Review of Literature
Chapter 2: REVIEW OF LITERATURE

The review of literature characteristically refers to available writings in books, journals and conference procedures associated with the problem of the study. The text also includes unpublished proposals and thesis. A complete evaluation of literature is significant for any investigative work. Significance of this study of applicable review can be over emphasized not only with a vision that it provides but also for the reason that it involves the structure of knowledge to demonstrate that this study could be an addition to the field. Reviews have been presented under the following heads:

2.2. Visual Functioning Status in Visually Impaired Adults.
2.3. Quality of Life in Visually Impaired Adults.
2.4. Depression among Visually Impaired Adults.
2.5. Loneliness among Visually Impaired Adults.
2.6. Indian Perspective for the Welfare of the Disabled
2.7. New initiative on Low Vision Services in 12th five-year plan under National Program for Control of Blindness (NPCB)

2.1 Prevalence and Causes of Visual Impairment all over the World

Caroline et al (1998) considered the incidence and causes of blindness and visual impairment in a variety of age categories of a large population. The occurrence of blindness, according to WHO report, varies from 0.1 per cent in people aging 55 to 64 years to 3.9 per cent aging 85 years or older; the commonness of vision impairment ranged from 0.1 per cent to 11.8 per cent. For people less than 75 years, myopic deterioration and optic neuropathy were the main causes of impaired vision. For people 75 years or older, AMD was the main cause of the augmented occurrence of blindness, while age-related cataract mainly caused the increased prevalence of vision impairment.
Dandona, et al. (1999) assessed the occurrence, division and demographic relations of the refractive error in southern India. Results showed 92.0 per cent people were suffering from refractive errors. In subjects <15 years of age, occurrence of myopia was 4.44 per cent, of hyperopia 59.37 per cent, and of astigmatism 6.93 per cent. In subjects > 15 years of age, occurrence of myopia was 19.39 per cent, of hyperopia 9.83 per cent, and of astigmatism 12.94 per cent with multivariate examination, myopia was considerably higher in people with education of class 11 or higher; hyperopia was considerably higher in people >30 years of age when compared with those 16 to 29 years of age in females and in people belonging to medium and higher socio economic strata; and astigmatism was higher in subjects >40 years of age.

Dandona et al. (2001) examined the occurrence and causes of sightlessness in the Indian state of Andhra Pradesh and assessed if blindness has decreased since the last survey of 1986-1989. The study suggests that 275 participants were blind that is the prevalence rate is 1.84 per cent. Among the 76 million population of Andhra Pradesh, 714,400 are approximated to have cataract linked blindness and 228,000 have refractive error related blindness. The prevalence of blindness in this state has risen from 1.5 per cent from the late 1980s to 1.84 per cent by 2000s.

Dandona et al (2002) assessed the incidence and topographical relation of the vision impairment in the Indian state of Andhra Pradesh. 87.3 per cent people took part in the study. 1237 people found to have moderate vision impairment, an attuned prevalence of 8.09 per cent. The bulk of this moderate vision impairment was caused due to refractive error (45.8 per cent) and cataract (39.9 per cent). These data proposed that there is a noteworthy load of moderate visual impairment in this population adding up to blindness. Study of these data suggested that there were 82 million people with moderate visual impairment in the year 2000, and this number could possibly be 139 million by the year 2020 if the current tendency continues. This approaching large load of moderate visual impairment, the preponderance of which is because of the fairly effortlessly treatable refractive error and cataract, would have to be taken into consideration.
Buch et al (2004) investigated the age specific prevalence and reasons of visual impairment and blindness in an adult Scandanavian population. Participants who had difficulty reading newspaper or were visually impaired and used eye medications were taken into account. Results revealed that the prevalence rates of visual impairment and blindness were 0.66 per cent and 0.20 per cent, and rose drastically with age. Study concluded that visual impairment and blindness are strongly connected with increasing age, and the causes were determined by age.

### 2.2 Visual Functioning Status in Visually Impaired Adults

Bikson and bikson (1981) analyzed and suggested that the problems of visually impaired people can be categorized on the basis of eight practical domains, amongst which an autonomous living skills factor measured for most response discrepancy. Main influences on outcomes in these domains were sharpness, sexual category, age, education and supposed impact of impairment on quality of life. The results revealed the importance of rehabilitation programs geared to activity domains rather than to vision parameters.

