disturbances, but no study has looked at patients' subjective reports of frequency and severity of cognitive disturbances after the initial phase of the illness. Answers to this question may be a clue to the role of motivation in cognitive disturbances. It is possible that although schizophrenic patients demonstrate cognitive disturbances, they do not, in fact, perceive this as a problem, and thus are not motivated to improve their cognitive functioning. Another question is what kinds of cognitive disturbances schizophrenic patients experience. Answers to this question will provide information about what specific problems could be targeted for treatment. The third question is how schizophrenic patients react to their cognitive disturbances, whether
they have particular coping strategies and how effective they feel these strategies are. Answers to this question will be helpful in formulating ideas for an effective treatment of cognitive disturbances in schizophrenia.
Subjects

The subjects in this study were 15 male schizophrenic patients and 10 male staff from the Northampton Veterans Administration Hospital. Eight of the schizophrenic subjects were inpatients at the hospital and seven were outpatients who attended the VA Day Treatment Center on a daily or near-daily basis. All patients had been hospitalized previously, and the mean number of previous hospitalizations was 6.1 with a standard deviation of 4.4. Patients were asked to participate in the study if they met the following criteria:

1) A current hospital diagnosis of schizophrenia with onset of symptoms at least 2 years prior to this study.

2) No evidence of organic central nervous system disorder.

3) No history of significant alcohol and/or substance abuse that would require treatment or result in a secondary diagnosis.

4) No single hospitalization lasting longer than 5 years, to reduce possible confounding effects of long-term hospitalization on cognitive
functioning.

5) Under 60 years of age, to minimize possible confounding effects of cognitive changes associated with aging.

Inpatients were approached in person by the investigator and asked to participate in the study; outpatients were asked by letter. Patients were then interviewed with the psychotic disorders module of the Structured Clinical Interview for the DSM-III-R-Patient Version (SCID-P) (Spitzer & Williams, 1985) and included in the study only if they met the criteria for chronic schizophrenia. Out of 136 patients at the Day Treatment Center and two hospital wards, 72 were diagnosed with schizophrenia, but only 22 met the other four criteria listed above. Out of these 22, 17 agreed to participate in the diagnostic interview. One patient was screened out using the diagnostic interview and another patient was unable to answer any of the questions on the cognitive disturbances interview. Thus, the final sample consisted of 15 chronic schizophrenic patients: 10 paranoid type, two disorganized, two residual, and one undifferentiated.

The control subjects were full-time staff who responded to an advertisement in the hospital's Daily Bulletin requesting volunteers
for an experimental study on cognitive processes. In order to keep the control group as similar as possible to the patient group, volunteers were only included in the study if they met the following criteria:

1) A self-report of no organic central nervous system disorder.

2) A self-report of no alcohol and/or substance abuse.

3) No educational degree beyond a B.S. or a B.A.

4) Under 60 years of age.

In addition, control subjects were also required to have a self-report of no significant psychopathology in themselves or in first degree relatives. Significant psychopathology is defined as outpatient treatment for a non-neurotic disorder or any inpatient and/or drug treatment for "emotional disturbance."

Control subjects were further screened for psychopathology on the basis of the psychotic disorders module of the Structured Clinical Interview for DSM-III-R-Nonpatient Version (SCID-NP) (Spitzer & Williams, 1985). A total of 14 staff volunteered to participate in the study, but 2 had been treated for alcoholism, one for post-traumatic stress disorder, and one for depression, so they could not be included in the study. The final sample consisted of 10 control subjects: 7
mental health associates or nursing assistants, one nurse, one vocational counselor, and one electrician.

There were no significant differences between patients and controls in age, ethnic background, religious background, or socio-economic status as determined by Hollingshead and Redlich’s (1958) two-factor index of social position. However, in marital status controls showed somewhat greater likelihood to be married, while patients tended to remain single ($X^2(4, N = 25) = 9.21, p < .06$). Table 1 summarizes the demographic information for both groups. The mean age of patients was 43.6, with a standard deviation of 9.1 and the mean age of controls was 42.7, with a standard deviation of 9.4. All patients were currently taking psychotropic medications.

Materials

Diagnostic Interview. The diagnostic interview used was the Structured Clinical Interview for the DSM-III-R (SCID), developed by Spitzer and Williams (1985). As the title implies, this interview was constructed to determine diagnoses in accordance with the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R). The entire interview consists of a general overview section with questions about
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<th>Control (N)</th>
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<tr>
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$X^2(4, N = 25) = 9.21, p = .06$

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$X^2(3, N = 23) = 1.07, n.s.$
**Table 1 (cont’d)**

Demographic Information for Patients and Controls

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\( x^2(3, \ N = 24) = 3.70, \text{n.s.} \)

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<td>Antianxiety</td>
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Mean Age

<table>
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<th>Patient</th>
<th>Control</th>
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<tbody>
<tr>
<td>Mean Age</td>
<td>43.6 (SD=9.1)</td>
<td>42.7 (SD=9.4)</td>
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demographic data and psychiatric history followed by eight different sections or modules focusing on different types of disorders. There are slightly different versions of the interview for patients and nonpatients. For example, the patient version asks about present illness in the overview, whereas the nonpatient version does not. For this study, the only sections used were the overview and the psychotic disorders module, which enables one to make differential diagnoses between schizophrenia, affective disorder, brief reactive psychosis, schizophreniform disorder, schizoaffective disorder, delusional disorders, and psychotic disorder not otherwise specified.

**Cognitive Disturbances Interview.** This interview is comprised of 48 open-ended questions about concentration, selective attention, and memory, and some of the questions have several parts. A copy of the interview can be found in Appendix E. The interview is loosely divided into three sections: the first focusing on concentration, the second on selective attention, and the last on memory. Each section begins by asking the subject whether they have difficulty concentrating, attending selectively, or remembering in two specific situations common in daily living: e.g. “When you're watching TV, do you ever
have trouble concentrating?" If subjects do express some difficulty in these situations, they are then asked to describe what happens, how they feel, and what actions they take. The rest of each section explores these same aspects of cognitive functioning in greater detail. There are questions about the frequency and severity of cognitive disturbances, e.g. "How often do you have trouble concentrating?" "Do you feel like this is a problem for you?" If yes: "How serious?" There are also questions about the nature of the disturbances: the types of situations in which disturbances are experienced and the types of stimuli that are distracting or difficult to remember. At the end of each section, there are questions about reactions to these disturbances: how subjects feel, whether they think they can control these disturbances, and what they do to cope with them. Nearly all of the questions request specific examples or details to flesh out responses.

Procedure

Following completion of the SCID, subjects who met the criteria previously set forth were asked to participate in the cognitive disturbances interview. All subjects were interviewed individually by
the investigator in one or two sessions, depending on the subject's preference. Interviews lasted from 30 to 90 minutes, with patients generally taking longer than control subjects. Interviews were conducted at the VA Hospital with inpatients and staff and at the Day Treatment Center with outpatients. The interviews were tape-recorded and transcribed for later analysis.
Coding and Reliability

To insure reliability, transcripts of the interviews were coded independently by the principal investigator and a research assistant. The interviews were transcribed question by question, so that responses to question 1 for all subjects were grouped together, responses to question 2 for all subjects were grouped together and so forth. The responses for patients and control subjects were interspersed and labeled only by number, so that the research assistant was blind to group membership. Like the transcripts, coding proceeded question by question, so that all of the subjects' responses to question 1 were coded before responses to question 2 were coded. This was done to maximize consistency in coding responses to each question and to minimize possible "halo effects" within individual interviews.

