

Understanding Coping with Distress due to Physical Disability

Psychology and Developing Societies
23(2) 177–209

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SAGE Publications
Los Angeles, London,
New Delhi, Singapore,
Washington DC
DOI: 10.1177/097133361102300203
<http://pds.sagepub.com>



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Abstract

This article presents findings of two studies that investigated coping with physical disability within the multivariate transactional model of stress. In the first study, 30 persons with locomotor disability were interviewed to explore the nature of stressors and coping strategies. In the second study, five scales were administered on a sample of 120 persons with locomotor disability to investigate the role of personal and situational variables in determining the extent of perceived distress and its relationship with coping. The manner in which *anāsakti* and positive life orientation moderated the relationship between perceived distress and coping was also investigated. The findings revealed that the major stressors which led to distress were ego-related stressors, inability to fulfil traditional gender roles, problems in interpersonal relationships with family and others, physical barriers and deformed body image. Education was found to be the strongest predictor of perceived distress and problem-focused coping was significantly related to lower levels of distress. Moderation analyses showed that with stronger belief in the philosophy of *anāsakti* and higher positive life orientation, lower levels of distress were strongly related to problem focused coping. The implications of these findings for psycho-social rehabilitation of persons with physical disability are discussed.

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Keywords

Physical disability, stress, distress, coping, *Anāsakti*, positive life orientation

...Like the heroes who never accept defeat, I have always believed in asking—‘What next?’, rather than, ‘Why me?’ If Helen Keller could overcome her handicap, so can I. The seed of achievement lies in the human mind. When this realisation comes, there is no looking back. I decided that my handicap was not going to stop me from dancing...

—Sudha Chandran¹
Dancer and Actress

A classic case of inner resolve, Sudha Chandran overcame her disability with the help of a prosthetic limb to become India’s highly acclaimed dancer and actress. She is one who took her disability as a challenge, worked through her state of disablement before it could become a handicap. There are others like her who have responded to their disability with courage and have moved ahead. Although such select group of persons are indeed source of inspiration for many, yet it is an unfortunate reality that majority of persons with disability find it difficult to overcome problems due to disability and therefore face innumerable barriers in achieving their life goals.

The problem of disability is widespread in India. In view of the fact that disability affects individual at multiple levels (Noonan et al., 2004), people with disability as compared to those without disability are often exposed to a wide range of stressors (Bramston and Fogerty, 2000). These stressors are highly complex and multifaceted and have significant implications for health, well-being, quality of life and overall adjustment with disability (Janssen, Schuengel and Stolk, 2002). Despite the apparent importance of understanding factors that contribute to stress in their daily lives, the nature of stressors encountered by persons with disability is not well understood.

It was the multivariate transactional model of stress (Lazarus, 2000; Lazarus and Folkman, 1984) which provided the necessary theoretical framework for the two studies reported in the article. Since this model considers distress experience as an outcome of a complex relationship between personal and situational variables, it seemed possible to conceptualise the state of physical disability as a ‘potential stressor’ and understand

how person related variables such as age, gender, education, socio-economic status, age of disability onset and health along with some situational variables, such as societal attitudes towards disability and restriction due to physical disability shape distress experience and coping. In particular, the first study explored the nature of stressors which persons with physical disability encounter and their efforts at coping with those stressors. The second study examined the relative significance of personal and situational variables in determining the perceived distress due to physical disability, relationship between distress and coping and the manner in which psychological resources like positive life orientation and *anāsakti* helped in dealing with distress.

The understanding of disability today is radically different from what existed more than 20 years ago. In contrast to the traditional medical models of disability which were oriented towards impairment, deficits and cure, the emphasis now is on conceptualising disability as a social issue. The recent model of disability, i.e., ICIDH-2 (International Classification of Impairment, Disability and Handicap-2) considers disability as an interactive and evolutionary process (WHO, 2001), attempts to integrate its social and medical aspects (Barnes, 2007) in order to provide a multi-perspective approach to disability. In this model disability is viewed as activity limitation which is deemed to be an outcome of an interaction between health conditions (disease, disorder and injuries), some contextual factors that include external environmental factors (for example, social attitudes, architectural characteristics, and social structures, etc.) and personal factors (such as gender, age and coping styles). The environmental and personal factors can affect not only experience of disability but its outcomes as well. Therefore, Pledger (2003) stressed the need to adopt a person-environment approach to understanding disability and claimed it to be integrative and holistic in nature. Disability impacts on people in a variety of ways. Whatever the nature of the disability, it gets experienced in a way that is unique to the individual concerned. Some may tackle their disability as a challenge to be mastered while others may feel frustrated by the limitations it imposes. Due to this diversity of stressful situations associated with different disabilities and individual's divergent life situations, the literature on coping with disability has become voluminous.

As stated earlier, the most influential and widely used theory which provides an integrative person–environment approach to investigate stress related issues is transactional theory of stress (Lazarus, 2000; Lazarus and Folkman, 1984). Its dynamic framework compliments the field of disability studies also, because it suggests a wide variety of coping resources and considers cognitive appraisal as a core concept. This theory suggests that while examining stressful situations, it is not enough to focus solely on what resources an individual brings to bear upon them, but it is equally important to examine an individual’s interpretation of those events. This theory provides a comprehensive framework for understanding stress and coping processes in the case of persons with disability too, because within this theoretical framework, person–environment interactions can be examined and those variables can be identified which influence stress-appraisals and coping with disability. To understand how the disability can be placed within this framework, a schematic model for understanding the process of coping with distress due to physical disability (Figure 1) was developed.