Lee et al (1997) examined the impact of blurred vision on functional status and well-being; the authors used a cross-sectional examination of Medical Outcomes Study (MOS) 2-year record data. 1642 subjects were taken into consideration. The unique effect of blurred vision on role boundaries due to physical health trouble was considerably greater than the effect of hypertension, record of myocardial infarction, type II diabetes mellitus, upset stomach, problem urinating, and headache.

Having blurred vision more than once or twice a month has a noticeable and important effect on functional status and well-being. This explains the impact of a common vision symptom on health status and well-being, as measured by the SF-36. In addition, contrast of the impact of a variety of symptoms and conditions provides significant and potentially clinically appropriate information.

West, Sheila et.al. (1997) investigated the effect of sight on serviceable status in a population based model of visually impaired adults. The occurrence of self reports of functional status and the relationship with visual loss were defined. All methods of functional status revealed a turn down with age; women and blacks
were more possible to report problems. Age, race, gender and visual impairment were all considerably connected to decrease in functional status.

Margaret et al (2001) compared autonomous effects of two levels of self reported hearing and vision impairment on consequent disability, bodily functioning, psychological health and societal functioning. Hearing and vision impairment was assessed in 1994. Study concluded that both the impairments have effect on consequent functioning. Vision impairment exerted a more wide ranging effect on functional status, ranging from bodily disability to communal functioning. The results also showed the significance of even mild hearing impairment.

Stelmack et al (2001) calculated the effect of low vision on self-determined quality of life and changes after low-vision interference. Low vision was found related with higher risk for despair and lower functional status. Deteriorated visual acuity, vision field loss, and infrequent blurred vision are also linked with decreased quality of life. Both the functional status and quality of life improved after low-vision provision delivery. Self-reported quality of life is a important outcome measure for low-vision treatment.

Sheila et al (2002) examined the relation between presentation on selected everyday jobs of life and impairment in vision acuity. 2520 older African American and whites were taken as sample. Performance was evaluated on mobility, every day activities with a tough visual module, and visually intensive tasks. Both visual acuity and contrast sensitivity loss were related with decreased function. The association of function to the ocular measures was mainly linear; therefore, recipient operating feature curves were not cooperative in identifying cut-off points for predicting impairments.

Klein et al (2003) linked the presentation based assessment of visual functioning with the incidence of falls, fractures, bodily outcomes and boundaries in an older population. Falls were more frequently reported for all individuals who had lesser visual function, even though not all relationships were important in persons less than 60 years of age. Age was linked with higher occurrence of almost every outcome and with time to walk a calculated course. Occurrence of not driving at
night, any fracture, and fright of falling were more widespread in women after adjusting for age. In persons 60 years of age and older, hip fractures after the age of 40 were considerably connected to all measures of visual function.

Globe et al (2004) assessed the relation between presenting binocular visual acuity (VA) and self-explained visual function as calculated by the 25-item National Eye Institute Visual Function Questionnaire (NEI-VFQ-25). Of the 5287 respondents with complete NEI-VFQ-25 data, 6.3 per cent and 4.2 per cent were found to be visually impaired. Relationships were alike in spite of the definition of visual impairment. In this population-based research of Latinos, the NEI-VFQ-25 was responsive to differences in VA. Self-reported ocular function is basically unaffected if the definition of visual impairment includes or excludes a VA of 20/40.

Lamourex (2004) determined the restriction of contribution in everyday activities of people with diabetic retinopathy using the effect of Vision Impairment questionnaire. 45 participants were recruited, with almost 70 per cent recording a VA worse than 20/60 or 6/18 in the better eye. The uppermost restriction was reported for the spare time and labor, Mobility, and customer and communal Interaction. A poorer VA in the better eye linked separately with increased limitation of participation was calculated by the Impact of Vision Impairment questionnaire scores. Low vision services were provided to improve outdoor mobility and print reading.

Lamoreux et al. (2008) found associations of visual impairment and the main causes of vision loss with falls in Asian population. Results revealed that out of the 3280 participants 3266 were given information about falls. Of these, 14.7 per cent reported having fallen. The results exposed that harsh visual impairment in the worse eye drastically increased the risk of falling after the adjustment for gender, age, and body mass index, history of angina, heart attack, stroke, hypertension, diabetes and self rated health. Conclusion from the population provided supplementary evidence in support of the association among severe visual impairment and falls in visually impaired adults.

Strong correlations between visual acuity and visual functioning, quality of life was found by Taylor et al (2008) Study concluded that cataract surgery in
Pakistan had not led to visual functioning and quality of life scores equivalent to those in unoperated individuals with the same level with the same levels of visual acuity.

