

METHOD

The research methodology is the complete plan of any research. In fact, research methodology is the blue print of the whole procedure or steps involved to analyze the hypothesis and way of discussing the results. The research methodology thus, may correctly be defined as a sequence of those steps taken ahead of time to be ensured that the relevant data will be collected in a way that will assure objective analysis of the different hypothesis formulated with respect to the research problems. Thus the research methodology help the researcher in testing the hypothesis by reaching valid and objective conclusions regarding the relationship between independent and dependent variables. The selection of any research methodology is obviously not based upon the wish and convenience of the researcher; rather it is based upon the purpose of the research, types of variables and the conditions in which the research is to be conducted. Research methodology helps to investigator analyze the hypothesis in most efficient way and with minimum cost. Basically, research design serves two functions. First, it answers the research questions as objectively validly and economically as it is possible. In fact it is an important function served by a research methodology. Second, a research design also acts as a control mechanism, in other words, it enables the researcher to control unwanted variances. In any scientific investigation there are three types of common variances, namely the experimental variance the extraneous variance and the error variance with which the researcher is directly concerned.

SAMPLE

212 male alcoholics drawn from hospitals and rehabilitation centers of Jalandhar, Nawashahar, Banga, Nakodar, Kapurthala and Dahan Kalera served as subjects in this study. Their age ranged from 19 yrs to 85 yrs with an average age of 47.1 years. The sampling can be described as incidental as only those alcoholics were included in the study who were available and accessible. Subjects who participated in the study belonged to different areas of Punjab. Predominantly they belonged to various villages of Doaba belt.

TESTS:-

The following tests were used in the present study for collecting data.

1. Blessed dementia scale (BLS-D) (Blessed, 1968)
2. Ways of coping questionnaire (Folkman and Lazarus, 1988)
3. Presumptive stressful life events scale (Singh; Kaur and Kaur, 1971)
4. PGI memory scale (Parshad and Wig, 1979).
5. Personal assessment inventory (King and Laughlin, 1976)

DESCRIPTION OF TOOLS OR TESTS

1. Blessed dementia scale (Blessed, 1968):- This scale is developed by Blessed in 1968, has been utilized as a research instrument to quantify the cognitive and symptoms of patients with dementia and is part of a comprehensive package by Blessed. The other components are the information scale, the memory scale and concentration scale. These last three form the blessed information memory concentration test (IMC). Other names for the blessed dementia scale are the blessed roth dementia scale, the new castle Dementia scale, or the Dementia rating scale. In this present study we used blessed dementia (BLS-D) only. The BLS-D is a clinical scale that has 22 items organized in three major areas:-

- Change in performance of everyday activities (8 items)
- Change in habits (3items)
- Change in personality, interest and drive (11 items)

The information is obtained from a caregiver and rating is based on a predetermined period of time usually 6 months. The scores for each item are on a 3- point scale for the change in performance where total incompetence is 1, partial or variable incapacity is 1/2 and normal is 0. Other items in change of habits have fixed 0, 1, 2, or 3. And change in personality interest and drive respectively have fixed 1 score for each change. The scores go from 0 = normal to 28= extreme incapacity. The BLS-D evaluates cognitive and Behavioral symptoms in individuals with dementia. The interrelate reliability for two raters is 0.59. The reliability is considered low and is probably due to the difficulty in scoring items, which call for complex judgments by informant. In terms of validity, the authors have reported scores correlated 0.77 with the count of disorders in the brain of

several patients. The BLS-D scale and has good predictive value in relation to the burden experience by caregivers. Time to complete scale: - 15-30 minutes.

(2) The ways of coping Questionnaire :- (Folkman and Lazarus, 1988) the ways of coping questionnaire was developed to provide researchers with a theoretically derived measure that could be used to explore the role of coping in the relationship between stress and adaptation outcomes. The ways of coping questionnaire studies in detail thoughts and actions of an individual's use to cope with the stressful events of everyday living. It is derived from a cognitive phenomenological theory of stress and coping that is formulated in stress, appraisal and coping (Lazarus and Folkman, 1984) and elsewhere (eg, Lazarus, 1981, Lazarus and Lavnier, 1978).

Uses of the ways of coping questionnaire:-

- (1) The ways of coping questionnaire has been used primarily as a research instrument in studies of the coping process. Investigators have used it to investigate the components and factors of coping in a variety of studies.
- (2) The ways of coping questionnaire studies in detail thoughts and actions of an individual's use to cope with the stressful events of everyday living .It measures coping processes not coping dispositions or styles.
- (3) The ways of coping questionnaire could potentially be used as a stimulus for discussion in clinical training and workshop settings.