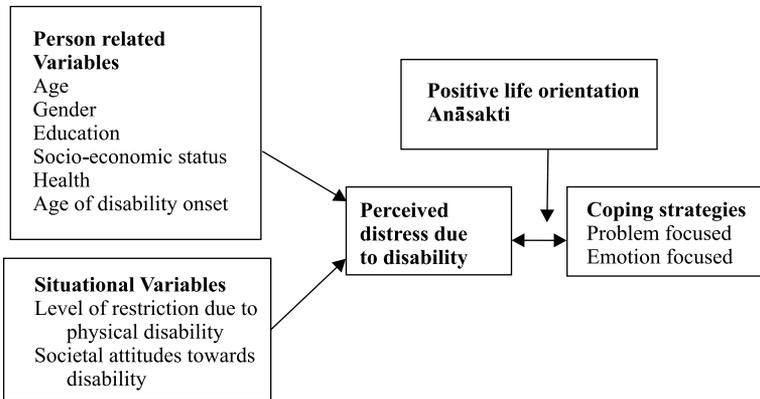


Figure 1. Schematic Model of Coping with Distress due to Physical Disability

The above schematic model depicts how a person with physical disability is likely to appraise his/her distress and formulate coping strategies. It suggests that perceived distress due to physical disability is predicted

by a set of person-related variables such as age, gender, education, socio-economic status, age of disability onset and health status along with situational factors like level of physical restriction due to physical disability and societal attitudes towards disability. Perceived distress due to disability might lead to different coping strategies. Earlier researchers (Lazarus, 2000; Livneh and Wilson, 2003) have identified two basic coping strategies; problem focused and emotion focused. Once the situation is perceived as threat, the secondary appraisal gets initiated to evaluate the situation and determine which coping options are available. Here it is assumed that psychological resources (such as positive life orientation and *anāsakti*) will moderate the relationship between perceived distress and coping. It is expected that the understanding of these relationships would help in identifying the process through which the persons with physical disability circumvent, avoid and surmount the innumerable obstacles in the course of their daily lives.

Distress Due to Physical Disability

The most widely studied outcome of the stress is *emotional distress*, sometimes referred to as 'nonspecific psychological distress' (Aneshensel, 1992) that results from an overload of stressful events. It has been shown that persons with locomotor disability are at a higher risk of psychological distress than those with other disabilities (Bramston and Mioche, 2001). Stressors related to physical disability were found to be chronic in nature which gets further intensified by factors specific to one's disability (Groomes and Leahy, 2002). Age, gender, education and socio-economic status influence the distress experience among persons with disability. A significant gender difference in the level of distress experienced by persons with disability has been reported (Hughes et al., 2001; Nosek and Hughes, 2003). Compared to men, women with disability report higher level of distress (Nosek et al., 2006) as a result of being both female and having a disability. Similarly, education and income were also found to be negatively correlated with symptoms of distress among persons with chronic illness (Ai et al., 2002; Banthia et al., 2007). Patti et al. (2007) found the educational level to be a significant predictor of health related quality of life. Along with these demographic variables, age of disability

onset also shapes one's experience of disablement. Li and Moore (1998) reported that participants with congenital disabilities showed lower level of distress and adjusted better to their disability than did the participants who acquired disability later in life.

Another important factor that contributes to distress among persons with disability is health status. Distress may have a more severe impact on persons with disabilities who generally have a more vulnerable health status and fewer resources to buffer the effects of distress (Rintala, Hart and Huhner, 1996). DeGraff (2008) found that poor health is one of the major distress-inducing variables among persons with disabilities. Health status of persons with disability has been studied as antecedent to distress (DeGraff, 2008; Whiteneck et.al., 2004) as well as an outcome of coping with distress (Livneh and Wilson, 2003). In addition to these, situational variables like physical restrictions due to disability and societal attitude towards disability also influence the distress experience in a variety of ways. Physical restriction due to disability is an inevitable consequence of the disability that induces distress that gets further intensified because of architectural barriers. Locomotor disability induces higher level of physical restriction as compared to other disabilities and it is linked with feeling of inadequacy, loss of control and helplessness (Bramston and Mioche, 2001). Similarly, negative attitudes of others also lead to distress experience. Since physical disablement is a state with which most people are not intimately affected, it takes on the characteristics of unfamiliarity and ambiguity in the minds of many. Non-disabled population often report discomfort while interacting with the persons with disability (Martz and Livneh, 2007). It has been found that within the family, the family members differentiated their own disabled member from the non-disabled in terms of feelings of distress and unhappiness and surprisingly, believed that these members could do nothing to earn their livelihood (Dalal and Pande, 1999). It seems possible that these attitudes gradually get integrated in the self concept and lead to distress. Therefore, combining the recent ICIDH-2 model of disability and transactional theory of stress, it can be stated that neither the individual characteristics nor the social and physical environment, but an interaction of individual's condition and multiple contextual variables shape the experience of disablement.

Coping with Distress Due to Physical Disability

The transactional theory of stress suggests that the stress experience is mediated by two other processes; cognitive appraisal and coping (Lazarus and Folkman, 1984). Cognitive appraisal is an evaluative process that includes a person's subjective interpretation of the event and an assessment of the appropriateness of various coping strategies. Coping with physical disability implies a prolonged period of cognitive and behavioural efforts at appraising the causes, meanings and consequences of disability and evolving protective mechanisms to combat its debilitating impact. This involves judgements and decisions concerning a wide variety of coping options. Traditionally, researches on coping have distinguished between problem-focused and emotional-focused coping (Lazarus and Folkman, 1984). Problem-focused coping is seen as consisting of efforts aimed at altering or managing the source of distress and emotion-focused coping at regulating emotional responses elicited by the situation (Lazarus, 2000). Previous researches have demonstrated that problem-focused coping is positively correlated with healthy adjustment (Lazarus 2000; Livneh and Wilson, 2003) and emotion-focused coping such as avoidance, venting of emotions and mental disengagement are related to increased depression and psychological distress in chronically ill samples (Pakenham, 1999). Selection of these coping strategies depends on individuals' appraisal of the situation and his/her own coping resources.