McClure et al (2009) assessed the association between presenting binocular visual acuity (VA) and self-reported visual functioning as measured by 25-item National Eye Institute visual function questionnaire (NEI-VFQ-25) and determined if National Eye Institute visual functioning questionnaire (NEI VFQ 25) scores decrease with worsening visual acuity (VA) in Latinos and American Indians/Alaskan natives respectively.

Black, Wood and Kitchin (2011) examined the relationship among visual impairment and practical status in adults with glaucoma. This study involved older adults living in a community with open-angle glaucoma. Results showed that greater levels of visual impairment were considerably linked with lower levels of functional status among adults with glaucoma living in a community, autonomous of age and gender. Lower levels of ocular function was found connected with slower timed up and go presentation, weaker inferior limb strength, less self-reported physical activity and lower total functional status scores.

2.3 Quality of Life in Visually Impaired Adults

Scott et al (1999) have investigated the functional status and quality of life of patients at a low-vision clinic evaluated the effect of low-vision services. Low-vision patients scored lesser in bodily functioning and role limitations caused by physical and psychological health problems. Low-vision services were related with improvement in the subjective functional status of 150 patients and were rated “very useful” by 82 patients. The SF-36 scores did not change significantly after low-vision services.

Stelmack et al (2001) have investigated the impact of low vision on self-reported quality of life and changes after low-vision intervention. Low vision has been found associated with increased risk for depression and decreased functional status and quality of life. Deteriorated visual sharpness, sight field loss, and occasional blurred sight are also related with decreased quality of life. Improvements in functional status as well as in quality of life occur after low-vision service delivery.
Broman et al. (2002) described the relationship of visual acuity impairment and eye disease on vision related quality of life. Study concluded that Mexican-American persons aged 40 or more, monocular disability and better eye sharpness was associated with a decrease in most domain representing quality of life. The subjects with persisted refractive error, glaucoma, cataract, and diabetic retinopathy showed decrements in quality of life.

Gabriel et al (2002) determined the differences of the of vision targeted quality of life (QOL) under different degrees of visual impairment using the national eye institute visual function questionnaire (NEI-VFQ) in a German sample of 241 consecutive patients. Patients with severe visual impairment and partly patients with moderate visual impairment suffered the most from a decrease in vision targeted QOL.

Chia et al. (2003) examined if unilateral visual impairment has a measurable impact on health related quality of life as assessed by the generic, multidimensional 36 item short form (SF-36) health survey. Results showed that moderate to severe non-correctable unilateral impairment is associated with poorer SF-36 profile. Moderate to severe non-correctable unilateral visual impairment caused by eye disease such as cataract had a measurable impact on quality of life.

Chia et al. (2004) revealed the impact of visual impairment on health related quality of life in adult population and compared it with the effect of major therapeutic conditions. Out of 3154 participants with complete data, 172 had visual impairment due to refractive errors and 66 due to eye conditions. Progressively more severe non correctable visual impairment was linked with considerably poorer SF-36 scores in all but two dimensions. The effect of non correctable visual impairment was similar to that from major medicinal conditions and had a bigger effect on psychological than physical domains. No important differences in HRQOL were found between visual impairment cases caused by age-related maculopathy and cataract.

Tsai et al (2004) evaluated the effect of vision impairment on health related quality of life (HRQOL). The author administered the medical outcome survey short form SF-36 to the elderly in the urban Taiwanese community and assessed the visual
impairment status. Interviewers collected information on demographics, history and HRQOL.

Nirmalan et al (2005) determined the impact of vision impairment and eye diseases on vision-specific quality of life in a population of rural southern India. The burden of eye diseases was calculated in a population aged 40 years and older. After modification for demographic variables and eye disease, people with vision impairment or bilateral blindness based on presenting visual acuity had lesser scores across all domains of quality of life and vision function. Scores for subscales of quality-of-life and vision function domains were considerably lower among those with age-related cataract and glaucoma compared with persons without those eye diseases.

Misajon et al (2005) identified the substance for a vision and quality of life–related utility measure for the financial evaluation of eye care and rehabilitation programs. Focus cluster themes incorporated bodily well-being, societal well-being, autonomy, self-actualization, psychological well-being, and development. Badly executed items were eliminated on basic psychometric properties, including failure to discriminate. A pooled SEM analysis showed the model to have very good fit properties.

