HISTORICAL RESUME
A disaster in human life of such magnitude as a sudden transection or severe injury to the spinal cord, which throws the body completely out of gear, inevitably disrupts the psycho-physical existence of the individual resulting in pronounced effects on the paraplegic individual's mind. This complex and challenging problem has been the subject of a number of studies.

Scanning of available research literature revealed a number of research studies on various aspects of the problem. In the following section an attempt would be made to review the studies dealing with the psychological aspects of the problem. The studies pertain to a large variety of variables. Therefore, these are planned on the basis of number of variables under investigation as well as chronologically as far as possible. First of all studies in which only one variable was undertaken, would be described followed by two or multivariate studies. A mention of the studies pertaining to sociodemographical correlates of the problem would also be presented. Lastly an overview of the literature would be presented.

In the past most of the authors viewed depression as an inevitable consequence of spinal cord injury and other chronic illnesses (Muller (1962); Thompson (1972); Hohman (1975)) and many others like Wittower, Gingras, Meglar (1954); Stewart (1977); Brackman and Shephard (1980) presumed depression to be a normal response to any illness. Tiller (1969) categorically stated that if depression is not seen in any SCI patient, it is a
cause for concern.

Goldiamond (1973) put forward the hypothesis that reaction of a person to any injury is always supposed to cause and develop depression in any injured person. He further elaborated that apathy, depression or aggression are inevitable responses to any injury.

Similar findings in various forms are mentioned in literature by Buke and Murray (1975); Krueger (1984). Krueger (1984) further said that the absence of depression in an injured person indicates that the reality of loss has not been emotionally recognised by the sufferer. Thus, he viewed depression as a normal response to any trauma.

Although the literature is flooded with the supporters of the hypothesis that depression is an essential part of response to injury but most of the literature is based on subjective findings and very little evidence is provided to support their assumptions. In last decade the research has been conducted, which evaluated the psychological variables in SCI based on modern tools of research and provided empirical evidences to support the outcome. In the past, only few authors put forward the contention that depression was not an inevitable consequence of SCI.

Judd, Burrows, Brown (1986) in a detailed empirical study reported that only few patients of SCI met the DSM III criteria of depression and were found to be clinically depressed. Most of the others were either not depressed or only show mild maladaptive reaction to injury. Somasundaram, Bala Krishnan,
Ravindran (1992) in a Madras based study further reported that only 11% patients suffered from marked depression and 70% from mild depression. Trieschmann (1988) stated that the patients who were less depressed, tend to function at best during rehabilitation and after discharge. Ernest (1987) and Cushman (1990) explained that low rate of depression in recent studies was because of difference which lies in staff rating and patient's rating of depressed mood Cushman and Dizkers (1990) further pointed out that the mental health professionals and physicians reported lowest rate of depression in comparison to occupational physiotherapists and nurses who reported higher rate of depression in SCI. Trieschmann (1992) reported that depression was more in acute phase of treatment of SCI which tended to resolve within few weeks.

Along with other psychological variables like depression and anxiety, adjustment has also been studied. Following SCI, adjustment problems are seen both in injured person and the family in the form of unwillingness to work, avoidance of social contacts and loss of previously acquired ambulation skills. Adjustment to early period of injury is adaptive and protective and may become maladaptive later.

Adjustment problems in SCI patients are natural to occur as a result of stress of injury and it may be influenced adversely by old-age, low socio-economic status, low education status and in male patients with complete cord lesion.

The importance of adjustment lies in the fact that it is a very important emotion which is key to rehabilitation of an
injured (Tucker (1980)). Nordholm and Westbrook (1986) reported that the SCI persons who assumed responsibility for their injury made better adjustment to their disability following discharge. In past, the adjustment was considered to be problem only for patient but recent research evidences show that adjustment affects family and society too.

Donovan (1984); Butt (1989) and Richmond (1990) reported that spinal injury does not occur only to the persons but it occurs to family also. Oliver (1988) conceptualised that process of social adjustment arises both from interaction between injured and his physical and social environment which is disturbed by the disability, reduced income and changed social circumstances.