Responses to each question were coded by placing them in categories that were largely predetermined. For example, categories
for questions about frequency of disturbance, such as question 8: “How often do you have trouble concentrating?” were: constantly, daily, weekly, monthly, and rarely/never. Categories for questions about severity of disturbances, such as question 9: “Do you feel like this is a problem for you? How serious?” were: yes, somewhat, and no. For questions about circumstances in which cognitive disturbances occur, the categories were based on: the subject’s self-reported physiological state, the subject’s level of interest in the task, the amount of external stimuli present, and the subject’s emotional state. For questions about reactions to cognitive disturbances, categories were based on whether subjects felt negative, neutral or positive when they experienced difficulty with their concentration and selective attention, and also whether or not they employed coping strategies. Categories for coping strategies were based on whether they involved changes in the environment (e.g. reducing external distraction), changes in the subject (e.g. increasing effort), or some combination of the two (e.g. taking a break and returning to the task later). Coping strategies were also categorized for their perceived effectiveness or ineffectiveness. A sample coding form listing the the
different categories for each question can be found in Appendix F.

Most of the categories were self-explanatory and each coder relied primarily on his/her own intuition in the coding process. It was felt that this approach would be less prone to bias than if the principal investigator were to specify how responses should be coded. However, this approach also may yield lower inter-rater reliability. After coding was completed, kappa, a measure of inter-rater reliability that accounts for chance (Cohen, 1960), was calculated for each question. Table 2 gives the values for kappa for each question. The average value for kappa was .792; 79% of the questions had kappa values of .70 or greater.

The two coders then discussed each response on which they disagreed until they were able to reach a consensus on how that response should be coded. Thus, all the codes used in the final data analysis were agreed upon by both coders. In general, the codes that were agreed upon were fairly evenly split between the original codes given by each coder. The discussion between the coders also resulted in more standardized criteria for coding responses to this interview.

It should be noted that responses to two of the questions on the
Table 2

*Inter-rater Reliability*

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<td>Question</td>
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<td>18</td>
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<td>.856</td>
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<td>.937</td>
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<td>31</td>
<td>.773</td>
<td>38b1</td>
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<td>.923</td>
<td>38b2</td>
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<td>21b</td>
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<td>.750</td>
<td>38b3</td>
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<td>34a</td>
<td>1.00</td>
<td>39a</td>
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<td>23</td>
<td>.928</td>
<td>34b</td>
<td>.872</td>
<td>39b</td>
<td>.794</td>
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<td>.710</td>
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<td>1.00</td>
<td>39c</td>
<td>.432</td>
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<td>.899</td>
<td>35b</td>
<td>1.00</td>
<td>40a</td>
<td>.825</td>
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<td>Question</td>
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<td>Question</td>
<td>Kappa</td>
<td>Question</td>
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<td>----------</td>
<td>-------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>40b</td>
<td>1.00</td>
<td>42c</td>
<td>.781</td>
<td>44e</td>
<td>1.00</td>
</tr>
<tr>
<td>40c</td>
<td>1.00</td>
<td>43a</td>
<td>.419</td>
<td>45</td>
<td>1.00</td>
</tr>
<tr>
<td>41a</td>
<td>1.00</td>
<td>43b</td>
<td>.754</td>
<td>46a</td>
<td>.918</td>
</tr>
<tr>
<td>41b</td>
<td>1.00</td>
<td>44a</td>
<td>1.00</td>
<td>46b</td>
<td>.834</td>
</tr>
<tr>
<td>41c</td>
<td>1.00</td>
<td>44b</td>
<td>1.00</td>
<td>46c</td>
<td>.921</td>
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<td>42a</td>
<td>.611</td>
<td>44c</td>
<td>1.00</td>
<td>47</td>
<td>.686</td>
</tr>
<tr>
<td>42b</td>
<td>.781</td>
<td>44d</td>
<td>1.00</td>
<td>48</td>
<td>.894</td>
</tr>
</tbody>
</table>
interview were not coded. Question 27, "When you have trouble deciding what to pay attention to, what kinds of things are you usually trying to decide between?", could not be answered by most of the subjects. Question 28, "What is it like when you can't decide what to pay attention to?", elicited answers that were identical to those from question 29, "How does it make you feel?", so those answers were coded under question 29.

Data Analysis

Responses of patients and controls on each question were compared using a chi-square test. However, when patients and controls were only being compared in two response categories, a Fisher's exact test was used when the smallest expected frequency was less than 5 or when there were fewer than 20 cases. When sample size exceeded 20 cases, groups were compared using a chi-square analysis corrected for continuity (Yates, 1959). It should be noted that sample size did vary from question to question because some questions were only asked if subjects answered affirmatively to the previous question. For example, questions about the nature of cognitive disturbances were only asked if subjects reported having cognitive disturbances. Also,
some subjects were not able to answer some questions, so their data was coded as missing on that question and excluded from that analysis.

Functioning in Common Daily Situations

Tables 3, 4, and 5 give the relative percentages of patients and controls responding in each category on questions about cognitive functioning in specific everyday activities. Although the percentages seem to vary considerably between groups on some categories, the chi-square values, also given on the tables, show that these differences were not statistically significant.

Frequency and Severity of Cognitive Disturbances

No significant differences were found between patients and controls in self-report of frequency of disturbances in concentration \((X^2(4, N = 24) = 4.84, \text{n.s.})\), selective attention \((X^2(4, N = 25) = 1.97, \text{n.s.})\), and memory \((X^2(3, N = 25) = 4.16, \text{n.s.})\). Likewise, patients and controls did not differ significantly in their perceptions of the severity of their disturbances in concentration \((X^2(2, N = 25) = 4.17, \text{n.s.})\), selective attention (Fisher's Exact Test, \(p = .308\)), and memory \((X^2(2, N = 25) = 1.93, \text{n.s.})\). Table 6 gives the relative percentages of
Table 3
Response Percentages of Patients and Controls on Questions about Concentration on Specific Daily Activities

<table>
<thead>
<tr>
<th>Question</th>
<th>Activity</th>
<th>Watching TV</th>
<th>Reading</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pt</td>
<td>Ctl</td>
<td>Pt</td>
<td>Ctl</td>
</tr>
<tr>
<td>Trouble concentrating?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>53.3</td>
<td>40</td>
<td>46.7</td>
<td>50</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>46.7</td>
<td>60</td>
<td>53.3</td>
<td>50</td>
</tr>
<tr>
<td>$X^2(1, N = 25) = 0.06$, n.s.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of distraction?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal</td>
<td></td>
<td>75</td>
<td>100</td>
<td>66.7</td>
<td>100</td>
</tr>
<tr>
<td>External</td>
<td></td>
<td>25</td>
<td>0</td>
<td>33.3</td>
<td>0</td>
</tr>
<tr>
<td>Fisher's Exact, p = 0.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feelings?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td></td>
<td>37.5</td>
<td>50</td>
<td>85.7</td>
<td>60</td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
<td>62.5</td>
<td>50</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td>Positive</td>
<td></td>
<td>0</td>
<td>0</td>
<td>14.3</td>
<td>0</td>
</tr>
<tr>
<td>Fisher's Exact, p = 0.85</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Action taken?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do nothing</td>
<td></td>
<td>12.5</td>
<td>25</td>
<td>14.3</td>
<td>20</td>
</tr>
<tr>
<td>Change tasks</td>
<td></td>
<td>62.5</td>
<td>75</td>
<td>57.1</td>
<td>20</td>
</tr>
<tr>
<td>Increase effort</td>
<td></td>
<td>25</td>
<td>0</td>
<td>28.6</td>
<td>60</td>
</tr>
<tr>
<td>Fisher's Exact, p = 1.31, n.s.</td>
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<td></td>
<td></td>
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</tr>
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</table>

