Resilience in Persons with Physical Disabilities: Role of perceived environment and emotional intelligence.

Authors

Meena Hariharan, PhD
Professor & Director
Centre for Health Psychology
University of Hyderabad
Prof. CR Rao Road, Gachibowli
Hyderabad, India

Meena Karimi, M.Phil
Programme Manager-Liliane Fonds Project
Catholic Health Association of India (CHAI),
Hyderabad, India

M. Thomas Kishore, Ph.D.
Reader in Health Psychology
Centre for Health Psychology
University of Hyderabad
Prof. CR Rao Road, Gachibowli
Hyderabad, India
Abstract

Functioning and participation of people with locomotor disabilities is limited by various external and internal factors. Though circumstances are same for all, some people are resilient enough to overcome the challenges and excel in life, which in turn indicates that there are some contributing internal factors particularly, person’s emotional resources and appraisal of circumstances. In this context this study aims to find out the individual’s perceptions about the environment in which they live and emotional intelligence as a function of resilience. Accordingly, 10 non-government organizations working in the State for people with locomotor disabilities were identified and requested to nominate at least five people who are resilient and another five who are vulnerable based on specific description. Thus the sample consists of 100 people with locomotor disabilities including 50 resilient and 50 vulnerable. All the participants were ambulatory, and were in the age range of 13 to 25 years. The participants were assessed with standardized tests of emotional intelligence and perceived environment. Results indicate that the resilient were emotionally more intelligent and had positive perceptions of their environment than their vulnerable counterparts. The results may suggest that positive perceptions coupled with emotional resources help people with locomotor disabilities excel in life despite of disability and environmental barriers.
Resilience in Persons with Physical Disabilities: Role of Perceived Environment and Emotional Intelligence.

Introduction

Persons with disabilities will have the disadvantage of sensory, motor or cognitive impairment depending on the nature of impairment. Having a physical disability can affect one’s emotional. Sometimes, the limitations imposed by attitudinal, socio-cultural, economic, and environmental variable act as barriers to their participation in society. Limitations in participation and poor access to resources may in turn contribute to handicap (Simeonsson et al., 2000). However, it is not that everyone buckles under the impact of impairment or at-risk for stress and discrimination. Not all individuals exposed to stressors would experience negative psychological effects (Alriksson-Schmidt et al., 2007). On the contrary, some may do well, and even excel their non-disabled peers. This ability to circumvent the environmental and emotional barriers, and excel despite certain limitations is generally referred to as invulnerability or resilience. While vulnerability predisposes an individual to develop varied forms of psychopathology or behavioral ineffectiveness, or leads to negative developmental outcomes (Zimmerman & Arunkumar, 1994), resilience acts the other way. That is, it predisposes the individual to resist the potential negative consequences of the risk, and develop adequately.

Studies from the field of psychiatry indicate that there is a need to consider a wide range of personal, familial, social, and environmental factors that could contribute to “a process of, or capacity for, or the outcome of successful adaptation despite challenging and threatening circumstances (Garmezy & Masten, 1991). There is strong evidence to
suggest that resilience is a multidetermined and ever-changing product of interacting forces within a given ecosystemic context (Waller, 2001). Because resilience occurs even when risk factors are plentiful, greater emphasis needs to be placed to understand how social and physical ecologies mediate positive developmental outcomes when individuals encounter significant amounts of stress (Ungar, 2011). As life stress is related to perceived environmental problems, which could affect the quality of life and resilience, perceptions about the environment need to be changed first. And any efforts to bring in changes must also consider necessary modifications at multiple levels, ranging from family to school, community, culture, and policy. Enhancing personal competence and providing social support may also improve quality of life (Masten & Reed, 2002; Alriksson-Schmidt et al., 2007).

In this context experiential accounts are useful to understand the level of resilience. The experiential accounts may include the entire ecological environment and positive behavioural competence. After all, capability (i.e. what an individual can do) and performance (what an individual does) depend on the environmental setting (Tieman et al., 2004). Environmental factors could be further divided into micro environmental variables like the physical environment, the family organization, the family support, and type of family. The behavioural competence may include the individual’s perceptions of the environment, personal competence, control and coping patterns.