Based on his research Judd et. al. (1988) proposed that the objective of rehabilitation of SCI persons should be a team effort and must emphasise on facilitation of family adaptation to changed circumstances. It has been observed that family support is an important factor in development of adjustment to the injured. Oliver (1986) concluded that adjustment is more difficult problem for family members than the injured himself.

Judd et. al. (1988) further reported that those families of injured patients who adapted well to the needs of an injured person and closely integrated with patients after injury exhibited low adjustment problems both for family and patient. He further supported this finding with low rate of divorce in recent studies in case of an injured where wives/ spouse were showing major adaptive changes to the needs of the patient.

Although anxiety was another variable which has been
frequently studied besides depression and adjustment. As most of the earlier studies combined the investigations on anxiety with other psychological variables such as depression, adjustment etc. Somasundaram et al. (1992) in a such study reported that 26% patients had severe anxiety.

On the Taylor manifest anxiety scale in an other comprehensive longitudinal study Hancock, Craig, Dickson (1993) reported that anxiety was prevalent in 25% patients following SCI as compared to 5% of controls.

Tunks (1986) in a review study reported that no typical personality type of SCI before injury influenced upon the psychological out come after injury. But in recent study Judd et al. (1986) reported that premorbid personality type may effect the post injury psychological outcome. The SCI patients with high-ego strength, ability to delay gratification reported good adjustment after injury. Similarly Elliot (1989) found that SCI patients who believed that they are primarily responsible for their health, did show less depression. In contrast patients with poor ambitions, little personal efforts or patients with psychopathic traits and poor personal control often cope with injury poorly (Thorn et al. (1964); Rotter (1966); Muller and Thompson (1950).

Research on anxiety, depression and adjustment in SCI also focuses on the socio-demographic factors affecting the SCI patients. Till recently, most of the studies ignored the importance of role of socio-demographic variables in development of various psychological problems in SCI. Most of these studies
lacked empirical research and rarely had a control or comparable group. These studies only hypothesised the role of variables like age, sex, education and economic status etc. in development of psychological problems in SCI.

Woodrich (1983) reported that female patients were found to be more accepting to their disability in comparison to male and did show good adjustment after injury.

Judd et al. (1986) in a detailed study concluded that younger patients specially less than 40 years of age were found to adjust better to SCI as compared to elderly patients. They further reported that good pre-injury educational status, good income and occupational status and better family support were the factors which predicted better psychological outcome after injury was present approximately in 50% patients and this was more in patients who were elderly and unmarried.

Besides all the above mentioned variables there are yet other variables related to injury itself, such as mode of injury, duration etc. which may be important for the outcome or prognosis of the injury. One of such factors is extent of injury to spinal cord and in contrast to the expectations (Cushman and Hassett, 1992) reported that the level of extent of injury to cord did not effect the psychological outcome of any injured person.

Horn (1989); Trieschmann (1992); reported that the initial hospitalization period during acute phase of injury is a critical period and development of psychological problems like depression and anxiety in this period are predictive of poor long
term adjustment. Trieschmann further reported that this phase in most cases tends to resolve within weeks or after discharge from hospital but there are other findings who reported contrary results.

Hancock et al. (1993) stated that duration of injury has no effect on development of depression and anxiety across time in SCI patients. They further reported that adjustment process goes along throughout the period of injury and after. They further stated that the difficulties encountered during initial hospitalization like lack of privacy etc. are replaced by other problems like physical barriers to transport, avoidance of social gathering etc. after discharge. Hancock and others further concluded that human spirit is resilient and many SCI victims are able to quickly come to terms with loss even if mild depression and anxiety are present.

Conclusion

Review of literature, revealed that very limited work has been conducted in this area and it is conspicuously very limited in India. This fact has also been pointed out in a very comprehensive work by Somasundaram et al. (1992) from Madras. The area seems to be lacking in empirical and conclusive evidences. The importance of studies in this field has been pointed out in the previous chapter. It requires little justification. Since the incidence of SCI appears to be on the increase due to increased mobility of an average person. There are number of factors which need attention from the researchers. Therefore multivariate, well controlled and methodologically rigorous research studies are imminent in this area.