Chapter-3
Methodology
The main objective of this research is to study how personality factors, causal attributions and perceived social support predict the experience of psychological well-being amongst university students. Three major variables were studied by the researcher in relation to psychological well-being i.e. personality factors (in terms of five dimensions, viz. Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness), causal attributions (Positive external/internal, Positive stable/unstable, Positive global/specific, Composite positive, Negative external/internal, Negative stable/unstable, Negative global/specific, Composite negative) and perceived social support relating to – family, friends and significant other. Thus, a total number of 16 variables were studied in relation to psychological well-being.

Design

It was therefore necessary to have a design which would appropriately study the prediction of well-being vis-à-vis these 16 variables. It was also important to study if some predictor variables were exercising their effect in terms of their interaction. The role of gender and family structure was also needed to be taken into consideration. For prediction of well-being by the 16 variables, correlational design was used by the researcher. Factorial design (2 x 2 x 2) was used for the assessment of the interaction effects among the predictor variables.

Sample

The sample comprised of 312 university students taken from the different departments of Aligarh Muslim University. 154 were undergraduates and 158 were post graduates. The age group of the students was 18 – 25.
<table>
<thead>
<tr>
<th>Subjects</th>
<th>Those belonging to joint family</th>
<th>Those belonging to nuclear family</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males (N = 157)</td>
<td>Undergraduates 29</td>
<td>46</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>Post graduates 43</td>
<td>39</td>
<td>82</td>
</tr>
<tr>
<td>Females (N = 155)</td>
<td>Undergraduates 22</td>
<td>57</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>Postgraduates 17</td>
<td>59</td>
<td>76</td>
</tr>
<tr>
<td>Total (N = 312)</td>
<td>Undergraduates 51</td>
<td>103</td>
<td>312</td>
</tr>
<tr>
<td></td>
<td>Postgraduates 60</td>
<td>98</td>
<td></td>
</tr>
</tbody>
</table>

Although strict random sampling is almost impossible in social science research because often individuals who should be in the sample do not consent to participate or withdraw in the midst of the research, an attempt was made to draw out the sample through random procedures. Many subjects did not consent or were not available therefore they had to be excluded. We took all precautions to ensure that sample was drawn objectively and systematically.

**Tools of the Study**

The following measures were used for collecting information regarding the subject’s experience of psychological well-being, their personality factors, attributional styles and the social support perceived by them.

1. **Psychological Well-Being Scale** constructed by Carol Ryff (1989a) has been used to assess the experience of psychological well-being. Six dimensions of psychological well-being have been conceptualised by Ryff. She suggested a multidimensional model of psychological well-being that comprised six distinct dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self acceptance (Ryff, 1989a; Ryff, 1989b). The scale has 84 items with 12 items in each dimension. The response categories for each item are on a six point scale ranging from Strongly Disagree to Strongly Agree. All the responses are added to get the score on psychological well-being.
Responses to negatively scored items are reversed in the scoring procedure. High scores indicate high self ratings on psychological well-being and the dimension assessed.

Ryff Psychological Well-being Scale was originally validated on a sample of 321 well educated, socially-connected, financially-comfortable and physically healthy men and women (Ryff, 1989b). In this study, a 20 item scale was used for each of the six constructs, with approximately equal numbers of positively and negatively worded items. The internal consistency coefficients were quite high (between 0.86 and 0.93) and test-retest reliability coefficients for a subsample of the participants over a six week period were also high (0.81 – 0.88).

2. **Personality Inventory (NEO – FFI)** by Paul T. Costa and Robert Mc Crae (1992) was used to assess personality factors. The NEO – FFI is a short form of the Revised NEO Personality Inventory. This personality inventory assesses five dimensions of personality namely Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness. This inventory is based on the five factor model of personality. The Inventory consists of 60 items with 12 items assessing each personality factor. The items are rated on a five point scale ranging from strongly disagree to strongly agree. Responses are added on each dimension to get the total score on each personality factor. Costa and Mc Crae (1992) report that the NEO FFI scales are highly reliable and strongly correlated with the corresponding domain scales of the full NEO PI – R (convergant reliability ranged from 0.77 to 0.94 across various samples).

3. **The Attributional Style Questionnaire (ASQ):** The attributional style of the subject was assessed with the help of Attributional Style Questionnaire (ASQ)
developed by Peterson, Semmel, Von Baeyer, Abramson, Metalsky and Seligman (1982) and revised by Peterson and Seligman in 1984.

The immediate impetus for the development of the ASQ was Abramson, Seligman and Teasdale's (1978) reformulation of the learned helplessness model of depression (Seligman. 1975). The view that depression follows perception of negative events as uncontrollable, based on causal attributions which the individual makes for them led to this reformulated model. The learned helplessness model holds that attributing uncontrollable bad events to internal, stable and global factors lead to depression. To the extent the individuals show characteristic attributional tendencies, it was felt necessary to speak of an attributional style, and for this purpose Seligman and his colleagues developed the ASQ.

The ASQ is a self report measure of patterns of explanatory style which is the tendency to select certain causal explanations of good and bad events. The scale consists of internal-external, stable-unstable and specific-global dimensions. Eight type of attribution styles emerge – composite positive, internal-external positive, stable-unstable positive, specific-global positive, composite negative, internal-external negative, stable-unstable negative and global-specific negative.