$X^2(2, N = 12) = 3.78$, n.s.  $X^2(2, N = 12) = 1.71$, n.s.
Table 4
Response Percentages of Patients and Controls on Questions about Selective Attention in Specific Daily Activities

<table>
<thead>
<tr>
<th>Question</th>
<th>Activity</th>
<th>Pt</th>
<th>Ctl</th>
<th>Pt</th>
<th>Ctl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trouble attending selectively?</td>
<td>In Conversation</td>
<td>53.3</td>
<td>40</td>
<td>42.9</td>
<td>10</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>53.3</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>46.7</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>On the Phone</td>
<td></td>
<td></td>
<td>57.1</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X²(1, N = 25) = .06, n.s.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feelings?</td>
<td></td>
<td></td>
<td></td>
<td>66.7</td>
<td>100</td>
</tr>
<tr>
<td>Negative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
<td>50</td>
<td>75</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33.3</td>
<td>0</td>
</tr>
<tr>
<td>Fisher's Exact, p = .42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Action taken?</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Attend to all</td>
<td></td>
<td>14.3</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do nothing</td>
<td></td>
<td>14.3</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce distraction</td>
<td></td>
<td>71.4</td>
<td>50</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>X²(2, N = 11) = .50, n.s.</td>
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<tr>
<td>Fisher's Exact, p = .83</td>
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Table 5
Response Percentages of Patients and Controls on Questions about Memory in Specific Daily Activities

<table>
<thead>
<tr>
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<th>Activity</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Appointments</td>
<td>Phone Numbers</td>
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<tr>
<td></td>
<td></td>
<td>Pt</td>
<td>Ctl</td>
</tr>
<tr>
<td>Trouble remembering?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>53.3</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>46.7</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$X^2(1, N = 25) = 0$, n.s.</td>
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<td></td>
</tr>
<tr>
<td>How often?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequently</td>
<td>62.5</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td>25</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Rarely</td>
<td>12.5</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$X^2(2, N = 13) = 2.30$, n.s.</td>
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<tr>
<td>Problematic?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>37.5</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Somewhat</td>
<td>12.5</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>50</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$X^2(2, N = 13) = 1.38$, n.s.</td>
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</tbody>
</table>

$X^2(2, N = 18) = 3.56$, n.s.  
$X^2(2, N = 18) = 3.37$, n.s.
Table 6
Response Percentages of Patients and Controls on Questions about Frequency and Severity of Cognitive Disturbances

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Concentration</th>
<th>Selective Attention</th>
<th>Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pt</td>
<td>Ctl</td>
<td>Pt</td>
</tr>
<tr>
<td>Constantly</td>
<td>14.3</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Daily</td>
<td>35.7</td>
<td>20</td>
<td>13.3</td>
</tr>
<tr>
<td>Weekly</td>
<td>0</td>
<td>20</td>
<td>6.7</td>
</tr>
<tr>
<td>Monthly</td>
<td>7.1</td>
<td>10</td>
<td>6.7</td>
</tr>
<tr>
<td>Rarely/never</td>
<td>42.9</td>
<td>50</td>
<td>53.3</td>
</tr>
</tbody>
</table>

\[ \chi^2(4, N=24) = 4.84, \text{n.s.} \]
\[ \chi^2(4, N=25) = 1.97, \text{n.s.} \]
\[ \chi^2(4, N=25) = 4.16, \text{n.s.} \]

<table>
<thead>
<tr>
<th>Severity</th>
<th>Concentration</th>
<th>Selective Attention</th>
<th>Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pt</td>
<td>Ctl</td>
<td>Pt</td>
</tr>
<tr>
<td>Problematic</td>
<td>13.3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Somewhat problematic</td>
<td>20</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>Not problematic</td>
<td>66.7</td>
<td>100</td>
<td>75</td>
</tr>
</tbody>
</table>

\[ \chi^2(2, N=25) = 4.17, \text{n.s.} \]
\[ \text{Fisher's Exact, } p = .31 \]
\[ \chi^2(2, N=25) = 1.93, \text{n.s.} \]
patients and controls responding in each category. In all areas, percentages were quite similar for patients and controls.

There were also no significant differences between the responses of inpatients and outpatients on frequency and severity of disturbances in concentration ($X^2(3, N = 14) = 3.66$, n.s. and $X^2(2, N = 15) = 2.28$, n.s., respectively), selective attention ($X^2(4, N = 15) = 6.29$, n.s. and Fisher’s Exact Test, $p = .893$), and memory ($X^2(3, N = 15) = 2.95$, n.s. and $X^2(2, N = 15) = 2.34$, n.s.).

**Nature of Cognitive Disturbances**

Patients and controls did not differ in the types of situations in which they have difficulties with concentration ($X^2(4, N = 19) = 6.43$, n.s.), selective attention ($X^2(4, N = 17) = 3.21$, n.s.) and memory ($X^2(3, N = 21) = 3.33$, n.s.). Tables 7, 8, and 9 show that patients and controls are equally likely to have difficulties in a variety of situations and with a variety of stimuli. The majority of both patients and controls found auditory stimuli to be more distracting than visual, but visual stimuli to be easier to remember than auditory.

There were also no differences between inpatients and outpatients on any of these items.
Table 7
Nature of Disturbances in Concentration for Patients and Controls

<table>
<thead>
<tr>
<th></th>
<th>Patient (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Difficult situations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tired/sick</td>
<td>22.2</td>
<td>20</td>
</tr>
<tr>
<td>Bored</td>
<td>22.2</td>
<td>40</td>
</tr>
<tr>
<td>External distraction</td>
<td>11.1</td>
<td>40</td>
</tr>
<tr>
<td>Internal distraction</td>
<td>33.3</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>11.1</td>
<td>0</td>
</tr>
</tbody>
</table>

\[ \chi^2(4, N = 19) = 6.43, \text{n.s.} \]

**Types of distractions:**

<table>
<thead>
<tr>
<th>Sensory modality</th>
<th>Patient (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mostly auditory</td>
<td>53.3</td>
<td>55.6</td>
</tr>
<tr>
<td>Mostly visual</td>
<td>13.3</td>
<td>33.3</td>
</tr>
<tr>
<td>Both equally</td>
<td>33.3</td>
<td>11.1</td>
</tr>
</tbody>
</table>

\[ \chi^2(2, N = 24) = 2.20, \text{n.s.} \]