Langelaan et al (2007) described the generic HRQOL and health status of visually impaired patients and to evaluate the HRQOL of visually impaired patients with that of both the common population of the Netherlands and patients with other severe conditions. Visually impaired patients reported more problems on every dimension than the common Dutch population. Only stroke patients and patients with severe fatigue syndrome reported more problems on every facet of the EQ-5D than visually impaired patients.

Finger et al (2008) calculated the considerable impact on older adults’ independence and autonomy among patients with AMD. The National Eye Institute–Visual Function Questionnaire (NEI VFQ-25-item) was found to be the most often used and best validated psychometric tool, followed by the Visual Function
Multi-Informant Assessment

Questionnaire, and the Impact of Vision Impairment Profile. Most of the tools were recognized and have been validated for the use in AMD patients.

Polack et al (2008) evaluated a vision-related quality of life scale and explore the impact of cataract visual impairment on vision- and health-related QOL in people from Bangladesh. Worsening common performance, psychosocial and in general eyesight scores was found associated with increased visual loss. Cases were more probable to report trouble with each descriptive domain and had poorer self-rated health than controls with normal vision.

Taylor et al (2008) assessed visual functioning and quality of life in a sample of generally sighted, visually impaired and cataract operated persons in Pakistan. There were strong correlations among visual sharpness and VF/QOL. Amongst operated individuals, rural residents and illiteracy were associated with lower VF and QOL. In multivariable analysis people with bilateral lenses had similar VF scores to the people with no bilateral lenses.

Toit et al (2008) developed and determined the reliability and validity of a vision-specific quality-of-life instrument designed to measure the impact of distance and near vision impairment in adults living in Timor-Leste. People’s separation reliability was substantial, representing that the instrument can distinguish between groups with normal and impaired vision.

Wang et al (2008) interpreted the associations between societal networks and vision-specific health-related quality of life amongst Chinese adults. Objective visual utility was measured by ophthalmologists clinically in terms of distance visual acuity. Findings demonstrated that age-related vision loss is a lot associated with older adults' social networks. Multiple regression analyses showed that social networks are slightly connected to vision-specific HRQOL even after controlling for other variables, and that companionship network was a major predictor, autonomy of family network, of vision-specific HRQOL.

Langelaan et al (2009) studied the overall aim of rehabilitation for visually impaired adults are to improve the quality of life and societal participation. The
objectives of the study was to obtain the short-term and long-term goal of a complete rehabilitation program on quality of life for visually impaired adults, and predictive baseline factors accountable for differences in outcome between certain groups of patients. The change among succeeding measurements of the four dependent variables was measured, and the long term relationship between vision-related quality of life on the one hand and possible prediction factors on the other was calculated by means of random coefficient analyses. Reliance scale showed a significant improvement. For respondents who received rehabilitation, age appears to be an important prediction variable for all factors. The results indicated that only age was an interpreter for all domains of quality of life.

Nutheti et al (2009) examined the effect of vision impairment and eye diseases on quality of life (QOL) in an older population of Andhra Pradesh in India. The World Health Organization instrument was modified as a health-related quality of life (HRQOL) apparatus for administration to adults participating in the Andhra Pradesh Eye Disease Study. Subjects with glaucoma or corneal disease autonomous of visual acuity had lesser scores than respondents without those eye diseases. Respondents suffering from cataract or any retina disease had considerably lesser scores than those without cataract or retinal disease in the model without visual acuity but not when visual acuity was added to the model.

Rahi et al (2009) have described the existence of impaired vision and its relative burden, altogether with the occurrence of impaired vision related quality of life and examine relations with social outcomes in a existing population of working aged adults. Of the total population 1.3 per cent of those with visual loss with prohibited driving, a further 0.75 per cent visually impaired or rigorously visually impaired and 0.15 per cent blind have been found. Impairment of VRQOL is powerfully linked with impaired distance, near, and stereo sight, as well as with unfavourable occupational and other societal outcomes. Though impaired vision in working age adults is comparatively uncommon, it confers significant unpleasant consequences for the “health and wealth” of the public. This may be captured best by measurement of VRQOL in addition to objective visual function.
Caroline et al (2010) evaluated vision-related and health-related quality of life in first stroke patients with visual field defects (VFD) with respect to the amount of the lesion. VFD-patients were less impaired in SF-36 scores than common stroke patients. VFD-patients showed considerable reductions of VRQOL and HRQOL compared to fit normal’s, but improved HRQOL compared to stroke patients. VFD-patients had notably lower HRQOL than a common stroke population at six months post-stroke. The stroke-related subjective level of HRQOL impairment was found to be extensively exacerbated by VFD. While VRQOL was mainly prejudiced by visual acuity, psychological components of HRQOL were affected by VFD-type with larger VFD being associated with more distress.