Positive Life Orientation and *Anāsakti* as Moderators

The transactional theory is best suited to describe the process of coping with distress due to disability because it highlights the central role of individual's appraisal in the process. In the state of physical disability, when the consequences are irreversible and any strategies of control and predictions do not work, individual may try to understand why disability occurred and how it is affecting his/her life. Initial coping with physical disability may take form of an active cognitive coping consisting

of reappraisals. Psychological adjustment to physical disability is better reached if there are positive reappraisals and attempts to focus on the brighter side of the situation. In a study, positive life orientation was found to be significantly correlated with positive affect and patient's expectations about his recovery from myocardial infraction (Agarwal et al., 1995). It is operationally defined as one's ability to emphasise the positive aspects of crisis, make positive comparisons and maintain a positive attitude towards life in general. Substantial amount of work has been done in the area of positive affect and coping with stressors, and it has been consistently reported that positive affect is associated with effective coping with chronic illnesses (Maruta et.al, 2000; Taylor et al. 2000). Positive life orientation may also result in acceptance of disability because it may help an individual de-emphasise those aspects of physical ability and appearance that are part of a disabling condition and emphasise one's own assets and abilities. Thus, positive life orientation can be seen as a potential psychological resource which can moderate the relationship between distress and coping.

Besides positive life orientation, another philosophy of life variable which can act as a moderator of the relationship between distress and coping is *anāsakti*. A number of studies have shown that *anāsakti* moderates stress-strain relationship and promotes well-being (Banth and Talwar, 2010; Bhushan and Jha, 2005; Pande, 1990; Pande and Naidu, 1992). *Anāsakti* is a Sanskrit term that designates a cluster of traits like non-attachment, equipoise, selfless duty orientation and effort in the absence of excessive concern for the outcomes. The *Bhagavad Gita*, a Hindu religious scripture, considers *anāsakti* as an end state and also as a means to achieve the end state of self-realisation through desireless action (called *nishkām karma*). It is an intense, though disinterested, action performed without passion and without concerns for success and failure. The principle of *anāsakti* involves accepting pleasures and suffering with equanimity. It means not being too involved in objects of pleasure and not being too concerned about avoidance of suffering. Studies carried out by Pande and Naidu (1986) can be taken as the starting point of a direct empirical validation of the construct of *anāsakti*. In these studies (Naidu and Pande, 1990; Pande, 1990; Pande and Naidu, 1992) *anāsakti* was found to be a moderator of stress-strain relationship. Interestingly these studies showed that high and low *anāsakti* groups encountered equal number of life event stressors but differed significantly in terms of

the manner in which they appraised their severity. Those high on *anāsakti* perceived lesser distress than those low on it and exhibited fewer symptoms of strain. *Anāsakti* also led to emotional stability, a quality highly valued in modern mental health science. Since higher *anāsakti* is related to lower levels of body-identification, it was expected that *anāsakti* will influence the choice of coping strategies in the face of physical disability as well.

To summarise, much of the existing literature treats disability as a stressor that varies in its effects depending on a person's life circumstances, broader social influences and the nature of one's approaches to coping. For example, proactively taking action and using positive coping strategies (e.g., positive thinking) have been identified as effective methods for promoting health and reducing stress that individuals associate with their disability (Noonan et al., 2004). Also, there is some literature that portrays disability as a positive, life-defining opportunity for personal growth, spiritual awareness and self-discovery of inner strength and resilience (Dunn, 2000). The contention that most persons with disabilities have significant strengths and coping ability seems to have been seriously underestimated by many professionals (Mactavish and Iwasaki, 2005). Investigating variables that influence distress appraisal and defining these variables in relation to coping with disability seem to be important though unexplored aspects of disability experience.

Study I

Sample

A total of 30 persons with physical disability (9 females and 21 males) within the age range of 18–55 years were interviewed in this study. All of them had locomotor disability and had Government of India certificate of disability.

Procedure

The participants were contacted at their workplace or residence and were informed that the purpose of the study was to learn from their experiences

in dealing with disability. Disability being a sensitive issue, utmost care was taken to ensure that participants felt comfortable during the interview process. Each interview lasted for about one and half hours. Interviews were taken with the help of a semi-structured, open-ended interview schedule. The questions were related to the stressors they faced and strategies they used to cope with them. Data were content analysed to identify important coding categories and recurring ideas. As various categories of stressors and coping patterns emerged, internally consistent categories were merged as a theme. The themes, their definitions and categories were rated by five judges for internal consistency.

Results and Discussion

The content analyses revealed 11 themes of major stressors leading to distress due to disability and six themes of coping strategies. These were ego-related stressors, physical restriction, deviant body image, dependency on others, educational barriers, occupational barriers, problems related to interpersonal relations (with family), interpersonal relations (with other), attitudinal barriers, inability to fulfil the traditional gender roles and future apprehensions. The themes of coping strategies were taking action, positive reinterpretation, acceptance, denial, seeking emotional support and turning to religion. In the following, some excerpts from the interviews are being presented as examples of distress experiences and coping.

Stressors Leading to Distress due to Physical Disability

The first theme of stressors was *ego-related stressors* that included situations which instigated feelings of inadequacy, helplessness, worthlessness, shame and guilt. Persons with physical disability perceived their disability as a constant source of threat to their ego which, in turn, gave rise to distress experience. For example, Participant A (21 years old, unmarried male, disability—polio, post-graduate student) shared his experience as,

.... having disability in itself is a disturbing thing as... it makes me feel helpless. I cannot live a full life and I cannot do anything about it...

Disability becomes a handicap, when the individual feels pessimistic, dejected and believes that his/her actions will not affect the environment.

The feeling of helplessness is self-perpetuating and results in frustration and distress (Yang and Linda, 2005).

Another overwhelming theme that surfaced during the interviews was *physical barriers* causing distress due to physical restriction. Participants discussed many issues related to restricted physical activity such as not being able to run for a bus, cross the road and travel for long distances. These were seen as simple, routine daily life activities which were restricted due to disability. Another prevalent concern voiced was a fear of falling. For example, Participant B (20 years old, unmarried male, disability—polio, undergraduate student) who was preparing for IIT entrance examination said,

I have my own limitations. I cannot travel alone. So I am bound to give my examinations from Allahabad only. I cannot fill forms of other cities. Once I was travelling by train and suddenly my crutches slipped slightly and I fell down. I got injured too. I have decided not to travel alone after that. This was something really bad that happened to me.