**Source**

<table>
<thead>
<tr>
<th>Source</th>
<th>Patient (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mostly internal</td>
<td>46.2</td>
<td>33.3</td>
</tr>
<tr>
<td>Mostly external</td>
<td>46.2</td>
<td>44.4</td>
</tr>
<tr>
<td>Both equally</td>
<td>7.7</td>
<td>22.2</td>
</tr>
</tbody>
</table>

\[ \chi^2(2, N = 22) = 1.04, \text{n.s.} \]
<table>
<thead>
<tr>
<th>Nature of Disturbances in Selective Attention for Patients and Controls</th>
<th>Patient (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficult situations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tired/sick</td>
<td>9.1</td>
<td>0</td>
</tr>
<tr>
<td>Bored</td>
<td>0</td>
<td>16.7</td>
</tr>
<tr>
<td>External distraction</td>
<td>54.5</td>
<td>66.7</td>
</tr>
<tr>
<td>Internal distraction</td>
<td>27.3</td>
<td>16.7</td>
</tr>
<tr>
<td>Other</td>
<td>9.1</td>
<td>0</td>
</tr>
</tbody>
</table>

\[ \chi^2(4, N = 17) = 3.21, \text{n.s.} \]
Table 9

Nature of Disturbances in Memory for Patients and Controls

<table>
<thead>
<tr>
<th>Difficult situations</th>
<th>Patient (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tired/sick</td>
<td>0</td>
<td>12.5</td>
</tr>
<tr>
<td>Bored</td>
<td>23.1</td>
<td>37.5</td>
</tr>
<tr>
<td>External distraction</td>
<td>61.5</td>
<td>50</td>
</tr>
<tr>
<td>Other</td>
<td>15.4</td>
<td>0</td>
</tr>
</tbody>
</table>

\[X^2(3, N = 21) = 3.33, \text{n.s.}\]

Types of memory stimuli:

<table>
<thead>
<tr>
<th>Sensory modality</th>
<th>Patient (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditory easier</td>
<td>13.3</td>
<td>20</td>
</tr>
<tr>
<td>Visual easier</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>No difference</td>
<td>6.7</td>
<td>10</td>
</tr>
</tbody>
</table>

\[X^2(2, N = 25) = .33, \text{n.s.}\]

Time

<table>
<thead>
<tr>
<th>Time</th>
<th>Patient (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensory hardest</td>
<td>6.7</td>
<td>37.5</td>
</tr>
<tr>
<td>Short-term hardest</td>
<td>6.7</td>
<td>0</td>
</tr>
<tr>
<td>Long-term hardest</td>
<td>40</td>
<td>37.5</td>
</tr>
<tr>
<td>No difference</td>
<td>46.7</td>
<td>25</td>
</tr>
</tbody>
</table>

\[X^2(3, N = 23) = 4.02, \text{n.s.}\]

Quality

<table>
<thead>
<tr>
<th>Quality</th>
<th>Patient (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Important harder</td>
<td>15.4</td>
<td>0</td>
</tr>
<tr>
<td>Unimportant harder</td>
<td>69.2</td>
<td>88.9</td>
</tr>
<tr>
<td>No difference</td>
<td>15.4</td>
<td>11.1</td>
</tr>
</tbody>
</table>

\[X^2(2, N = 22) = 1.72, \text{n.s.}\]
Reactions to Cognitive Disturbances and Coping Strategies

Patients and controls did not differ significantly in how they felt when they had difficulties with concentration ($X^2(2, N = 24) = 1.43$, n.s.) or selective attention (Fisher's Exact Test, $p = .797$). Most subjects expressed having negative feelings, such as frustration; a few said they felt neutral, i.e. it did not bother them.

Although patients and controls did not differ on self-report of frequency, severity, and nature of cognitive disturbances or the ways in which they reacted emotionally to these disturbances, they did differ in the actions they claim to take when they have difficulty with concentration ($X^2(2, N = 24) = 8.95$, $p < .02$) and selective attention (Fisher's Exact Test, $p = .03$), with patients being more likely to change tasks, while controls tend to stay with the task at hand. Table 10 shows the relative percentages of patients and controls responding in each category.

Both patients and controls employ strategies to cope with difficulties in concentration ($X^2(1, N = 25) = .74$, n.s.), and are likely to use the same kinds of strategies ($X^2(2, N = 19) = 2.55$, n.s.), though controls are somewhat more likely to find these strategies effective.
<table>
<thead>
<tr>
<th>Action Taken by Patients and Controls When Experiencing Cognitive Disturbances</th>
<th>Patient (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concentration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change tasks</td>
<td>71.4</td>
<td>10</td>
</tr>
<tr>
<td>Take a break and return to task</td>
<td>7.1</td>
<td>30</td>
</tr>
<tr>
<td>Continue task</td>
<td>21.4</td>
<td>60</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ x^2(2, N = 24) = 8.94, p = .01 \]

<table>
<thead>
<tr>
<th><strong>Selective Attention</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Change tasks</td>
<td>75</td>
<td>0</td>
</tr>
<tr>
<td>Focus attention</td>
<td>25</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fisher’s Exact, \( p = .03 \)
<table>
<thead>
<tr>
<th>Use of coping strategy</th>
<th>Patient (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>66.7</td>
<td>90</td>
</tr>
<tr>
<td>No</td>
<td>33.3</td>
<td>10</td>
</tr>
</tbody>
</table>

$X^2(1, N = 25) = .74, \text{ n.s.}$

<table>
<thead>
<tr>
<th>Type of coping strategy</th>
<th>Patient</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce distraction</td>
<td>10</td>
<td>11.1</td>
</tr>
<tr>
<td>Increase effort</td>
<td>90</td>
<td>66.7</td>
</tr>
<tr>
<td>Take a break and return to task later</td>
<td>0</td>
<td>22.2</td>
</tr>
</tbody>
</table>

$X^2(2, N = 19) = 2.55, \text{ n.s.}$

<table>
<thead>
<tr>
<th>Effectiveness of strategy</th>
<th>Patient</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Sometimes effective</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>Not effective</td>
<td>20</td>
<td>0</td>
</tr>
</tbody>
</table>

$X^2(2, N = 18) = 5.54, p = .06$
\( (X^2(2, N = 18) = 5.54, p < 0.07) \). The strategy most commonly employed by both patients and controls is to increase the amount of effort being put into a task. Although overall there were no differences between the number of patients and controls who sometimes give up on a task when they had trouble concentrating \( (X^2(1, N = 24) = 0.17, \text{n.s.}) \), the responses of inpatients and outpatients did differ significantly \( (\text{Fisher's Exact Test}, p = 0.002) \), with 100% of the inpatients saying that they do give up, as opposed to only 14.3% of the outpatients. Table 11 gives the Chi-Square values, probabilities, and percentages for all questions relating to reactions to cognitive disturbances and coping strategies.