The International Classification of Functioning, Disability, and Health (ICF) also recognizes that disability is a function of person-environment interactions (World Health Organization, 2001). Applying the same in the area of physical disabilities, it could be understood that mobility is influenced by their capability in all developmental domains.
(e.g. gross motor, fine motor, cognition, and vision) as well as personal factors (e.g. age, personality, preferences and lifestyle), which in turn may vary across various everyday settings (e.g. home, school, and outdoor/community) as the settings are marked by specific physical, temporal, and social features. The interaction of the person and the environment leads to the performance of an activity, such as mobility. Because mobility is needed in many activities of daily living, successful participation in society is contingent on the person-environment interaction. Thus the environment plays a significant role in deciding the performance of the individual, though it depends on the interpretation of the environment. Hence there is a strong advocacy to study the environmental antecedents of positive growth (Ungar, 2011). Another important dimension is the emotional strength. While the stressors being the same, some appropriately and successfully respond to a vast variety of emotional stimuli being elicited from the inner self and immediate environment, which in turn facilitates successful adaptation. Therefore there is a need to understand the interactive effect of emotional intelligence and the perceived environment on resilience.

Most of the times, the physical environment in India is not designed to facilitate access. The access equation shows how, when access is denied, persons with disabilities are marginalized and excluded from mainstream society. However, it is the individual’s perception and interpretation of the environment, which instills or diminishes one’s faith in one’s own capabilities. In this context, the present study was designed to understand the perceived access to environment and emotional intelligence as function of resilience among persons with locomotor disabilities.
Method

Participants

Stratified sampling was used to select the study group. First 10 Non-Government Organization (NGOs) working with persons with physical disabilities across the State of Andhra Pradesh, India were randomly selected. Between them they were providing educational and vocational training to 1114 individuals with physical problems. There were both day scholars and residential students receiving educational and/or vocational training from these NGOs.

Each NGO was asked to nominate five invulnerable and five vulnerable both belonging low socio-economic status based on the following description: those excelling in academic, personal, and social skills despite physical disability, have good relationships with people around, keep themselves cheerful and meaningfully busy despite impoverished physical and social environment was considered invulnerable; those performing poorly in school/work, do not maintain good relationships with people around as result of physical disability, and impoverished physical and social environment were considered invulnerable. Thus the total sample consisted of 100 subjects where 50 are Invulnerable and 50 are Vulnerable. This purposive selection resulted in the study group aged 13 to 25 years, who were ambulatory.

Tools:
1. Environment Rating Scale (Hariharan and Karimi, 2006): This scale measures the environmental stimulation as perceived by the children and youngsters with physical disabilities. The 64 item scale was pertinent to the individuals’ immediate environment.
The items were spread across three dimensions of perceived environment, namely, Physical Environment, Social Environment and Emotional Environment, which were further divided into sub-domains. All the sub-domains have both positive and negative worded items. Each item is scored on a five-point scale, with the negative items reverse coded. The scores on all the domains are added to give a total score, which range from 64 to 320. Thus the scoring is such that higher score is indicative of positive perceptions.

2. Emotional Intelligence Test (Chadha & Singh, 2003): This test measures three emotional dimensions, namely, emotional competency, emotional maturity and emotional sensitivity in areas of an individual’s personal and professional life, and the composite scores are expressed as EQ. Out of 15 questions, five were retained as it is and ten questions were modified to enhance the applicability with persons with physical disabilities. Higher score means higher level of emotional intelligence.