Participants recounted stories of falling and its consequences such as immobility, increased discomfort due to the use of crutches and loss of confidence. Another adverse consequence of physical disability which got reflected in interviews was lack of physical mobility. Lack of mobility prevents an individual from actively carrying out important roles of life. If a person cannot drive a vehicle, easily climb stairs, and step over side walk curbs, s/he is not likely to participate in many activities. Architectural barriers present an example of how individual characteristics combine with environment to influence the experience of disablement. Due to architectural and mobility barriers persons with locomotor disability differ in their disability experience from those suffering from other kind of disabilities. Bramston and Mioche (2001) compared three different types of disabilities (physical, visual and intellectual) and found that in response to a question about whether participants perceived their disability as a source of distress, majority of the participants with physical disability reported their disability as distressing. Also a number of participants discussed their *dependency on others* as a major stressor. Impact of this stressor increased with severity of the disability.

Besides these, *body image* plays a very important role in the experience of disability (Rumsey and Harcourt, 2005). It is the mental picture a

person forms of his/her physical self. An alteration in a person's ideal body image sets up a series of emotional, perceptual and psycho-social reactions. The significance that is placed on body image affects an individual's sense of personal worth, confidence and belief in his/her capabilities. For example, Participant C (29 years old, unmarried female, disability—polio, NGO worker) said:

Because of my disability, everyone ignores me... I am not good looking. I don't like myself. I cannot wear what I want, like chudidhar salwar and sandals....

Disability violates people's expectations of what a 'whole' person should look like and belief that all individuals must exceed at least minimal requirement of physical activity and appearance. The existing societal tendencies to feel sad for persons with disability, pity them and focus intensely on their disability make it impossible to recognise that a person with physical disability is simply another person with same interests, emotions and needs as any other person may have. Once these attitudes are assimilated as aspects of self-concept, disability indeed becomes handicap. *Attitudinal barrier* is widely recognised as an impediment for mainstreaming of the persons with disability and it emerged as one of the underlying theme of stressors. For example, Participant D (28 years old, unmarried female, disability—polio, post-graduate student) said.

I don't like my relatives' attitude towards me and my parents. Occasionally they pass such comments.... like....they say, 'how unfortunate my parents are', 'it is a punishment given by God for their (parents) sins (paap)', 'they (my parents) are so humble and good. Why God did this to them?' I always question—am I so bad that others perceive me as a punishment from God?

Limitations in mobility and attitudinal barriers seriously affect social interactions of the person with disability and subsequently his/her self image. This, in turn, leads to *problems in interpersonal relationships*. A strong feeling which was expressed in many interviews was that losing a limb impacted friends and relatives more than the person him/herself. Some participants described how their family members did not support them, underestimated them while others described how family relationships were affected by their disability. For example, participant B said:

...Everyone in my family loves me a lot but when I decided to come to Allahabad for preparation of IIT, they were not happy. They wanted me to stay at village only. ...and they have doubts that I can make it. However, entrance in IIT has nothing to do with disability. It was one thing which disturbs me and I didn't talk to my family for long.

Another theme of stressors that emerged during interviews was *inability to fulfil the traditional gender roles*. As stated earlier, disability can have a significant impact on an individual's ability to carry out his/her traditionally expected gender roles. A disabled woman is seen as one who is unable to perform her traditional roles of wife and mother. For example, a woman with mobility impairment may be perceived as one in need of physical assistance and therefore unable to carry out the domestic tasks that require mobility and physical labour. As a result, many women with disability are likely to consider themselves as non-persons, with no rights or privileges to claim, no duties or functions to perform, no aim in life to achieve and no aptitudes to fulfil (Hughes et al. 2001; Nosek and Hughes, 2003). In a few instances, disabled women may be 'married off' by their families to 'wrong' persons, (such as men who are already married, impotent or mentally ill). There may also be higher demands for dowry in the case of a woman with disability. For example, Participant E (30 years old, unmarried female, disability—polio, post-graduate student) said:

....I faced a lot of problems in my marriage. Initially no one wanted to marry a disabled girl and if they got ready..... then... they wanted excessive dowry.....I felt bad and decided not to marry but my parents were not ready for that... then fortunately we got one option. Let's see what will happen. I am getting married in December. He is a divorcee.

The interviews also revealed that not only women with disability but men with disability also experienced distress due to their incapability in carrying out the expected gender roles. Men with disability may experience more distress as their disability creates a discrepancy between expected image of 'man' and that of 'man with disability' (Thomas and Thomas, 2003). The male participants narrated incidents when they felt distressed due to the inability to carry out the roles of a son, a husband and a father. Whereas women saw themselves as lacking competence required for child rearing and other household work, men saw their

disability as a barrier in their traditional image of being strong, independent and powerful. Participant F (32 years old, married male, disability—polio, a businessman) father of two daughters, shared his experience as,

....sometimes it hurts when your daughter asks you to do something and you make an excuse. But actually your disability does not allow you to do so.....many a times I feel bad for my wife too. I don't think I fulfil her expectations of a good husband. After all she has to go out for simple tasks like buying vegetables or milk because I cannot carry them... I am already carrying my crutches.

The last sets of stressors evident from the interviews were *educational, occupational barriers* and *future concerns*. In a developing country like India, persons with physical disability have fewer opportunities for education, employment and economic attainment which can lead to distress. The Indian government has implemented a number of policies and programmes for mainstreaming of persons with disabilities but the availability of these resources is limited. The interviews suggested that limited opportunity for education, specifically higher education, was one of the causes of perceived distress. Employment was another domain where they faced hurdles due to their disability. Participants reported that they could not pursue the occupation they desired because there are limited areas of occupations available for persons with physical disability.