**Ability to Control Cognitive Processes**

Although patients and control subjects differ in the actions they take when they have disturbances in their cognitive processes, they do not differ in their attitudes about their reported ability to control their cognitive processes in a variety of situations. Table 12 gives the Chi-Square values and probabilities for questions asking about ability to control cognitive processes. Both patients and controls seem to feel that they can control their cognitive processes the
<table>
<thead>
<tr>
<th>Type of Situation</th>
<th>Patient (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All the time</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Most of the time</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>Sometimes</td>
<td>13.3</td>
<td>10</td>
</tr>
<tr>
<td>Rarely/never</td>
<td>6.7</td>
<td>0</td>
</tr>
<tr>
<td>$\chi^2(3, N = 25) = 1.45$, n.s.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When alone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All the time</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td>Most of the time</td>
<td>66.7</td>
<td>50</td>
</tr>
<tr>
<td>Sometimes</td>
<td>13.3</td>
<td>0</td>
</tr>
<tr>
<td>$\chi^2(2, N = 25) = 3.30$, n.s.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When with others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All the time</td>
<td>6.7</td>
<td>20</td>
</tr>
<tr>
<td>Most of the time</td>
<td>46.7</td>
<td>50</td>
</tr>
<tr>
<td>Sometimes</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>Rarely/never</td>
<td>6.7</td>
<td>0</td>
</tr>
<tr>
<td>$\chi^2(3, N = 25) = 1.74$, n.s.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When interested in task</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All the time</td>
<td>46.7</td>
<td>60</td>
</tr>
<tr>
<td>Most of the time</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Sometimes</td>
<td>13.3</td>
<td>0</td>
</tr>
<tr>
<td>$\chi^2(2, N = 25) = 1.54$, n.s.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of Situation</td>
<td>Patient (%)</td>
<td>Control (%)</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>When bored with task</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All the time</td>
<td>14.3</td>
<td>0</td>
</tr>
<tr>
<td>Most of the time</td>
<td>50</td>
<td>20</td>
</tr>
<tr>
<td>Sometimes</td>
<td>28.6</td>
<td>50</td>
</tr>
<tr>
<td>Rarely/never</td>
<td>7.1</td>
<td>30</td>
</tr>
<tr>
<td>$\chi^2(3, N = 24) = 5.37$, n.s.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When tired or sick</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All the time</td>
<td>6.7</td>
<td>0</td>
</tr>
<tr>
<td>Most of the time</td>
<td>26.7</td>
<td>20</td>
</tr>
<tr>
<td>Sometimes</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Rarely/never</td>
<td>46.7</td>
<td>50</td>
</tr>
<tr>
<td>$\chi^2(3, N = 25) = 1.04$, n.s.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When feeling OK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All the time</td>
<td>26.7</td>
<td>50</td>
</tr>
<tr>
<td>Most of the time</td>
<td>53.3</td>
<td>50</td>
</tr>
<tr>
<td>Sometimes</td>
<td>13.3</td>
<td>0</td>
</tr>
<tr>
<td>Rarely/never</td>
<td>6.7</td>
<td>0</td>
</tr>
<tr>
<td>$\chi^2(3, N = 25) = 2.92$, n.s.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 12 (cont'd)
Perceived Ability to Control Cognitive Processes

<table>
<thead>
<tr>
<th>Type of Situation</th>
<th>Patient (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lots of external stimuli</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All the time</td>
<td>13.3</td>
<td>10</td>
</tr>
<tr>
<td>Most of the time</td>
<td>53.3</td>
<td>50</td>
</tr>
<tr>
<td>Sometimes</td>
<td>13.3</td>
<td>30</td>
</tr>
<tr>
<td>Rarely/never</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>( \chi^2(3, N = 25) = 1.28 ), n.s.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| No external stimuli             |             |             |
| All the time                    | 6.7         | 40          |
| Most of the time                | 60          | 50          |
| Sometimes                       | 26.7        | 10          |
| Rarely/never                    | 6.7         | 0           |
| \( \chi^2(3, N = 25) = 4.94 \), n.s. |             |             |

Possible to improve concentration?
- Yes: 66.7%
- No: 33.3%
| \( \chi^2(1, N = 22) = .67 \), n.s. |             |             |

Possible to improve memory?
- Yes: 60%
- No: 40%
| \( \chi^2(1, N = 25) = 1.13 \), n.s. |             |             |
majority of the time, except when they are tired or feeling physically ill. The majority of patients also feel that it is possible to improve their concentration and memory.

Quality of Responses

Subjects' responses were also coded for peculiarity by a rater who was blind to group membership. Responses to each question were evaluated to see whether they were ordinary or peculiar. A peculiar response was defined as one that contained deviant verbalizations, marked tangentiality, descriptions of unusual experiences such as hallucinations, or anything else that seemed out of the ordinary. The following are examples of questions and peculiar responses:

Q: Do you ever have trouble concentrating when you're doing something boring?

A: Well, I would suppose I would try to take it in my stride and let it go at that. Of course, I'm a person that has a slow thing before an explosion. It takes quite a bit to get me to explode....

Q: Do you ever have trouble concentrating when you're doing something you enjoy?

A: Seems I'm a brute for punishment, I don't know why.

The number of peculiar responses was tallied for each subject and the scores for patients and controls were compared using a t-test. The
results showed that patients gave a significantly greater number of peculiar responses than controls ($t(23) = 2.80, p < .01$), with a mean of 9.87 peculiar responses as compared with .80.
A vast number of studies using objective measures of cognitive processes show that schizophrenic patients function more poorly than normal and psychiatric control subjects on a variety of cognitive tasks (Nuechterlein and Dawson, 1984). Interviews with schizophrenic patients in the early stages of their illness also reveal disturbances in cognitive processes (McGhie and Chapman, 1961; Freedman and Chapman, 1973). However, the results of the present study suggest that chronic schizophrenic patients and normal control subjects do not differ in self-reported frequency, severity, and nature of cognitive disturbances in day to day functioning. Both groups report some disturbances in daily activities, but neither perceived these disturbances as particularly problematic. Since the control subjects were quite carefully screened to determine the absence of mental illness, it is unlikely that they reported a pathological level of cognitive disturbance. Rather, it seems that chronic schizophrenic patients do not report having extreme difficulties in simple daily
tasks. Given that the percentages of patients and controls responding in each category were very similar on most items, it is unlikely that a larger sample size would have greatly increased the number of significant differences found between groups.

A plausible explanation for the difference between the results of this study and previous studies is that the interview used in this study focused on the effects of cognitive disturbances on day-to-day functioning, and asked about simple daily tasks. Previous studies using objective measures of attention required complex tasks tapping specific cognitive processes to differentiate between patients and controls. For example, on a dichotic listening task, patients performed as well as controls in the absence of a distractor, but significantly worse in the presence of a distractor (Hemsley & Richardson, 1980). Thus, although schizophrenic patients may indeed suffer from deficits in cognitive processes, they are not particularly troubled by these deficits when they are performing simple daily tasks. A possible implication of this finding is that schizophrenics might not be motivated to improve their cognitive functioning since they do not perceive it as problematic. However, the majority of patients claimed
that they believe it is possible for them to improve their cognitive functioning in some way. These findings are quite encouraging in terms of treatment for schizophrenic patients because they suggest, first of all, that patients might be willing to learn ways to improve their cognitive functioning, and secondly, that if a complex task can be broken down into a series of simple tasks, it would be possible for a schizophrenic patient to learn.

Another important distinction between the present study and previous studies is the patient population used as subjects. Previous interview studies used patients in the early phase of illness as subjects and focused on their experiences during acute psychosis. Nearly all of the patients in the present study had been stabilized on medication and were no longer acutely psychotic. Recent findings by Harrow, Marengo, and McDonald (1986) indicate that levels of cognitive disturbance vary considerably with psychotic state, and that only a minority of schizophrenics show severe thought disorder after the acute phase of illness. The lack of differences in the present study between patients' and controls' perceived frequency and severity of cognitive disturbances suggests that the view of schizophrenics as
chronically impaired in overall cognitive functioning may need to be reassessed.

Although schizophrenic patients do not report more cognitive disturbances than normal control subjects in their day to day routine, they do take different types of actions when faced with these disturbances. Schizophrenic patients, particularly inpatients, are more likely to give up on a task when they have trouble concentrating, whereas controls will persevere, and perhaps try to cope with their difficulties by increasing the amount of effort they put into the task, decreasing distractions or taking a break and returning to the task later. Schizophrenic patients report that they do employ coping strategies at times, and seem to use the same kinds of strategies used by controls, but they do not feel as successful in their attempts as controls. Why they do not feel as successful is unclear--further research needs to be done to look more closely at the coping strategies patients use and how they may be improved.

