Chapter III

Method
Design

Three way ANOVA i.e. 2 X 2 X 2 factorial design with two levels of hearing loss (mild / severe), perceived social isolation (low / high) and learned helplessness (low / high) was adopted to see their effect on Quality of life. The mild and severe categories of hearing impairment consist of 120 individuals each irrespective of high and low levels of perceived social isolation and learned helplessness. Similarly 120 individuals, each in the category of having high perceived social isolation and low perceived social isolation were taken irrespective of their degree of hearing loss and levels of learned helplessness; and the same criteria was adopted for learned helplessness i.e. 120 individuals each in high and low category of learned helplessness were included by keeping their levels of other two variables constant.

Fig F: Sample’s specification
Participants:

240 adults (120 males and 120 females) in the age range of 40-55 years were selected randomly from various hospitals of Chandigarh. The selection of this sample was incidental as only those subjects were taken who were available there and were willing to participate in the study. These 240 subjects were categorized into two categories on the basis of severity of hearing loss i.e. 120 in mild and 120 in severe category (both males and females). Afterwards, Friendship scale for social isolation (Hawthorne, 1996) and LH scale for learned helplessness (Verma et al., 1988) questionnaires were administered to assess the levels of Perceived Social Isolation and Learned Helplessness respectively followed by WHOQOL-Bref for Quality of life (WHOQOL, 1998), to assess their quality of life. **Criteria for the selection of sample:** Inclusion criteria were new cases coming prospectively to the hearing clinics with age range 40-55 years having minimum primary level of education who are clinically diagnosed cases of acquired hearing loss by ear nose throat specialist and later confirmed after doing pure tone audiometry (PTA) by an audiologist having mild and severe hearing loss with reference to ISHA battery, 1990 modified from Goodman, A (1965) were taken.

**Tools used:**

**WHOQOL-Bref for Quality of life: (WHOQOL, 1998)**

It measures the following broad domains: physical health, psychological health, social relationships, and environment. The WHOQOL-BREF instrument comprises 26 items. All items are rated on 5 point scale. Scoring was done by
summation and scores were presented in percentage (WHOQOL, 1998). Domains can be described as:

*Physical health domain* - dependence of treatment, energy & fatigue, mobility, presence of pain and discomfort, sleep & rest, activities of daily living, and perceived working capacity.

*Psychological well-being domain* - affect, positive self-concept, negative feelings, higher cognitive functions, body image, and spirituality.

*Social relations domain* - social contacts, family support, sexual activity.

*Environment domain* - freedom, quality of home environment, physical safety and security, involvement in recreational activity, quality of health and social care, and accessibility to services.

All 26 items were checked and scores ranging from 1-5 were assigned. Scores of three negatively phrased items were reversed. Scores were transformed to 0-100 scale using of WHO QOL-BREF instrument. Cases with greater than 20% of missing data were deleted and the data set was saved. Domain scores were scaled in a positive direction (i.e. higher scores denote higher quality of life). Internal consistency, Cronbach alpha values for each of the four domain scores ranged from .66 (for domain 3) to .84 (for domain 1). Discriminant validity of the WHOQOL-BREF was shown to be comparable to the WHOQOL-100 in discriminating between the ill and well groups, with similar values and significant differences between ill and well subjects apparent in all domains.
**Importance of domains in assessing overall quality of life:**

All four WHOQOLBREF domain scores made a significant contribution in explaining variance observed in the general facet relating to Overall Quality of Life and General Health, with the physical health domain contributing most highly, and the social relationships domain making least contribution. This suggests that all four domains should be taken into consideration when evaluating overall quality of life. In summary, the WHOQOL-BREF provides an adequate alternative to the assessment of domain profiles using the WHOQOL-100.

The WHOQOL-Bref application, the individual was required to think about their life during the last two weeks and to check the column which contained the most adequate answer to their case. The instrument is self-applicable, that is, the individual reads the question and signs the answer. In case they do not understand the question, have reading difficulties or illiteracy, the examiner reads the question like it is written, trying not to explain it in order to not influence the answer. In addition to this, it should be answered at once. After reading one of the 26 questions, the individual had to check the number whose answer were the most adequate one to their situation (1 to 5). The questionnaire has been created with four kinds of answer: intensity, ability, assessment and frequency, each of which had two key words and three intermediate words for answer. For example, in the frequency evaluation ("how often do you.") the key words are always and never. The intermediate words are seldom, quite often and very often. WHOQOL-BREF was scored over four domains: Physical Capacity (7 items), Psychological Well-being (6 items), Social Relationship (4 items), and
Environment (9 items). All items were rated on a 5-point scale with a higher score indicating a higher quality of life. The mean score of items within each domain was used to calculate the domain score. Mean scores were then multiplied by 4 in order to make domain scores comparable with the scores used in the WHOQOL-100.

**Friendship scale for social isolation: (Hawthorne, 1996)**

Friendship scale cover the key dimensions reported in the literature about perceived social isolation. It is parsimonious so that it could be easily incorporated into studies. It is self-completed i.e. suitable for inclusion in survey instrument batteries. It includes both positive and negative items to avoid acquiescent response bias. Guttman-type because most people do not experience social isolation and timeframe is 4-weeks to get stable estimates, yet not so long that memory effects would unduly influence results. Friendship scale for social isolation consists of six items. All items were rated on 5 point scale. Scoring was by summation and scores were presented in percentage (Hawthorne, 1996).

Scale construct is made according to concepts which say social isolation as living without companionship, an absence of intimate relationship with significant others (e.g. partner, friends), having low levels of social contact, including an inability to relate to others, little social support, being unable to ask others for support when it is needed, being a burden to others, feeling separate from others, having no social networks regardless of whether for giving or receiving support, being an outsider in social settings, including being unable to perform social roles, being isolated from other, including being unable to
communicate or having social inadequacy, suffering loneliness, in relation to how the individual perceives themselves in relation to others. Thus, perceived social isolation will occur where these are transgressed.

The Friendship Scale is a short, user-friendly scale for measuring social isolation consisting of 6 items, 3-reversed. Internal consistency Cronbach $\alpha = 0.83$. Concurrent validation shows that it correlates well with SF12 MCS, WHOQOL-Bref Psychological Scale, AQoL Social relationships scale. Tests of concurrent discriminant validity suggest it is sensitive to the known correlates of social isolation. Scoring involves reversal of items 1, 3 and 4 followed by summation across all items. The score range is 0–24. A high score represents social connectedness and a score of “0” complete social isolation.

**LH scale for learned helplessness: (Verma et al., 1988)**

Learned helplessness may be defined as “when people who experience uncontrollability first learn that their outcomes elude their control and then generalize this belief about their own experience of helplessness to new situations, where it produces difficulties for them which might result in stress for the individual” (Peterson, 1993). Scale consisted of 15 items having reliability and validity of the scale 0.74 and 0.88 respectively. Here the subjects are asked to tick only those items that they agree with and have to say no, when the item is not applicable, whereas uncertainty has to be marked when uncertain. Each item has three choices scored on three-point scale. Scoring categories of yes, uncertain and no are given scores of 3, 2 and 1 respectively as suggested by Verma et al. (1988).