Procedure:

The caretakers of the each NGO was asked to nominate five individuals with physical disability, hailing from low socio-economic background, and yet excelling in their personal, academic and social competence; and also another five individuals with physical disability coming from low socio-economic background and sharing low competence at personal, emotional and social dimensions. Informed consent was taken from each individual and also the authorities of each NGO to conduct the study. Assessment was done on individual basis. The data was analyzed using the Statistical Package for Social Sciences (SPSS version 18.0) for Windows.
Results

Results were completed on the sample that consisted of 50 resilient and 50 vulnerable nominated by different NGOs. The characteristics of sample are depicted in table 1, which indicates that while the resilient group has almost equal distribution of gender, the vulnerable group is skewed to male. While the resilient group fairly represented all levels of education starting from high school to graduation, the distribution of the Vulnerables is unequal with majority having only high school education. Thus, the sample characteristics of invulnerable and Vulnerables were found to be different where the Vulnerables were predominantly male, below 18 years, and with education up to high school level. On the other hand the representation in terms of gender, age and qualification among the resilient were comparable. Since the sample selection was purposive and based on beyond academic and social competence, there was no exercise of control on the incidental characteristics like gender age and qualification.

The two groups were compared on their perception of environment, and the results are given in table 2. It results indicate that the two groups differed significantly in their perception of physical (t = 6.41; p<.01) social (‘t’ = 9.44; p<.001) and cumulative environment (t =6.68, p<.001). It is observed that the perception of environment by resilient group is significantly positive compared to the vulnerable group.

A t test was done to test the differences between the two scores on Emotional Quotient. Table 3 presents the results of t test. The results reveal that the resilient group has significantly higher (t=18.51, p< .01) emotional quotient (M = 3.46) compared to their vulnerable counterparts (M = 1.62).
Discussion

This study is set in background that invulnerability is the functions of specific internal and external factors viz. the perceived environment and the emotional intelligence. Usually most of the models and theories are based on the vulnerable, but studying a healthy individual in an unhealthy setting would provide us with valuable information on the invulnerability. This study takes a middle approach by taking both resilience and vulnerable to understand the immediate environmental perception and emotional factors contributing to invulnerability. Perception of immediate environment assumes significance in the context of person with locomotor disability because it is the perception of physical environment with barriers, social environment consisting of others reaction to the disability and emotional environment around that determines the overall appraisal either as a threat or challenge to the performance, achievement and success. Emotional intelligence is assumed to be a major contributing factor in personal and social competence. Further, the perception and appraisal of environment are mutuality complementary.

This study indicates that the resilient group, despite locomotor disabilities, had favorable perceptions of the physical environment and social environment. Though, it is difficult to comment on the cause-and-effect relationship between resilience and positive environmental perceptions, it is reasonable to say that both are strongly related. These findings add to the existing knowledge that individual specific psychological factors such as positive perceptions and emotional strengths (Rutter, 1985), social factors (Werner, 1993) and accessibility (Smokowski, 1998) are important predictors of successful outcome even in the face of adverse situations. Further these findings strengthen the
current assumptions on disability and functioning that the contexts, opportunities for participation and settings play a major role in determining the effects of impairment (for example, ICF). This finding has several implications for a developing country like India where implementation of Law to develop a barrier-free and accessible environment is very necessary. While it takes considerable amount of time and patience to achieve this goal, the persons with disabilities cannot "wait" to take advantage of this facility in remote future. The only best alternate left is to bring about a change in their perception, which would help them to act and move in a direction to put in best efforts and be optimally mobile and sociable. This positive perception among the resilient is a belief related to locus of control that can be imparted to the vulnerable groups too by way of personality retraining.

Though, social environment was favorable, lack of group differences in the perceived emotional environment could be understood from two dimensions. One, emotional environment is not synonymous with social environment. Second, the social resources may not have translated into emotional resources. Or, even the study group had different connotation of, and expectations of emotional environment. This finding may imply that mere alteration of physical environment and social environment may not contribute to positive perception of emotional environment. Sometimes a very high positive social environment may translate into over concern, overprotection, depression etc. lowering the emotional environment. The reverse is also true. But, it would be worth studying how to facilitate positive views on emotional environment.