The other major difference found between patients and controls was in the quality of their responses. Although patients did not report a significantly greater amount of cognitive disturbance than controls,
the quality of their responses revealed some thought disorder in the form of deviant verbalizations, tangentiality, and peculiar experiences. In other words, the patients were indeed thought disordered, and signs of their illness could be seen in the interview that was conducted. According to their self-reports, however, their functioning on simple daily tasks does not seem to be significantly impaired by their illness. The accuracy of their self-reports cannot be assessed from this study, and it is possible that patients were hesitant to reveal their difficulties to a relative stranger. Future studies could interview the patients' therapists as well as the patients and compare the therapists' reports with those of the patients.

There were surprisingly few differences between inpatients and outpatients on their subjective experience of cognitive disturbances. One difference was that inpatients are more likely than outpatients to give up on a task when they have trouble concentrating. A simple explanation for this finding is that inpatients are suffering from some kind of hospitalization effect. Another explanation is that inpatients are sicker than outpatients. In this case, the ability of patients to persevere on a task when they have trouble concentrating may reveal
some clues about their prognosis.

In summary, then, the results of this study show that chronic schizophrenic patients do not differ from normal control subjects in self-reported frequency and severity of disturbances in concentration, selective attention, and memory in daily functioning. However, patients are more likely to give up on a task when they have disturbances in concentration and selective attention, whereas controls will persevere. Both groups report using strategies such as increasing the effort they expend on a task, decreasing external stimuli, and taking a break and returning to the task later, to cope with cognitive disturbances. Patients feel somewhat less successful with their coping strategies than controls. The implications for treatment are that patients could be taught more effective coping strategies and that they could be taught to perform complex tasks if these tasks are broken down into a series of simpler tasks. Social skills training programs have used this technique to teach schizophrenic patients how to interact with others more effectively (Wallace et al., 1980). Future research on cognitive functioning in schizophrenia could focus on how to improve the coping strategies used by schizophrenic patients, how to
teach them these improved strategies, and whether these strategies are effective in improving the cognitive functioning of individuals suffering from chronic schizophrenia.
APPENDIX A

Informed Consent Form (Patient)

This is a study on cognitive disturbances in different groups of individuals that is being conducted through the Department of Psychology at the University of Massachusetts, Amherst. In this study you will be asked to participate in two interviews. The first interview, which will take approximately one hour, asks for background information and information about unusual experiences or problems which may have led you to come to the hospital. The second interview, which will take approximately 90 minutes, asks about your concentration, attention, and memory. The interview will be tape-recorded. There are no known or foreseeable risks involved. This study is for research purposes only—your responses will be strictly confidential and will not have any impact on treatment planning or discharge.

I have read the description above and agree to participate in this study. I understand that I may discontinue my participation at any time without penalty and that any questions I have about the procedure will be answered at the end of the interview.

Signed _____________________________ Date ____________

Witness ______________________________
APPENDIX B

Informed Consent Form (Staff)

This is a study on cognitive disturbances in different groups of individuals that is being conducted through the Department of Psychology at the University of Massachusetts, Amherst. In this study you will be asked to participate in two interviews. The first interview, which will take 20 - 30 minutes, asks for background information and information about unusual experiences or problems you may have had at some point in your life. The second interview, which will take approximately one hour, asks about your concentration, attention, and memory. This interview will be tape-recorded. There are no known or foreseeable risks involved. This study is for research purposes only, and your responses will be strictly confidential.

I have read the description above and agree to participate in this study. I understand that I may discontinue my participation at any time without penalty and that any questions I have about the procedure will be answered.

Signed ____________________________ Date ___________
APPENDIX C

Debriefing

Thank you for your participation in this study on the subjective experience of cognitive disturbances. The purposes of this study are: a) to find out what types of difficulties different people have with attention, concentration, and memory and b) to find out how they cope with these difficulties. The responses given by schizophrenic patients will be compared with those given by the hospital staff to see whether schizophrenic patients experience more cognitive disturbances than hospital staff and whether hospital staff use strategies for coping with these disturbances that schizophrenic patients do not. If you have any further questions about this study, or if you wish to know the results, please contact Welli Yeh (545-1559). Again, thanks for your participation.
APPENDIX D

Background Information

Name: ___________________________ Subject #: __________

Rater: ___________________________ Date: ________________

Location: _________________________ Source of Info: ________

1. Age: ___________ Date of Birth: _________________

2. Sex: 1) Male 2) Female


4. # of marriages: ____________


b. Religious Background: 1) Catholic 2) Protestant 3) Jewish 4) Other

6. Highest level of formal education: __________________

7. Occupation: __________________________

8. Age when emotional difficulties began: ____________

9. Nature of difficulties:

10. Age when first consulted mental health professional: ____________
11. Outpatient treatments (include dates, places, type of treatment, symptoms, diagnosis, outcome):

12. Inpatient treatments (include dates, places, type of treatment, symptoms, diagnosis, outcome):

13. Number of hospitalizations (including current hospitalization) for emotional problems: ____________

14. Family history of emotional problems (include aunts, uncles, cousins, grandparents, siblings, parents, children) (give symptoms, treatment, outcome, dates, places):
15. Current meds (name, dosage, frequency):

16. Current DSM-III Diagnosis
   Axis I: ________________________
   Axis II: ________________________
   Axis III: ________________________
APPENDIX E

Cognitive Disturbances Interview

Name: ___________________________ Interviewer: ___________________________

Sub.#: ___________________________ Date: ___________________________

How have things been going?

Tell me about your typical day here.

I'd like to ask you some questions today about your concentration, attention, and memory. Almost everyone has had trouble concentrating, paying attention, or remembering things every now and then, and different people react to this in different ways. I'd like to find out about your experiences and how you react or cope when you have trouble concentrating, paying attention, or remembering. Please remember that all your answers will be strictly confidential and will not have any impact on treatment planning or discharge. Do you have any questions?

1a. When you're watching TV, do you ever have trouble concentrating on the plot?
   If yes: What happens?

   What makes it hard? (What distracts you?)

   How do you feel when you can't concentrate on the TV?

   What do you do? (What could you do?)

   Does that help? How? (How would that help?)

   How often do you do that?

b. When you're reading a magazine or a book, do you ever have trouble concentrating?
   If yes: What happens?
What makes it hard? (What distracts you?)

How do you feel when you can't concentrate on the magazine or book?

What do you do? (What could you do?)

Does that help? How? (How would that help?)

How often do you do that?

2. What do you do well? (What things are easy for you to do?)

3. What things are hard for you to do?

Tell me about them. (What makes them hard?)

4. Are there other situations where you have trouble concentrating?

5a. In general, do you ever have trouble concentrating when you're alone? Examples?

b. Do you ever have trouble concentrating when you're around other people?
Examples?

c. If yes to both: Which happens more frequently? (When you're having trouble concentrating, are you more likely to be alone or with other people?)

6a. Do you ever have trouble concentrating when you're doing something boring?
Examples?

b. Do you ever have trouble concentrating when you're doing something you enjoy?
Examples?
c. If yes to both: Which happens more frequently?

7a. Do you ever have trouble concentrating when you're feeling tired or sick? Examples?

b. Do you ever have trouble concentrating when you're feeling OK? Examples?

c. If yes to both: Which happens more frequently?

8. How often do you have trouble concentrating? Constantly, several times a day, several times a week, several times a month, rarely?

9. Do you feel like this is a problem for you? If yes: How serious—very, somewhat, not very?

10. What kinds of things distract you?

11a. Are you ever distracted by things you see? Examples?

b. Are you ever distracted by things you hear? Examples?

c. If yes to both: Which distracts you more?