Fintz et al (2011) demonstrated the benefits of a low-vision intervention upon the quality of life of visually disabled adults. The survey was proposed to patients who were taking a low-vision intervention at certain hospital centre over a period of 9 months. The low-vision intervention led to overall improvement. Some items involving visual function and psychological issues showed significant benefits: the patients reported a more optimistic score concerning their general vision, described better nearby activities, and a feeling of more independence.

Li y et al (2011) examined the association between age-related eye disease, visual impairment, and health-related quality of life. People with any eye disease were more likely than those without to report visual impairment as well as physical impairment and mental distress. The prevalence of vision impairment and physical impairment increased with increasing number of eye diseases after controlling for all other co-variables. There was no noteworthy lineal curve, however, in mental distress among people with one or more eye diseases.

Leung et al (2012) assessed the health related quality of life by medical outcomes with physical module summary and mental module summary scores. Demographics, medical background, psychological status, and quality of life were gathered from face-to-face interviews, using properly structured questionnaire. Better binocular visual sharpness and contrast sensitivity were related with higher physical components. Medical outcome was only related with visual sharpness and contrast sensitivity, but no relation was found after adjustment.
2.4 Depression among Visually Impaired Adults

Donohue et al (1995) assessed the effects of societal skills training in individuals afflicted from major despair and relentless macular degeneration. Self-reported violence, sadness, and contentment were continually recorded throughout baseline, cure, and proceedings phases. Results revealed increased improvement in targeted societal skills with SST in both hospital and home settings. Simultaneous with improved levels of social skill were spectacular decreases of depression to a nonclinical point. Enhanced skill levels and diminished Geriatric Depression Scale scores were sustained during the 7-month follow-up phase, apart from the 6 month appraisal after which booster treatment was made functional to restore maximum enhancement.

Hersen et al (1995) found that regardless of sex, kinds of impairment, beginning of impairment, there were important correlations between social support and depression in visually impaired adults. People with the higher severity of vision impairment reported higher emotional distress and decreased functional status and perceived quality of life.

Wahl et al (1998) examined the psychosocial effects of age-related ocular impairment in different ways: (a) evaluation of visually impaired and unimpaired adults, (b) evaluation of sight impaired and mobility-impaired adults, and (c) long-term adjustment across 5 years. When compared with the mobility impaired the sight impaired verified lower proficiency level but no disparity in emotional adjustment. The long-term modification of the visually impaired remained comparatively steady in the behavioural sphere; even though lower in comparison with the unimpaired elders. Emotional variation decreased over the 5-year longitudinal period in the visually impaired and the unimpaired group, but the reduction was usually advanced in the visually impaired group. Theoretical ideas from ecological gerontology as well as emotional flexibility are used to construe these results.

Rovner et al (1998) found how depression and impaired vision are co related to the impairment in older people. Demographics, everyday activities and customized centre for epidemiologic studies depression dimension were used to measure
depression. When depression was compared with intact vision, those with vision impairment were more expected to have 5 or more depressive signals and to be more functionally impaired. It is concluded that impaired vision and depression are both connected strongly with functional impairment in this commune population of adults.

Broody et al (2001) examined the occurrence of depressive impairments in adults with higher age-related macular degeneration (AMD) and the relationship between despair, visual acuteness, the numeral co morbid therapeutic situation, disability caused by sight loss. Of the total respondents, 32.5 per cent met the criteria for depressive disorder, double the rate experienced in earlier studies of elderly residing in a community. Depression, visual acuity aided in calculation of the level of sight-specific disability.

Stone et al (2001) viewed the relationship among depression and visual performance by investigating impending mediating and moderating factors. Earlier studies had recognized an association among decreased life satisfaction and depressive symptoms. Results of the study revealed that life satisfaction to some extent mediates the association between ocular functioning and depression. In addition, a noteworthy coping by visual functioning interaction was exposed, enlightening that amongst this sample, visual impairment is linked with superior levels of depression amongst persons with low coping techniques; though, little effect was established for persons with elevated coping techniques. Results revealed the importance of early vetting of contentment with life and coping between older persons experiencing age associated sight impairment.