The sample from which the coping scales were developed was composed of 75 middle and upper –middle – class white married couples who had at least one child living at home. Husbands and wives were interviewed separately in their homes by different interviewers once a month for five months. Subjects were asked to describe the most stressful encounter experienced during the previous week and then to fill out the ways of coping questionnaire.

The items on the ways of coping questionnaire were analyzed, using alpha and principal factoring with oblique rotation. Oblique rotation was selected because individuals are expected to choose from an array of coping strategies rather than use one set of strategies to the exclusion of others and the resulting eight scales are described in table.

Table-2

Description of the coping scales.

1.	Confrontive Coping	:	Confrontive coping is one of the coping styles. It is an aggressive effort to alter the situation and suggests some degree of hostility and risk taking behavior.
2.	Distancing	:	It explains the tendency to face the situation and deal with it perfectly.
3.	Seeking social support	:	It explains efforts to seek support in any form like informational support, tangible support and emotional support.
4.	Self controlling:	:	Self controlling explains the effort of an individual to regulate one's feelings and actions in certain situation
5.	Accepting responsibility	:	It acknowledges one's own role in the problem with a concomitant theme of trying to put things right
6.	escape – avoidance	:	It explains the thinking and behavior which is generally to avoid pain and problematic situation.
7.	Planful problem solving	:	When someone deliberately solves the problem and makes efforts to change the situation is known as planful problem solving
8.	Positive reappraisal	:	It explains efforts to create positive thing by focusing on positive side of the situation. It also has a religious significance

The ways of coping questionnaire can generally be completed in about ten minutes, although the time will vary with respondents. Items on the questionnaire have been designed to be answered in relation to a specific stressful encounter, although no single standardized method has been devised for eliciting it. The method must be adopted to fit the needs of the specific study. For example, the ways of coping questionnaire was used

as an interview protocol in one set of studies and as a self-administered assessment in another. It has also been used to assess coping in encounter chosen by the respondent as well as in encounter chosen by ourselves to investigate a particular research question. There are two methods for scoring the ways of coping questionnaire, raw and relative. The decision as to which set of scores to use depends on the information described.

Raw scores explain coping efforts for each of the eight types of coping; whereas relative scores describe the proportion of effort represented by each type of coping. In both methods of scoring, individuals respond to each item on a 4 point likert scale, indicating the frequency with which each strategy is used: 0 indicates "does not apply and not used," 1 indicates "used somewhat," 2 indicates "used quite a bit," 3 indicates "used a great deal".

The raw is the grand total of responses of the subject to the items that comprise a given scale and in relative scores, which were suggested to us by Peter Vitaliano (Vitaliano, Mairo, Russo and Becker, 1987), describe the contribution of each coping scale relative to all of the scale combined. A relative score for each scale is calculated by (a) calculating the average item score for the items on a given scale by dividing the sum of the ratings on the scale by the number of items on that scale (b) calculating the sum of the average items scores across all eight scales and (c) dividing the average item score for a given scale by the sum of the average item scores across all eight scales. Because the ways of coping questionnaire measures coping processes, which, by definition, are variable, traditional test-retest estimates of reliability are in appropriate reliability can be evaluated, however, by examining the internal consistency of the coping measures, estimated with Cronbach's Coefficient alpha. Internal consistency estimates of coping measures generally fall at the low end of other traditionally acceptable range. As Billings and Moss (1981) point out those who are constructing coping measures attempt to minimize item redundancy within each coping category. When one coping mechanism proves to be useful and effective in the present situation than other coping mechanisms from this category will be selected in similar situation.

The face validity of the items of the various translations of the instrument needs to be examined to determine the extent to which the items have similar meanings across

nationalities translations have done in the Dutch, Hebrew, Spanish, and French and German languages.

Evidence of content validity is found in the fact that the results of our theoretical predictions, namely that: (1) coping is both problem- focused and emotions focused strategies (2) coping is a continues process. That is why when ever people face stress they sometimes try to solve the problem and sometimes gets threatened with the after effects and try to escape that shows the variation in responding to the situation.