This scale consists of 12 items in which 6 items assess the causal dimensions related to the interpersonal/affiliative events and 6 items to the achievement related events. There are 12 hypothetical events, 6 describing positive events (“YOU WIN A PRESTIGIOUS SCHOLARSHIP”) and the other 6 describe negative events (“YOU GO ON A TOUR AND IT GOES BADLY”). Each item presents the individual with a statement to imagine an event and then requires the subject to generate its one major cause. On the three questions, that are always in the same order, subjects have to rate
each cause along a 7-point bipolar scale for internal vs. external, stable vs. unstable and specific vs. global dimensions. Peterson et al. (1982) suggested that the three attributional dimension rating scales associated with each event description are scored in the directions of increasing internality, stability, and globality. Composite scores are calculated by summing the appropriate item scores and dividing the sum by the number of sums in the composite. Scores are derived by averaging within dimension and across events for individual dimension scores or across dimensions and across events for composite scores. Each individual dimension ranges from 1 to 7. Therefore, composite scores (Composite positive and Composite negative) range from 3 to 21. High score on any dimension of attributional style denotes internality, stability and globality and, on the other hand, low score on any attributional style dimension shows externality, unstability and specificity.

The ASQ has proven to be a valid measure of attributional style and it stresses the habitual tendencies in the attribution of causes (Peterson et al., 1982). Peterson et al. (1982) observed that the three scales, that is, locus, stability and globality have reliability with Cronbach’s alpha ranging from 0.44 to 0.69 (mean reliability of 0.54). Peterson and Seligman (1984) found Cronbach’s alpha coefficient of revised ASQ range from 0.66 to 0.88.

Peterson et al. (1982) followed correlational approach and devised several methods of demonstrating the criterion validity of ASQ. The results of the study conducted by Peterson, Bettes and Seligman (1982) demonstrated the construct validity for the ASQ in that it both taps spontaneously generated attributions and relate to theoretically relevant symptomatology. Other studies conducted by Zullow
and Seligman (1985), Kamen and Seligman (1985) and Seligman and Shulman (1986) have further supported the construct validity of ASQ.

4. **Multidimensional Scale of Perceived Social Support (MSPSS):** Perceived social support was assessed through Multidimensional Scale of Perceived Social Support (MSPSS) by Zimet, Dahlam, Zimet and Farley (1988). This is a 12 item measure of subjectively assessed social support. It measures three different subscales: (a) Family, (b) Friends and (c) Significant Other. Responses are rated on a 7 point Likert type scale and range between low point of strongly disagree to a high point of strongly agree. The Significant Other subscale does not assume the presence of such a person but rather the perceived presence or absence of such a person or support. The score are summed up to get the total score on the three dimensions.

Using data from university undergraduates (n = 275, 49% females and 51% males), the authors of the scale reported internal reliability for the total scale to be 0.88 and three month test-retest reliability was reported to be 0.85 (Zimet et al., 1988). In reporting construct validity using the same undergraduate sample, Zimet et al. reported statistically significant relationships of the family, friends and significant other subscales with a measure of psychological distress in the expected directions (The Hopkins Symptom Checklist, Derogatis, Lipman, Rickels, Ulenhuth and Covi, 1974). The family subscale was inversely related to both depression (r = -0.24, p < 0.01) and anxiety (r = -0.18, p < 0.01), the Friends subscale was inversely related to depression (r = -0.24, p < 0.01) and the Significant other scale was also inversely related to depression (r = -0.13, p < 0.05), as was the scale as a whole (r = -0.25, p < 0.01). Clara, Cox, Enns, Murray and Torgrude (2003) reported a confirmatory factor
analysis of the MSPSS, using two separate samples: one of university students (n = 549, 42% male, 58% female), another of psychiatric outpatients (n = 156, 35% male, 65% females) in a mood disorders clinic. Internal consistency reliability for the total scale in the sample was 0.89.

Procedure

Each subject was approached personally. After due establishment of rapport, subjects who were willing to participate were given the questionnaire. They were assured that their responses will be only used for research purposes. Subjects were instructed by the researcher to give honest responses.

All questionnaires had different sets of instructions. For the Psychological Well-being Scale, subjects were instructed to read each item carefully and tick mark the response that best represented their opinion about themselves and their life. The NEO Five Factor Inventory and the Multidimensional Scale of Perceived Social Support also had the same set of instructions.

For the Attributional Style Questionnaire (ASQ), the subjects were instructed to imagine the event happening to them and write down one major cause that they perceived responsible for the situation. They were then asked to answer the next three questions about the cause by circling one number for each question.

Since the questionnaires were long, they were administered in two settings. The subjects were thanked and asked to leave.
Statistical Analysis

Intercorrelations among all the variables were calculated. Since the major purpose of the study was to find out the predictor variables for psychological well-being, multiple regression was applied. Q-Q plot was plotted for the dependent variable to fulfil the assumption of normality for ANOVA. Three-way ANOVA (2×2×2) was used to find out whether the interaction of certain predictor variables exercised their effect on psychological well-being. t-test was applied to compare males and females on their mean scores of psychological well-being and its components to find significant differences. Students coming from nuclear and joint families were also compared in their terms of their experience of psychological well-being and its components using t test.