Coping with Distress Due to Disability

Another major objective of this study was to explore coping strategies frequently used by persons with disability. *Taking action or active coping* was the first theme of coping strategies which refers to taking active steps to remove or circumvent the stressor or to ameliorate its effects. For example, when Participant G (29 years old, unmarried male, disability—polio, post-graduate student) was asked the question about how he manages the problem of physical restriction, he said:

....I can go anywhere using my wheelchair. I do all the work such as submitting forms, going to bank, etc. on my own. In fact, my classmates give their forms to me for submitting as I don't have to stand in the queue. You can also call me whenever you have to do anything like this, in the university.

The participant in the above example tried to minimise his physical limitation by using wheelchair. Active coping also includes taking help from a relevant person like doctor, counsellor or rehabilitation agencies. Those who engage in active coping plan, initiate actions, increase their efforts and try to execute coping attempts in a step-wise manner.

Positive reinterpretation was found to be another important coping strategy. Some participants did not consider physical disability as the end of the world and it did not stop them from doing something they wanted to do. Some took disability as challenge and some found it as an opportunity to prove themselves among adversity.

In coping with disability, almost all participants talked about the need and importance of *emotional support*. Those who received support described its benefits and those who did not receive, explained why it was necessary. Participant H (26 years old, unmarried male, disability—paralysis, undergraduate student) said:

... it is just my *baba* (father) and *amma* (mother) who give me strength to live. They never take me for granted. They trust me. That is why they did send me to the university for higher education.

The content analyses showed that there were instances when the participants *accepted* their fate and deliberately de-emphasised aspects of physical ability and appearance. Instead they attempted to highlight their own abilities and strengths. For example, they believed that there are people who are worse-off than them and are unable to perform certain activities. For example, Participant I (42 years old, married male, disability—polio, a primary teacher) said:

....By the time you cross the 30s or 40s, everybody has their area of weaknesses. Everybody has something missing. Be it high blood pressure or diabetes.... There is always some problem. For me disability is one of those problems.

It seemed that *denial* too was a common coping strategy, specifically, for those who had mild level of disability or those who could hide their disability by using aid and appliances. Participant J (27 years, unmarried male, disability—amputation, post-graduate student) initially refused to accept that he had any disability and participated only after he was convinced that his identity will not be disclosed.

Finally, the last theme that emerged from the interviews was *turning to religion and God*. For example, participant K (23 years old, unmarried female, disability—polio, post-graduate student) said:

....I surrender myself to Bhole Nath (God). He has given me disability so he will only tell me the way to come out of it. Whenever I feel very sad I go to Mankameshwar (an old temple of Shiva in Allahabad) and that relaxes me to some extent.

In sum, the study explored a variety of stressors which cause distress due to disability and frequently used coping strategies. Research questions which emerged from this study were identifying conditions which either intensify or lower the impact of such stressors, the manner in which stressors and coping strategies are related, and explaining psychological resources which may facilitate the coping process. The second study attempted to answer some of these questions. With the help of a survey, an attempt was made to understand the extent to which the level of perceived distress due to disability is predicted by a set of person related variables (such as age, gender, socio-economic status, education, health, and age-of-disability onset) and situational variables (including physical restrictions due to disability and societal attitudes towards disability); the way coping strategies get linked to distress perceptions and the significance of psychological resources such as *anāsakti* and positive life orientation in moderating the effect of perceived distress on coping.

Study 2

Sample

A total of 120 persons with locomotor disability (70 males and 50 females) within the age range of 19–60 years ($M = 32.97$, $SD = 14.26$) participated in this study. All of them belonged to Allahabad city of Uttar Pradesh, India. Most of the participants ($N = 84$) were polio survivors, 20 had paralysis and the rest 16 reported accident as the cause of their locomotor disability. Seventy participants had moderate levels of disability, 30 had mild and 20 had severe levels of physical disability.

Twenty respondents were educated up to middle school (eight years of formal schooling), 22 up to high school (10 years of formal schooling), 28 up to intermediate (12 years of formal schooling), 27 were graduates and the remaining 23 had completed post-graduation. Majority of the participants belonged to lower socio-economic status (64.2 per cent), some to middle (29.4 per cent) and only 6.7 per cent participants belonged to higher socio-economic status.

Measures

Data were collected using the following measures:

Demographic Sheet: It included information related to demographic details like age, gender, education, socio-economic status and disability-related information like cause of disability, age of disability onset, severity of disability and physical restriction. Physical restriction due to disability was assessed by two items using a four-point rating scale ranging from 1 (very less) to 4 (very much). Higher score indicated higher level of physical restriction due to disability.

General Health Status Scale: From the general health status scale developed by Ruback and Pandey (1991), 14 items were taken. The original scale has 24 items related to physical and psychological health. This scale required responses on a four-point rating scale ranging from 1 (never) to 4 (always). Higher scores on physical and psychological health indicated higher levels of health problems. The reliability of the scale (Cronbach alpha) is 0.92 (Ruback and Pandey, 1991).

Disability Attitude, Belief and Behaviour (DABB) Scale: From the Disability Attitudes, Belief and Behaviour (DABB) scale (Dalal et al., 2000), 10 items were taken. Participants were asked to express perception about societal attitudes towards disability on a five-point scale ranging from 1 = strongly disagree, to 5 = strongly agree. Higher score indicated more favourable societal attitude towards persons with disability. The reliability (Cronbach alpha) of the scale which was obtained in the present study was 0.65.

Positive Life Orientation Scale: An 11-item scale assessing positive life orientation (PLO) developed by Agarwal et al. (1995) was used. Participants were asked to rate degree of agreement to the statements on a 4-point rating scale (1 = not at all, to 4 = very much). Higher scores reflected higher positive life orientation. The reliability of the scale (Cronbach alpha) is 0.86 (Agarwal et al., 1995).