Tsai et al (2003) investigated the association between impaired vision and depression among the elderly in an urban community. Impaired vision was considerably associated with depression in multi variable analysis. After controlling for all other co variables, impaired sight was found to be a positive predictor. Visual impairment was found linked with feelings of unimportance and despair in the communal population of adults. However, elderly people often neglect disturbances or effect related with deteriorating sight. There is a need for communal education regarding the need for adult individuals to pay active attention to visual care in their later life.
Casten et al (2004) studied the age related macular degeneration and depression. The findings of the study revealed that the occurrence of depression among patients with AMD is comparatively high and that depression is a main cause of disability amongst patients with AMD, even when severity of vision loss is measured. Interventions to improve the emotional distress connected with vision loss were also discussed. Several studies suggested that AMD is a risk issue for depression and this has grave consequences for the quality of life amongst patients with AMD.

Tolman et al (2004) analyzed psychosocial variation to vision loss and its association to symptoms of despair in officially blind adults with age-related macular degeneration. A main components examination of the alteration to Vision Loss Scale defined three different adaptation factors, that is, recognition of sight loss, pessimistic impact on relations, and attitudes toward reimbursement. Out of these, recognition of vision loss and attitudes toward reimbursement were optimistically related with the affect on depression. Adding up to this, use of outpatient rehabilitative services was less recurrent in those exposing higher depressive symptoms.

Horowitz et al (2005) studied the possible risk factors of major and sub threshold depression among elderly persons looking for rehabilitation for age related visual impairment. Results revealed poorer self related health, lower perceived adequacy of the odds of both a sub threshold and chief depression verses no depression, but higher functional disability and experiencing a pessimistic life event were noteworthy only for a sub threshold depression.

Evans and associates (2007) investigated the association between despair and worry and visually impaired people in Britain. Results revealed that visually impaired individuals had a superior occurrence of depression in comparison with the people with better vision. There was a small proof for any relation among visual impairment and anxiety. Study recommended that it is believable that populace with visual impairment are more probable to face problems with performance, which in return causes depression. Hayman et al (2007) established the occurrence of depression in a section of adults with impaired vision and examine the associations
among bodily and visual disability and depression. About 29.4 per cent of respondents were identified as potentially miserable. Bodily function, activity and ability, ocular function, nervousness, and self-assessed physiological and psychological health were considerably worse for those with depressive symptoms. Depression was not linked with age, sexual category, livelihood situation, civilization, or number of recommendation or antidepressant medications taken.

Chou (2008) examined the role of dual sensory loss in the onset and persistence of depression in older persons living in U.K. Socio-economic variables, bodily indicators, and communal support were assessed. The study calculated the odds ratio for any association between sensory loss and depression. Vision loss was a reliable predictor of both onset and persistence of depression even after a wide range of co variables had been adjusted, but the relation between dual sensory loss and depression gone once health indicators were guarded for.

Fenwick et. al. (2009) determined eye healthcare professional’s views of depression in patients with sight impairment and recognize present management practices and hindrances to effective care. Result exposed different barriers to sufficient management of depression involving confusion on roles and tasks and also recognized that there is substantial scope and passion for improving depression management in tertiary care services.

Gwyn et al (2009) examined the edge among visual impairment and depressive signals on physical condition, self-care, and societal contribution amongst adults. The authors compared visually impaired adults with and without signs of depression with a indication group of adults with none of the condition for result measures: physical condition, health behaviours, and problems with self-care and societal contribution. Adults with visual impairment and severe depressive signs were more expected than adults with neither situation to smoke, be bodily stationary, have deprived health, and have problems with self-care and communal contribution. Visually impaired adults with the symptoms of despair are susceptible to health decline and added disablement without appropriate interventions that target smoking termination, fit eating, and improved physical activity.
Holbrook et al. (2009) studied the relationship between impaired vision and depression among the elderly in the urban community. Study exposed that among the participants, the prevalence of impaired vision was 7.2 per cent and the percentage with depression was 8.8 per cent. Visual impairment was found connected with the feeling of irrelevance and desperation in this community population of the adults.

Jones et al (2009) studied the edge of visual impairment and depressive symptoms on health conditions, self care and communal participation amongst adults. Results revealed that adults with ocular impairment and severe depressive symptoms were further likely than the adults with neither condition to smoke, be overweight, be bodily motionless, have fair-poor health, and have difficulties with self care and social participation. The occurrence of depression in individual with a vision disability is elevated but screening for depression and referral for cure is not yet an essential part of visual rehabilitation service provision.