(3) Presumptive stressful life events scale: - (Singh; Kaur and Kaur, 1977)

In 1936 Selye proposed his concept of stress as the “general adaptation syndrome” a group of non-specific biological reactions to various disturbing environmental agents. This explanation popularized the concept of stress in the scientific vocabulary of medicine. The researchers conducted in Wolff’s laboratory incorporating the concepts of Pavlov, Friend, Cannon and Skinner confirmed that stressful life events plays significant causative role in the natural history of many diseases. Subsequent work has confirmed the importance of life events in medical and psychiatric disorders and has led to the development of several stressful life events questionnaires which provide a basis for the quantification of life events e.g in terms of life change units (LCU) in the social readjustment rating scale as a measure of stress (Holmes and Rahe, 1967). Because of cultural differences and non-validation of these scales in our population the results obtained by these studies are thought to be unreliable. To overcome this deficiency and also in view of the various other shortcomings of the existing life events scales was pointed out, researchers have decided to develop and construct a new scale suitable for the Indian population. Thus researchers were able to develop a presumptive stressful scale (PSE) scale consisting of 51 life events. These 51 items were further classified according to (a) whether they were personal or impersonal (b) according to whether they were desirable, undesirable and ambiguous. In PSLE there are 51 common life events which are experienced by almost everyone at sometime or other in their life. There are two option for each event i.e. past 1 year and life time .Subject is required to put a tick mark against all those events that he may have experienced during the past our year in col.1 and those he have experienced at any time period to that in his life in col.2 the scale generally applied to find out the number of stressful life events experienced by normal

adult population. Normally 15-30 minutes approximately for scoring generally researchers use the ranking method .In present study we also used mean ranked stress score for each item, which are given in the manual. First of all we put respective rank against the tick in each column and after that we add the ranks for each column i.e. for last 1year separately and for life time separately.

(4) P.G I Memory scale (Prasad & Wig, 1979)

The psychiatrists, neurologist and chemical psychologists working in India have long felt the need for a short ,simple ,objective and valid test of memory .Such a battery of memory tasks PGI memory scale was constructed and standardized in 1977. It contains 10 sub tests:-

1. Remote memory
2. Recent memory
3. Mental balances
4. Attention concentrations
5. Delayed recall
6. Immediate recall (sequential reproduction of sentences)
7. Retention for similar pairs
8. Relations for dissimilar pairs
9. Visual retention
10. Recognition

While constructing memory scale efforts were made to ensure that is not unduly dependent on intelligence and is equally valid for both sexes and applicable and acceptable to unsophisticated subjects who constitute majority of subjects Indian hospitals and clinics.

The simplest definition of memory as commonly understood that is, “the memory is an ability to retain and reproduce impression once perceived unintentionally”. This definition illustrates compartmental views of very short term, short and long term memory .The scale was validated against four hypotheses which are as follows.

1. The subject suffering from neurological disorders obtain poorer scores than the subject suffering from functional psychiatric tunes.
2. The older subject should obtain lower score than younger normal adults.
3. The scores on memory scale should have positive relationship with education.
4. It should not have higher correlation with intelligence total scores.

A test scores is called reliable when we have reasons for believing the score to be stable and trust worthy. Stability and trust worthiness depend upon the degree to which the score is an index of true ability-is true of change error. Methods of estimating reliability fall into two categories –

- (1) Relative reliability
- (2) Absolute reliability

Test retest reliability for each subtest was determined by using pearson's product moment method of correlation .Mean difference was evaluated by t-test using method for correlated mean Since ,the normal and neurotic groups did not show any significant difference in their mean performances on any of the sub –test, these two therefore were combined together for testing the reliability of psychotic and organics, because they were different from the normal control group, were combined together as a concurrent validity against the existing memory tests was determined through coefficient (r) between raw scores of the two tests (present memory test- Boston memory scale: and present memory test – Wechsler Memory scale). Construct and cross validities were determined by finding out the significance of mean difference by t- test. Administration of the test is simple and similar to other memory tests and clinical evaluation of memory. Broad hints for administration are provided in test blank itself. It is however, advised to consult the Bhargava research monograph no.2 (parsad, 1977) for more details. Administration takes neary 15-20 minutes **Subtest I and II** – one score for each correct response. Maximum total scores will be 6 and 5 respectively.**Subtest III-** Alphabets and counting backward -3 scores if all correct within 15 seconds, 2 if takes longer than 15 seconds if time is one mistake or omission, separately for alphabet and backword counting.Counting backward by 3's - 3 scores if all correct with in 30 seconds, 2 if takes longer than 30 seconds, if there is one error or omission. **Subtest IV** – summation of digits forward and backward is the

score for this subtest. **Subtest V** – one score for each word correctly recalled (total 10). **Subtest VI** – one score for each clause correctly reproduced (maximum score 12). **Subtest VII** – one score for each correct reproduction of the associated word of the pair. (Total 5). **Subtest VIII** – one score each for the correctly reproduced pair, separately for each trial. Summation of scores on three trials is the score (total 15) **Subtest IX** – one score for each type of geometrical figure correctly reproduced in sequence and number. Thus cards 1 to 3, 2 scores each, card 4, 3 scores and card 5, 4 scores (total 13) **Subtest X** – each object correctly recognized and named is to be given a score of one. Numbers of wrong identified objects are to be deducted from the earned score (total 10).