Scale of *Anāsakti*: From the scale of *anāsakti*, developed by Pande and Naidu (1992), 16 items were taken. This scale assesses *anāskati* on five dimensions: outcome vulnerability, attachment, effort orientation, endurance and equipoise, and physical sensual non-identification. Participants were asked to rate degree of agreement to statements on a 5-point rating scale ranging from 1 (strongly disagree) to 5 (strongly agree). A higher score indicated a higher level of *anāsakti*. The test-retest reliability coefficient was reported as 0.57 (Pande and Naidu, 1992).

Scale of Perceived Distress due to Physical Disability: A 43-item scale for assessing perceived distress due to physical disability was developed. The scale consisted of 11 dimensions of distress due to disability that had emerged from semi-structured interviews (Study 1). A pool of statements related to various dimensions was generated and judges' ratings were obtained to ascertain conceptual clarity. The scale was administered on 25 persons with locomotor disability. A preliminary item analysis was done and items with high psychometric properties were selected. All the items were written under the stem, "*I am distressed because....*" Some of the items were like, "*I am distressed because I cannot move around easily due to my disability*" and "*I am distressed because people ignore me due to my disability*". Participants were asked to give their distress ratings for each item on a five-point rating scale ranging from 1 (not at all distressing) to 5 (extremely distressing). Higher score reflected greater intensity of perceived distress. The reliability of the overall scale was high (Cronbach alpha = 0.97).

Scale of Coping with Physical Disability: This scale consisted of 35 items to assess problem focused and emotion focused coping. Problem-focused coping strategies were active coping, planning, seeking instrumental support, while emotion-focused coping strategies included seeking

emotional support, positive reinterpretation, acceptance, denial, turning to religion, behavioural disengagement, mental disengagement and focusing on or venting of emotions. The 28 items of the scale were taken from Brief COPE scale developed by Carver (1997) and remaining seven items were developed. The participants were asked to give their response on a 5-point scale ranging from 1 (never) to 5 (always). Higher score reflected higher use of that particular coping strategy. The reliability of scale was high (Cronbach alpha = 0.87).

Procedure

The booklet containing demographic information sheet and the six scales were administered on 120 persons with locomotor disability. Major educational institutions and rehabilitation centres were contacted to locate the participants. After obtaining consent, each participant was administered on the scales individually.

Results and Discussion

To begin with, the range of scores, means and standard deviations were calculated for all scales used in the study.

Table 1 shows that in general, participants reported moderate level of perceived distress due to physical disability ($M = 128.86$). This could be because of the fact that most participants were either students or were employed. Results also showed that men with physical disability perceived greater level of distress ($M = 127.85$) as compared to women ($M = 109.84$) and this difference was significant ($t_{(118)} = 2.16^*$).

The participants reported higher levels of belief in positive life orientation ($M = 38.37$) and problem focused coping ($M = 46.70$). On the other hand, they rated moderate levels of belief in the philosophy of *anāsakti* ($M = 48.49$) and emotion-focused coping ($M = 71.94$). They further reported slightly poor health status ($M = 30.60$) and neutral societal attitudes towards disability ($M = 29.16$).

Table 1. Descriptive Statistics for all Scales (n = 120)

Scales	Range of Scores	Mean	SD
Perceived Distress due to Disability	43–215	128.86	49.87
Health Status	14–56	30.60	7.16
Perceived Societal Attitude towards Disability	10–50	29.16	12.07
<i>Anāsakti</i>	16–80	48.49	9.47
Positive Life Orientation	11–44	38.37	8.89
Coping Strategies:			
Problem-focused Coping	11–55	46.70	9.79
Emotion-Focused Coping	24–120	71.94	16.32

Note: Higher scores reflect higher values on respective scales.

Perceived Distress Due to Physical Disability

The perceived distress scale consisted of 11 dimensions of distress. Responses obtained on the scale of perceived distress were factor analysed using varimax rotation.

As evident from Table 2, the 11 factors of perceived distress got condensed into four factors and explained 72.91 per cent of total variance. Four factors were ego-related stressors (19 items; explained 27.07 per cent of variance), inability to fulfil traditional gender roles (10 items; 17.66 per cent of variance), problems in interpersonal relationships (6 items; 15.09 per cent of variance) and physical barriers and deviant body image (8 items; 13.09 per cent of variance). All the factors of the distress scale were significantly correlated with the overall perceived distress scores. These findings are consistent with the previous studies which demonstrated that persons with disability are potentially at greater risk of

Table 2. Eigen Values of the Factors for Scale of Perceived Distress (N = 120)

Factor	Eigen Value	% Variance
Ego-related Stressors	11.64	27.07
Inability to Fulfil Traditional Gender Roles	7.59	17.66
Problems in Interpersonal Relationships with Family and Others	6.49	15.09
Physical Barriers & Deviant Body Image	5.62	13.09
Total		72.91

psychological distress (Cummings et al., 2006; Haussleiter et al., 2009) and experience variety of stressors such as ego-related stressors like feeling of helplessness (Yang and Linda, 2005), deviant body image (Kashif et al., 2004; Taleporas and McCabe, 2002), physical barriers and restricted mobility (Rumsey and Harcourt, 2005) and problems related to interpersonal interactions (McCarthy et al., 1997).

Predictors of Distress Due to Physical Disability

Multiple regression analyses were performed to examine the predictors of perceived distress due to disability. Personal and situational variables were put in the multiple regression equation. All of the variables were significantly correlated with the perceived distress. Perceived distress was positively correlated with age ($r = 0.62^{**}$), age of disability onset ($r = 0.23^{**}$) and level of physical restriction ($r = 0.59^{**}$) which suggests that perceived distress increases with age and level of physical restriction. Perceived distress was negatively correlated with education ($r = -0.66^{**}$), socio-economic status ($r = -0.41^{***}$), societal attitudes towards disability ($r = -0.55^{**}$) and health status ($r = -0.67^{**}$). Participants who had higher level of education, higher socio-economic status, better health, perceived favourable societal attitudes, experienced lower level of distress due to physical disability. To assess the relative significance of these variables as predictors of perceived distress, a step-wise regression analysis was carried out (Table 3).