Noran et al (2009) evaluated the association among severity of visual impairment and depression amongst elderly Malaysians going to an eye clinic. Exposure dimension was based on ophthalmologic examinations by an ophthalmologist. Data on conclusion were calculated using the Geriatric Depression Scale. After adjusting for significant confounders, harshness of visual impairment both having low vision or blind were autonomous risk factors of depression. The probability of developing depression among elderly with small vision was double than those with normal vision, and adults who were blind had approximately 5 times the chances to be depressed in comparison with those having normal vision. Findings suggested a positive association among the severity of sight impairment and depression among elderly Malaysians.

Rees et.al. (2010) studied the exceptional involvement of vision specific sorrow in determining depressive symptoms in individuals with sight impairment. Results revealed that 21 out of 143 participants reported therapeutic noteworthy depressive symptoms and an adding up to this 27.3 per cent had mild depressive symptoms. An evaluation of vision specific suffering may be a useful tool recognized for those who are at verge of depression.
Grant et al (2011) investigated the association among depression and quantitative method of sight functions. Results showed a considerable relationship between despair levels and reading acuteness differentiation scores and changes in variation to vision loss levels, suggestive of those who reported higher depressive symptoms and did not react as well functionally to reading rehabilitation but reported marked enhancement in levels of adaptation to vision loss subsequent to rehabilitation.

Schilling et al (2012) functionalized the life span speculation to study transformation in sight-specific control strategies in visually impaired older population, which depends on the performance in influential activities of daily life and depressed mood. A recently recognized vision-specific management scale to measure given major control, selective resultant control, mandatory major control and modified secondary control was used. CPC gradually increased as IADL capability decreased up to a turning level, at which CPC was based, while all other strategies declined linearly with the decrease in activities of daily life.

Kleinshmidt et al (2013) compared on despair, nervousness, life contentment, and a variety of magnitude of control visually impaired adult, minimally and harshly. The association of control to despair, nervousness, and life contentment among the severely impaired was then evaluated. The severely impaired were found to be considerably more miserable and scored lesser in perceptions of administering than the minimally impaired, but significant differences were not found in nervousness and life pleasure. Amongst the severely impaired, apparent control and the inner domain of locus of control were powerfully connected to levels of despair, nervousness, and life contentment.

Margrain et al (2013) assessed the consequences of depression treatments on individuals with a visual impairment and co morbid despair. Depression was widespread in people with disabling vision impairment. This investigative research established despair screening and recommendation for treatment in visual treatment clinics in the UK.
Renaud et al (2013) have investigated depression or quality of life in adults with visual impairment. A research was done using different electronic databases for studies addressing the relationship between QOL and despair in elders with visual impairment. Comparison of QOL scores between participants with and without depression and relations between depression and QOL were made. The study revealed that better QOL was moderately to strongly correlate with less severe depressive symptoms.

Taking into consideration the high prevalence rate of depression in this community and its disabling effects on QOL, interventions to avoid and cure depression are essential. More hard work is required in medical settings to train health care practitioners to identify depressed elders with visual impairment and provide appropriate treatment.

### 2.5 Loneliness among Visually Impaired Adults

Jessica M. McIlvane and Joann P. Reinhardt (2001) studied the interactive effect of support from family and friends in visually impaired elders. Women with high social support from both family and friends were found to have better mental well being. Two univariate main effects showed that participants with high qualitative friend support and high qualitative family support had superior adaptation to sight loss. Findings showed the difficulty of measuring and considerate relationships among communal support, well being and field specific adaptation to continual impairment.

Brinkman, Stevens and Schouten (2005) investigated the prevalence of loneliness among visually impaired elderly and its relations with adaptation to vision loss, perceived social support and depression. The results regarding the high prevalence of loneliness among visually impaired elderly interventions aimed at reducing this loneliness seems to be highly indicated.

Bruce et al (2007) examined the blind and partially sighted people’s perceptions of addition by family and friends in a major survey. Findings demonstrated a complicated picture, exposing high levels of severe deficiency of communal support in comparison to the normal population especially amongst men,
and lack of social support articulated extensively by those who were very rare or never visited by family or neighbors. Levels of reported social support were not associated to the level of severity of vision loss, age and fiscal inactive respondents of working age showed lower levels of social support than those who were working.