The above findings have implications for policy. The Persons with Disabilities Act of India (Government of India, 1996) envisages equal opportunities, protection of
rights and full participation of persons with disabilities. Accordingly, the state has the responsibility to create an accessible environment, and educate the general public about the rights of the people with disabilities in order to secure social support and acceptance. But the efforts in this direction are far from satisfactory. Overall, these findings raise a possibility of introducing interventional programs for significant family members of the physically challenged through certain modules of training to build a highly positive environment suitable for the physically challenged at home. Apart from home, Community support forms an essential factor in encouraging the physically challenged to bring the best out of them. This indicates the immediate need for sensitizing the general public about the need for extending positive support to the physically challenged. Unless this change is attempted in the attitudes of the society and public, the physically challenged may not be able to unfold their potentials and contribute their lot to the society. A physically challenged person's perception of home and neighborhood and attribution of supportive tendencies to them constitute major contributing factors to their general emotional state. Further, the attitudes of the significant others at home and of the community towards them constitutes the emotional environment of the person.

In summary, Vulnerables and Resilients differ on their perception of environment and emotional intelligence. Access to physical environment and a congenial social environment may reinforce the trait of invulnerability in persons with physical disabilities. Hence appropriate strategies to change the environment or change the perceptions about the environment should be in place. Future studies may focus on the facilitating and inhibiting factors of the environment favorable to physical accessibility, social integration and emotional support.
References


Table 1:

*Sample Characteristics.*

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Variable</th>
<th>Distribution of sample</th>
<th>$\chi^2$</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Resilient</td>
<td>Vulnerables</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>24</td>
<td>31</td>
<td>1.98</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>26</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Age range</td>
<td>13 to 18 years</td>
<td>27</td>
<td>39</td>
<td>6.42*</td>
</tr>
<tr>
<td></td>
<td>18 to 25 years</td>
<td>23</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Level of Education</td>
<td>High School</td>
<td>17</td>
<td>41</td>
<td>27.93**</td>
</tr>
<tr>
<td></td>
<td>Intermediate</td>
<td>18</td>
<td>09</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Graduate</td>
<td>15</td>
<td>00</td>
<td></td>
</tr>
</tbody>
</table>

* p< .01;

** p <.001.
Table 2:

*Perceptions of the Resilient and the Vulnerable about their immediate environment.*

<table>
<thead>
<tr>
<th>Domain</th>
<th>Group</th>
<th>M ± SD</th>
<th>t-value (df= 98)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Environment</td>
<td>Resilience</td>
<td>65.66 ± 12.76</td>
<td>6.41**</td>
</tr>
<tr>
<td></td>
<td>Vulnerable</td>
<td>49.80 ± 11.97</td>
<td></td>
</tr>
<tr>
<td>Social Environment</td>
<td>Resilience</td>
<td>54.64 ± 5.05</td>
<td>9.44**</td>
</tr>
<tr>
<td></td>
<td>Vulnerable</td>
<td>42.14 ± 7.88</td>
<td></td>
</tr>
<tr>
<td>Emotional Environment</td>
<td>Resilience</td>
<td>70.00 ± 7.73</td>
<td>1.30</td>
</tr>
<tr>
<td></td>
<td>Vulnerable</td>
<td>71.64 ± 4.43</td>
<td></td>
</tr>
<tr>
<td>Cumulative Environment</td>
<td>Resilience</td>
<td>190.30 ± 18.91</td>
<td>6.68**</td>
</tr>
<tr>
<td></td>
<td>Vulnerable</td>
<td>163.58 ± 21.02</td>
<td></td>
</tr>
</tbody>
</table>

**P < .01
Table 3:

*Differences between Resilient and the Vulnerable in Emotional Quotient.*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>t-test (df= 98)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Quotient Score</td>
<td>Resilient</td>
<td>3.46</td>
<td>.50</td>
<td>18.51**</td>
</tr>
<tr>
<td></td>
<td>Vulnerable</td>
<td>1.62</td>
<td>.49</td>
<td></td>
</tr>
</tbody>
</table>

**P < .01**