Results of step-wise multiple regression analysis showed that perceived distress due to physical disability was best predicted by a set of four variables (i.e., health, education, age and physical restrictions). These four predictors together explained 65 per cent of variance in the distress scores. Socio-economic status, age of disability onset and societal attitude towards disability were excluded as they were not significant predictors. Negative beta values of education and general health status indicated that higher level of education and better health status led to lower level of perceived distress. Although all the predictors were found to predict perceived distress significantly, yet age and educational levels were found to be the strongest predictors. These results were consistent with findings of recent studies which show a significant role of education (Banthia et al., 2007; Patti et al., 2007), age (DeGraff, 2008; Patti et al., 2007), health status (Whiteneck et al., 2004) and level of physical

Table 3. Regression Analysis of the Predictors of Perceived Distress

	R ²	Adj R ²	R ² Change	F Change	Beta Value (β)	T Test
Model 1	0.45***	0.44	0.45	95.14***		
Health					-0.67	-9.75***
Model 2	0.57***	0.56	0.11	31.43***		
Health					-0.44	-6.01***
Education					-0.41	-5.63***
Model 3	0.63***	0.61	0.05	17.42***		
Health					-0.24	-2.89**
Education					-0.40	-5.93***
Age					0.31	4.17***
Model 4	0.65***	0.64	0.02	6.99**		
Health					-0.19	-2.26**
Education					-0.38	-5.68***
Age					0.30	4.19***
Physical restriction					0.16	2.64***

Notes: **p < 0.01, ***p < 0.001.

restriction due to disability (Bramston and Mioche, 2001) in predicting the experience of distress.

Relationship between Perceived Distress and Coping Strategies

To see the relationship between perceived distress and coping strategies, Pearson's product moment coefficients of correlation were calculated.

Table 4 shows that perceived distress was negatively correlated with problem-focused coping. It implies that participants who adopted problem-focused coping perceived lower level of distress ($r = -0.35^{**}$). It was also negatively correlated with ego-related stressors, stressors related to traditional gender roles, physical barriers and body image. Emotion-focused coping was found to be positively correlated with perceived distress ($r = 0.30^*$) which suggests that those who adopted emotion-focused coping perceived higher level of distress. Emotion-focused coping was also positively correlated with ego-related stressors, stressors related to traditional gender roles and interpersonal relationships. These findings are consistent with previous studies which show that problem-focused coping is associated with lower levels of distress (Livneh and Wilson, 2003) and emotion-focused coping is associated negative affective states (Pakenham, 1999). It can therefore be stated that taking direct action to resolve distress is a more adaptive way of coping with disability related distress.

Table 4. Correlation of Perceived Distress and Coping Strategies

Dimensions of Perceived Distress	Problem Focused Coping	Emotion Focused Coping
Ego-related Stressors	-0.35**	0.29*
Traditional Gender Roles	-0.36**	0.19*
Interpersonal Relationships	-0.13	0.33**
Physical Barriers & Body Image	-0.33**	0.02
Overall scale	-0.35**	0.30*

Notes: * $p < 0.05$, ** $p < 0.01$.

Higher scores reflect higher levels in the respective scale.

Moderating Roles of Positive Life Orientation and *Anāsakti*

Moderating roles of two psychological resources namely positive life orientation and *anāsakti* were assessed through moderated regression analyses. Before carrying out the moderated regression analyses (MRA), Pearson's product moment coefficients of correlation between perceived distress and moderated variables were calculated. Coping resources were significantly correlated with problem focused coping only. Stronger belief in the philosophy of *anāsakti* ($r = 0.56^{**}$) and positive life orientation ($r = 0.35^{**}$) were related to higher problem-focused coping. Table 5 presents moderated regression analyses for assessing moderating roles of *anāsakti* and positive life orientation in the relationship between perceived distress and problem-focused coping.

Table 5 suggests that perceived distress (predictor variable) explained 19 per cent of variance and positive life orientation and *anāsakti* (moderating variables) explained 26 per cent and 23 per cent of variance, respectively, in predicting problem-focused coping. In addition to the direct effects, interaction term (comprising perceived distress and positive life orientation) added 22 per cent (R^2 change = 0.22^{***}) to the variance explained, resulting in a total of 47 per cent variance in predicting problem focused coping. Similarly, in the second MRA the interaction term (consisting of perceived distress and *anāsakti*) added 14 per cent (R^2 change = 0.14^{**}) to the variance explained, resulting in a total of 37 per cent of variance in predicting problem-focused coping. The significant changes in variance due to interaction terms indicated significant moderating effects. It was concluded that positive life orientation and *anāsakti* were significantly moderating in the relationship of perceived distress and problem-focused coping. For further interpretation of moderating roles of these variables, sub-group analyses were carried out. The sample was divided into low and high groups on the basis of the median scores of the moderating factors and correlation coefficients between perceived distress and problem-focused coping in each group were assessed. The negative correlation between perceived distress and problem-focused coping was stronger in the higher positive life orientation group ($r = -0.80^{**}$) as compared to low positive life orientation group ($r = -0.29^*$) and the difference was statistically significant

Table 5. Moderated Regression Analysis for Assessing Moderating Roles of Coping Resources in the Relationship between Distress and Problem-Focused Coping

	Predictors	R ²	Adj R ²	R ² Change	Beta Coefficient	T Test
Step 1	Perceived Distress	0.19***	0.18	0.19***	-0.34	3.39**
Step 2	Positive Life Orientation	0.26***	0.24	0.07*	0.28	2.98**
Step 3	Perceived Distress x Positive Life Orientation	0.47***	0.45	0.22***	-2.09	-4.26***
Step 2	Anāsakti	0.23***	0.22	0.04	0.08	0.723
Step 3	Perceived Distress x Anāsakti	0.37***	0.36	0.14**	-0.48	-4.04***

Notes: *p < 0.05, **p < 0.01, ***p < 0.001.