Manna et al (2011) defined the level of loneliness amongst the visually impaired elderly and made an association with a coordinated reference group of the usually sighted individual. The study also assessed self management skills as determinants of loneliness amongst the visually impaired. Results revealed that the occurrence of loneliness in the visually impaired elderly was higher in comparison with the reference group. Seriousness and duration of visual impairment had no impact on loneliness.

2.6. Indian Perspective for the Welfare of the Disabled:

The constitution of India asserts the equality, justice, freedom and dignity of every individual and unreservedly mandates an inclusive society for all including people with disabilities (PWDs). In the recent few years, there have been broad and positive changes in the observation of the society towards PWDs. It has been felt that a majority of PWDs can live a better quality of life if they get equal opportunities and effectual access to treatment measures.

Concession offered by the government of India to visually impaired persons: According to guiding principles by the ministry of Social Justice and Empowerment, GOI, the minimum degree of impairment should be 40 per cent for an individual to be entitled for any concessions or reimbursement. State government also extends different benefits in addition to those initiated by GOI.

Travel: The visually impaired person travelling on his own or with an escort on production of a certificate from a government doctor or a registered medicinal practitioner is eligible to get an allowance to the tune of 75 per cent if travelling in first, second or sleeper class on Indian railways. The Indian Airlines Corporation permits 50 per cent concessional fare to severely visually impaired persons on solitary journey or single fare round trip journey on all domestic flights.
Postage: There are no postal charges applied on transmission of blind literature packets (papers, books printed in Braille, disc films, sound records, and wires for the use of the visually impaired and when sent by an officially recognized institution for the visually impaired) to internal/foreign destination if sent by surface route weighing up to 7 kg only.

Telecommunication: A severely visually impaired person is permitted for rental rebate of 50% on phone facility. An educated jobless disabled person with minimum 8th or middle schools pass for countryside areas and matriculation or high school for urban areas is suitable for allowance of STD/PCO on priority basis.

Income tax concessions: Section 80 DD provides for a subtraction in respect of the expenses incurred by a person or Hindu Undivided Family (HUF) resident in India on the medical treatment, training and rehabilitation of visually disabled dependants.

Employment: Three per cent of vacancies in government service in Grade C and D post are booked for people with disabilities, 1 per cent each for persons suffering from vision impairment, hearing impairment and cerebral palsy. The GOI has set up 47 unusual employment exchanges in different states for the visually impaired. As per the decision of the GOI, it has been informed that canning of chairs in government offices should be done by a visually disabled person as far as possible when the volume of job needs a full time chair caner. NIVH also gives training to the visually impaired of chair canning.

2.7. New initiative on Low Vision Services in 11th and 12th Five-Year Plan under National Program for Control of Blindness (NPCB):

2.7.1. New Initiatives on Low Vision in 11th Five Year Plan

Reinforcing Low Vision service is one of the push areas under 11th five-year plan in NPCB in addition to progressing activities. Regional Institutes of Ophthalmology (RIO) and government medical colleges are developing as Low Vision units in a phased manner. Monetary assistance for Low Vision devices like elevated plus glasses, handy magnifiers, stand magnifiers, telescope, video magnifiers
[closed circuit television], absorptive lenses; field expanding devices are being
provided by NPCB especially for underprivileged patients. Ophthalmic surgeons
working in public area generally provides seven days direction training on Low
Vision services and economical support is given by the GOI. Improving quality of
life of people tormented from vision impairment includes endurance, persistence,
multi-disciplinary approach with effective coordination among stakeholders involving
medical, social/psychological and educational professional. The distance between
need and accessibility of Low Vision services is known worldwide, however, a
commencement has been made by the GOI to tackle this issue and fruitful results
will apparently comes in time.

2.7.2 New Initiatives on Low Vision in 12th Five Year Plan

NPCB has proposed that needy person suffering from vision impairment be
provided free glasses to enable them to perform near work like reading printed
material, cooking and other essential daily routine activities. It has also been
proposed to introduce a multipurpose mobile ophthalmic unit in all districts for entire
country to reach remote areas not covered by existing facilities and to be involved in
all the following activities:

- Screening eye camp
- School eye screening camp
- Transporting patients for treatment
- Diagnosis of the disease like diabetes retinopathy, glaucoma etc.
- Monitoring of NPCB activities by district program officers
- Many of the eye banks opened earlier have become defunct due to lack of
  initiative. A new list of all existing eye banks and those are active is being
  prepared so as to know the exact quantum of work performed by existing eye
  banks and to urge them to perform better in the forthcoming year.