12a. Are you ever distracted by things going on around you? Examples?

b. Are you ever distracted by things that you're thinking or feeling? Examples?

c. If yes to both: Which distracts you more?

13. What is it like when you can't concentrate?

14. Does it seem like something you can control or does it seem uncontrollable?
15. How does it make you feel?

16. What do you end up doing?

17. Do you ever try to make yourself concentrate?
   If yes: What do you do?

   Does it work?  How?

   How often do you do that?

18. Do you ever just give up?
   If yes: Then what do you do? (constructive vs. nonconstructive tasks)

19. Do you think there's anything you could do to make your concentration better?
   If yes: What could you do?

   How would that help?

20a. When you're having a conversation with someone and there's noise in the background, do you ever have trouble deciding what to pay attention to?
   If yes: What happens?

   How do you feel when you can't decide?

   What do you do?

b. When you're talking to someone on the phone and there's noise around you, do you ever
have trouble deciding what to pay attention to?  
      If yes: What happens?

      How do you feel when you can't decide?

      What do you do?

21. Do you ever find that a lot of things catch your attention at the same time?  
      If yes: How often—constantly, several times a day, several times a week, several times a month, rarely?

      Tell me about it. What happens?

22. Can you decide what to pay attention to?  
      If yes: All the time, most of the time, sometimes, hardly ever?

23. Do you feel like this is a problem for you?  
      If yes: How serious—very, somewhat, not very?

24. In what situations do you have trouble deciding what to pay attention to?

25a. Do you ever have trouble deciding what to pay attention to when you're by yourself?  
      Examples?

   b. Do you ever have trouble deciding what to pay attention to when you're with other people?  
      Examples?

   c. If yes to both: Which happens more frequently?

26a. Do you ever have trouble deciding what to pay attention to when there are lots of things going on around you?  
      Examples?
b. Do you ever have trouble deciding what to pay attention to when there's nothing else going on around you? Examples?

e. If yes to both: Which happens more frequently?

27. When you have trouble deciding what to pay attention to, what kinds of things are you usually trying to decide between?

- auditory/visual
- external/internal
- people/things
- give examples

28. What is it like when you can't decide what to pay attention to?

29. How does it make you feel?

30. What do you end up doing?

31. Do you think other people would pick the same things to pay attention to?

32. Do you think you can control what you want to pay attention to?
   If yes: All the time, most of the time, sometimes, rarely?

33. In what situations do you feel like you can control what you want to pay attention to?

34a. Do you feel like you can control what you want to pay attention to when you're alone?
   All the time, most, some, rarely? Examples?

   b. Do you feel like you can control what you want to pay attention to when you're with other people? All the time, most, some, rarely? Examples?

35a. Do you feel like you can control what you want to pay attention to when you're doing
something that interests you? All the time, most, some, rarely? Examples?

b. Do you feel like you can control what you want to pay attention to when you're doing something that bores you? All the time, most, some, rarely? Examples?

36a. Do you feel like you can control what you want to pay attention to when you're feeling tired or sick? All the time, most, some, rarely? Examples?

b. Do you feel like you can control what you want to pay attention to when you're feeling OK? All the time, most, some, rarely? Examples?

37a. Do you feel like you can control what you want to pay attention to when there are lots of things going on around you? All the time, most, some, rarely? Examples?

b. Do you feel like you can control what you want to pay attention to when there's not very much going on around you? All the time, most, some, rarely? Examples?

38a. Do you ever have trouble remembering appointments?

If yes: Frequently, sometimes, or rarely?

Do you feel like this is a problem for you?

How serious--very, somewhat, not very?

What's going on that makes it hard for you to remember?

Is there anything you can do that will help you to remember?

b. When you look up a phone number in the phone book, do you have trouble remembering it when you try to dial it?

If yes: Frequently, sometimes or rarely?

Do you feel like this is a problem for you?
How serious—very, somewhat, not very

39a. How often do you have trouble remembering things—constantly, several times a day, several times a week, several times a month, rarely?

b. Do you feel like this is a problem for you?
   If yes: How serious—very, somewhat, not very?

c. In what situations do you tend to forget things?

40a. Do you ever forget things when you have a lot of things to remember at once? Examples?

b. Do you ever forget things when you only have a few things to remember? Examples?

c. If yes to both: When are you more likely to forget something?

41a. Do you ever forget things when you're under a lot of pressure? Examples?

b. Do you ever forget things when you're not under pressure? Examples?

c. If yes to both: When are you more likely to forget something?

42a. Do you ever forget things when you're feeling tired or sick? Examples?

b. Do you ever forget things when you're feeling OK? Examples?

c. If yes to both: When are you more likely to forget something?

43. What kinds of things are easy for you to remember?

Hard?
44a. Do you ever have trouble remembering things that just happened, like a question that someone just asked you? Examples?

b. Do you ever have trouble remembering things that happened five or ten minutes ago? Examples?

c. Do you ever have trouble remembering things that happened a few hours ago? Examples?

d. Which things are the hardest for you to remember—things that just happened, things that happened a few minutes ago, or things that happened a few hours ago?

Which are second hardest?

45. Do you find it easier to remember things that people say or things that you see? (words or pictures)

46a. Do you ever forget things that are important to you? Examples?

b. Do you ever forget things that are unimportant to you? Examples?

c. If yes to both: Which are you more likely to forget?

47. Do you ever try to do things to improve your memory?
   If yes: What do you do?

   Does that help? How?

   How often do you do that?

   If no: Do you think that there is anything you could do to improve your memory?
   If yes: What could you do?
How would that help?

48. Are you on any medication?
   If yes: What kind and how much?

Do you feel like your meds help you with your concentration and memory?
   If yes: In what way?
APPENDIX F

Response Rating Form for Cognitive Disturbances Interview

Subject #: ________________________  Rater: ________________________

Date: ________________________

1a. Watching TV, trouble concentrating?
   
   Yes  No
   1  2

   If yes: Type of distraction?
   
   Internal  External
   1  2

   Feelings?
   
   Negative  Neutral  Positive
   1  2  3

   Action Taken?
   
   Do Nothing  Do s.t. else  Try harder to concentrate
   1  2  3

1b. Reading, trouble concentrating?
   
   Yes  No
   1  2

   If yes: Type of distraction?
   
   Internal  External
   1  2

   Feelings?
   
   Negative  Neutral  Positive
   1  2  3
Action Taken?

Do nothing  
Do s.t. else  
Try harder to concentrate

1  
2  
3

2. Easy things

a. Number of physical/manual things: __________

b. Number of intellectual things: __________

c. Number of creative things: __________

d. Total number of easy things: __________

3. Hard things

a. Number of physical/manual things: __________

b. Number of intellectual things: __________

c. Number of creative things: __________

d. Total number of hard things: __________

4. Difficult situations for concentrating

<table>
<thead>
<tr>
<th>Tired/sick</th>
<th>Bored</th>
<th>Ext. stimuli</th>
<th>Int. stimuli</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

5a. Trouble concentrating when alone?

Yes  
No

1  
2

b. Trouble concentrating when with others?

Yes  
No

1  
2

c. Which is worse?

Alone  
With Others  
No difference

1  
2  
3

6a. Trouble concentrating when bored?
b. Trouble concentrating when interested?

Yes  
1  

No  
2  

c. Which is worse?

Interested  
1  

Bored  
2  

No difference  
3  

7a. Trouble concentrating when tired/sick?