(5) Personal assessment inventory (Krug and Laughlin,1976)

Historically, depression was among the first of the psychogenic disorders to be regained and identified entity .Although theoretical and experimental analyses of depression phenomena have taken us for beyond Hippocrates .At our present stage of enlightenment we no longer consider black bile for a significant contributory factor –Depression remains our one of the most confusing problems fearing the physician, psychiatrist and clinical psychologist.

To the physician or psychiatrist the question of accurate diagnosis is very central because the prescription of the most effective drug or other treatment procedure requires premise differential diagnosis. To illustrate the point, consider that one of the more common somatic complaints in depression involves disturbances in the sleep pattern, which is an equally frequent complaint in anxiety –induced disorders. It is this confusion of anxiety and depression symptoms that creates one of the most significant problems in the treatment of depression. One of the principal concerns in the development of such a scale was that the tests should confirm to the researcher’s best understanding of personality structure.

The format of the test should be such that it can be administered on a single individual or on a large group at one time .It normally takes 10-20 minutes for administering the test .In this inventory there are 40 questions with 3 options for each statement and the

statements are about how people feel or think at one time or another .There are no right or wrong answers. This test therefore, is subjective in nature.

The subject has to put a (x) mark in any of the three options given after each statement as per her own feelings the answer will be entirely confidential. Implicitly this test is used to measure depression but results are interpreted using the normal Scoring key. Reliability coefficient of the depression scale or alcoholics was measured by split half method which came out to be .94 and with internal consistency it came out to be .93 Validity score for normal individual came out to be .88 where as its correlation with chemical Analysis questionnaire ranges from .31 to .87. The validity of the test was examined from three aspects–its underlying factorial validity, discriminatory power and theoretical consistency with other construct and found to be quite satisfactory on all three counts.

1. Method (without correcting factor)

- a. Add the 1's and 2's down the page for those items fall in within the unshaded box at the bottom of the page.
- b. Repeat this process for page 3 using the same key.
- c. Transfers the scores from page 2+3 to the on shaded boxes on the back page and add them together, this gives the total uncorrected raw score.

2. Method (with correcting factor)

- a. Add the 1's and 2's down the entire page including those in the shaded area and write the total in the shaded box at the bottom of the page.
- b. Repeat this process for page 3, using the same key.
- c. Transfer the scores from pages 2+3 to shaded boxes on the back page and add them together, this gives the total corrected raw scores.

$\text{Sten score} = \frac{\text{Raw score} - \text{population mean}}{\text{Population standard deviation}}$
--

ANALYSIS

The following analysis were done for the processing of data:-

- a) On the basis of dementia score two groups are framed i.e. high dementia group (n=71) and low dementia group (n=71)
- b) Mean, standard deviation, skewness and kurtosis of all the variables included in the study were computed of two group's i.e. high dementia and low dementia group.
- c) t-test was employed for studying the effect of psychological variables (age, stress, coping, memory and depression) on the two group's i.e. high dementia group and low dementia group.
- d) A Discriminant analysis of all the variables was computed to see the contribution of each variable of the two groups.

DESCRIPTION OF THE VARIABLES INCLUDED IN THE STUDY

Table-4 Shows the variables included in the study

AGE	DEPRESSION	STRESS	DEMENTIA	COPING STRTERGIES	MEMORY
AG	DEP	1.last one year S(1)	(DEM)	1.conforting coping (CN)	1.Remote Memory(RM)
		2 life time S(LT)		2 distancing (DIS)	2.Recent Memory(RCM)
				3Self controlling(SC)	3.Mental Balance(MB)
				4 Seeking social support(SSS)	4.Attention Concentration(AC)
				5.Accepting responsibility(AR)	5.Delayd Recall(DR)
				6.Escape Avoidance(EA)	6.Immediate Recall(IR)
				7.Planful problem solving (PPS)	7.Retention for similar pairs(RSP)
				8.Positive Reappraisal(PR)	8.Retention for dissimilar pairs(RDP)
					9.Visual retention(VR)
					10.Recognition(REC)
					11.Total score(TS)