($t_{(1)} = 3.54^{**}$). In addition, the inverse correlation of distress and problem focused coping was also stronger in group with higher belief in philosophy of *anāsakti* ($r = -0.42^{**}$) as compared to lower *anāsakti* group ($r = -0.27^{**}$) and the difference was significant ($t_{(1)} = 2.53^{**}$). These findings suggest that the negative correlation of distress and problem focused coping was stronger among individuals with higher positive life orientation and higher belief in philosophy of *anāsakti*. In other words, persons with physical disability who had stronger positive life orientation and belief in philosophy of *anāsakti* were more likely to use problem-focused coping while in distress. The transactional theory advocates moderating roles of environmental/social and psychological resources in primary and secondary appraisals (Lazarus, 2000). Positive life orientation leads to active seeking of support, emphasising positive aspects of any situation to facilitate the process of coping with distress. There may be a number of reasons why *anāsakti* is an important philosophy of life as far as disability appraisal and coping are concerned. The first reason is the emphasis that it places on effort orientation which may have significant implications for deriving problem-oriented coping strategies. Second reason is emotional equipoise, which is the defining characteristic of individuals high on *anāsakti*. Third reason is lesser body identification, which suggests that a person high on *anāsakti* is less likely to consider body image as important in defining the self.

Conclusion

These studies were carried out to understand the nature of stressors, distress experiences and the process of coping with distress due to physical disability. The results revealed that the major stressors which led to distress among persons with physical disability were ego-related stressors, inability to fulfil traditional gender roles, problems in interpersonal relationships with family and others, physical barriers and deformed body image. Perceived distress was determined primarily by a set of personal variables such as gender, education, age, health and situational variable namely physical restriction due to disability. Problem-focused coping was positively correlated with perceived distress and this relationship was significantly moderated by psychological resources namely *anāsakti* and positive life orientation.

Persons with physical disability encountered unique stressors. The most important stressor was ego-related stressors, which was feelings of inadequacy, helplessness, worthlessness, shame and guilt. Inability to fulfil traditional gender roles was another very strong stressor which led to distress. Both men and women with physical disability perceived distress due to non-fulfilment of their traditional gender roles. Negative attitude of others, underestimation of one's capabilities and discriminatory behaviour of others gave rise to problems in interpersonal relationships. Besides these, physical and architectural barriers hindered physical mobility of persons with physical disability resulting in distressing experiences. A number of researches have showed strong linkages between deformed body image and psychological distress (Chau et al., 2008; Kashif et al., 2004). Changes in body image resulting from physical disability often threatened the self-esteem and were perceived as more problematic than the disability itself. Recent studies indicate that persons with disability often have difficulties in developing a positive self-concept due to deformed body image (Taleporos and McCabe, 2002). Since the body creates the first impression, negative feedbacks relating to one's body image can be quite devastating and may also generalise other aspects of self as well. Findings also suggested that higher education, better health, lower level of physical restriction and younger age lowered the levels of perceived distress. These findings implied that level of distress due to disability can be reduced by providing education, better health services and appropriate assistive devices.

Coping with physical disability requires that stressors unique to the condition of disablement must be encountered along with those that are faced during the journey of life. In case of physical disability, the coping task requires that the short-term effects of disability be resolved first before the person can begin to handle the loss caused by disability that is more permanent in nature. How aptly a person is able to meet the extra demands placed before his/her by the condition of disability, renders the coping efforts effective or ineffective. Every form of coping may be adaptive in some circumstances and counterproductive in others, depending on the nature of the situation and how the coping response is executed. Hence, there are neither 'good' coping responses nor 'bad' ones; rather, all forms of coping must be evaluated within the context in which they occur. Consistent with the previous literature, the findings of present

studies also suggested that problem-focused coping was related to lower levels of distress (Lazarus 2000; Livneh and Wilson, 2003).

Coping resources are relatively stable characteristics of a person's disposition and environment and refer to what is available to individuals when they select their coping strategies. It was found that psychological resources such as *anāsakti* and positive life orientation significantly moderated in the relationship between perceived distress and problem-focused coping. When persons with disability had stronger belief in the philosophy of *anāsakti* and higher positive life orientation, the negative association of perceived distress and problem-focused coping became stronger. The concept of positive life orientation is focusing of one's attention on positive aspect of life in general and disability in particular. The principle of *anāsakti* involves looking at pleasures and suffering with equanimity. Not being too involved in objects of pleasure and not being too concerned about avoidance of suffering is seen as the nature of one who is non-attached. It can be concluded that belief in positive life orientation and philosophy of *anāsakti* facilitated choice of problem focused coping in response to distress.

The article has implications for rehabilitation of persons with physical disability. Eliminating or reducing emotional distress may be facilitated by physical and psychosocial adjustment interventions (King et al., 2006). Whereas physical adjustment concerns with the body's capacity for successful negotiation of the physical environment, psycho-social adjustment concerns the capacity to function appropriately in the personal and interpersonal spheres. On the basis of the findings, it can perhaps be suggested that rehabilitation programmes should focus on education, health care delivery and reduction of physical barriers for a person with physical disability as these were found to be important determinants of distress. Levels of physical restriction can be reduced by creating barrier-free physical environment and improving access to assistive devices. In a study on Canadian sample, McColl et al. (2007) identified adequate health care services, inclusive of attitudes towards disabled individuals, reasonable expectations of expertise about disability as having important policy implications. At this stage, it is difficult to recommend specific coping strategies for all people in all situations but nevertheless it can be stated that a more active and problem-focused approach may generally be more helpful than one that involves passivity or avoidance. Since coping involves long and short-term efforts at dealing with routine and

unexpected situations, it becomes necessary to develop an overall strategy for coping. The rehabilitation programmes should focus on awareness and teaching of problem-focused coping skills and inculcate positive orientation towards life and *anāsakti* as these may lead to successful coping.

Note

1. Excerpt from an interview posted on 17 March 2003 on www.indiantelevision.com

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