Yes  
1  

No  
2  

b. Trouble concentrating when OK?

Yes  
1  

No  
2  

c. Which is worse?

OK  
1  

Tired/sick  
2  

No difference  
3  

8. Trouble concentrating--how often?

Constantly  
1  

Day  
2  

Week  
3  

Month  
4  

Rarely/Never  
5  

9. Problem?

Yes  
1  

Somewhat  
2  

No  
3  

10. Types of distractions?

Total number of distractions: ____________

11a. Visual distractions?
Yes | No  
---|---  
1 | 2  

**b. Auditory distractions?**  
Yes | No  
---|---  
1 | 2  

**c. Which is worse?**  
See | Hear  
---|---  
1 | 2  

**No difference**  
3  

**12a. External distractions?**  
Yes | No  
---|---  
1 | 2  

**b. Internal distractions?**  
Yes | No  
---|---  
1 | 2  

**c. Which is worse?**  
External | Internal  
---|---  
1 | 2  

**13. Feelings?**  
Negative | Neutral | Positive  
---|---|---  
1 | 2 | 3  

If negative:  

| sad/hopeless | anxious/nervous | angry/frustrated  
---|---|---  
1 | 2 | 3  

**14. Controllable/uncontrollable?**  
Uncontrollable | S.x. cont/s.x. uncont | Controllable  
---|---|---  
1 | 2 | 3  

**16. Action Taken?**  
Doing s.t. else | Break and return | Staying with task  
---|---|---  
1 | 2 | 3
17. Make yourself concentrate?

Yes 1
No 2

If yes: Action taken?

Reduce distraction 1
Increase effort 2
Take a break and return to task 3

Effective?

Yes 1
No 2

18. Give up?

Yes 1
No 2

19. Try to improve concentration?

Yes 1
No 2

20a. Conversation--trouble deciding what to pay attention to?

Yes 1
No 2

If yes: Feelings?

Negative 1
Neutral 2
Positive 3

Action taken?

Listen to both 1
Do nothing 2
Reduce distraction/focus on 1 thing 3

b. Phone--trouble deciding what to pay attention to?

Yes 1
No 2

If yes: Feelings?
Negative 1
Neutral 2
Positive 3

Action taken?
Listen to both 1
Do nothing 2
Reduce distraction/focus on 1 thing 3

21. A lot of things catching attention at once?
Yes 1
No 2

If yes: How often?
Constantly 1
Day 2
Week 3
Month 4
Rarely 5

22. Able to decide what to pay attention to?
All 1
Most 2
S.x. 3
Rarely/Never 4

23. Problem?
Yes 1
Somewhat 2
No 3

24. Difficult situations for deciding what to pay attention to
Tired/Sick 1
Bored 2
Ext. stimuli 3
Int. stimuli 4
Pressured 5

25a. Trouble deciding when alone?
Yes 1
No 2

b. Trouble deciding when with others?
Yes 1
No 2

c. Which is worse?
Alone 1
With others 2
No difference 3

26a. Trouble deciding when a lot is going on?
b. Trouble deciding when not much is going on?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

27. Things to decide between?

29. Feelings?

<table>
<thead>
<tr>
<th>Negative</th>
<th>Neutral</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

30. Action taken?

- Pay att to everything
- Change tasks
- Decrease distraction
- Focus on 1 thing

| 1 | 2 | 3 | 4 |

31. Attention similar to others?

<table>
<thead>
<tr>
<th>Yes</th>
<th>Sometimes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

32. Control attention?

<table>
<thead>
<tr>
<th>All</th>
<th>Most</th>
<th>Some</th>
<th>Rarely/Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

33. Easy situations to control attention?

<table>
<thead>
<tr>
<th>Not tired/sick</th>
<th>Interested</th>
<th>Few ext. stimuli</th>
<th>Few int. stimuli</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

34a. Control attention when alone?
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Control attention when with others?</td>
<td>All (1), Most (2), Some (3), Rarely/Never (4)</td>
</tr>
<tr>
<td>35a. Control attention when interested?</td>
<td>All (1), Most (2), Some (3), Rarely/Never (4)</td>
</tr>
<tr>
<td>b. Control attention when bored?</td>
<td>All (1), Most (2), Some (3), Rarely/Never (4)</td>
</tr>
<tr>
<td>36a. Control attention when tired/sick?</td>
<td>All (1), Most (2), Some (3), Rarely/Never (4)</td>
</tr>
<tr>
<td>b. Control attention when OK?</td>
<td>All (1), Most (2), Some (3), Rarely/Never (4)</td>
</tr>
<tr>
<td>37a. Control attention when lots going on?</td>
<td>All (1), Most (2), Some (3), Rarely/Never (4)</td>
</tr>
<tr>
<td>b. Control attention when not much going on?</td>
<td>All (1), Most (2), Some (3), Rarely/Never (4)</td>
</tr>
<tr>
<td>38a. Trouble remembering appointments?</td>
<td>Yes (1), No (2)</td>
</tr>
<tr>
<td>If yes: How often?</td>
<td>Frequently (1), Sx. (2), Rarely (3)</td>
</tr>
</tbody>
</table>
Problem?
Yes  Somewhat  No
1  2  3

b. Trouble remembering phone numbers?
Yes  No
1  2

If yes: How often?
Frequently  Sx.  Rarely
1  2  3

Problem?
Yes  Somewhat  No
1  2  3

39a. Trouble remembering—how often?
Constantly  Day  Week  Month  Rarely/Never
1  2  3  4  5

b. Problem?
Yes  Somewhat  No
1  2  3

c. Difficult situations for remembering?
Tired/Sick  Bored  Ext. stimuli  Pressured
1  2  3  4

40a. Trouble remembering a lot of things?
Yes  No
1  2

b. Trouble remembering a few things?
Yes  No
1  2

c. Which is worse?
Few 1  
   Alot 2  
 No difference 3

41a. Trouble remembering under pressure?
   Yes 1
   No 2

b. Trouble remembering not under pressure?
   Yes 1
   No 2

c. Which is worse?
   Pressure 1
   No pressure 2
 No difference 3

42a. Trouble remembering when tired/sick?
   Yes 1
   No 2

b. Trouble remembering when OK?
   Yes 1
   No 2

c. Which is worse?
   OK 1
   Tired/sick 2
 No difference 3

43. Number of easy things to remember: __________

   Number of hard things to remember: __________

44a. Trouble remembering things that happened seconds ago?
   Yes 1
   No 2

b. Trouble remembering things that happened minutes ago?
   Yes 1
   No 2
c. Trouble remembering things that happened hours ago?
   - Yes
   - No
   - 1
   - 2

d. Which are hardest?
   - Seconds
     - 1
   - Minutes
     - 2
   - Hours
     - 3
   - No difference
     - 4

e. Which are 2nd hardest?
   - Seconds
     - 1
   - Minutes
     - 2
   - Hours
     - 3
   - No difference
     - 4

45. Easier to remember things said or seen?
   - Say
     - 1
   - See
     - 2

46a. Trouble remembering important things?
   - Yes
     - No
     - 1
     - 2

b. Trouble remembering unimportant things?
   - Yes
     - No
     - 1
     - 2

c. Which is worse?
   - Imp
     - 1
   - Unimp
     - 2
   - No difference
     - 3

47. Try to improve memory?
   - Yes
     - No
     - 1
     - 2

48. Medication effect?
   - Hurts
     - No effect
     - Helps
     - 1
     - 2
     - 3


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Psychiatric Institute.

