

Depression and anxiety among students with physical impairment studying in an inclusive setting

Dr. Maria Sohaib Qureshi¹, Dr. Hina Fazil², Prof. Dr. Humara Bano³

¹Assistant Professor, Institute of Special Education, University of the Punjab, Lahore, Pakistan.

²Assistant Professor, Institute of Special Education, University of the Punjab, Lahore, Pakistan.

³Chairperson/Director, Institute of Special Education, University of the Punjab, Lahore, Pakistan.

Abstract

Students with physical disability are at greater risk of bullying, harassment and social withdrawal (Maag & Katsiyannis, 2012). These challenges in addition to the challenges posed by the impairment may affect mental health of individuals (Hancova & Vavrova, 2016). The aim of this study was to identify the level of depression, anxiety and stress among students with physical impairment studying in an inclusive educational setting. Type of research was descriptive. A developed questionnaire called Depression, Anxiety and Stress Scale (DASS) was used to collect data from the sample of 160 adolescents with physical impairment. Same number of individuals was taken from each of the two genders by using convenient sampling. The collected data was analyzed using DASS scoring sheet and descriptive as well as inferential stat. According to the study's findings, more than half of the sample showed mild to moderate level of anxiety and depression, while no significant difference was found between the depression, anxiety and stress faced by male and female students with physical impairment in inclusive educational set up. Relevant stakeholders along with parents of students with physical impairment need to play active role in eliminating depression, anxiety and stress among these students.

Keywords: Physical impairment, depression, anxiety, stress.

Introduction

Students with physical impairment face several challenges including mobility issues, academic and social problems (Smith et al., 2012). This may increase the risk for these students to develop mental health problems (Anjeh, 2007). Additionally, a person's entire

well-being may be affected by physical impairment. Impact on quality of life due to disability can lead to isolation, anxiety and depression (Kohner, 2017).

Cerebral palsy, epilepsy, muscular dystrophy, and other health issues such as arthritis are all examples of physical disabilities. A physical impairment can be of neurological, musculoskeletal, lymphatic, skin or endocrine. When any condition of the said origin significantly creates problem in daily living activities, it then refers to physical disability (Allen & Cowdery, 2015).

Physical disability can affect any part of the individual from head to toe. Thus challenges from this disability may range from standing, walking, writing to eating, talking or even sitting (Basit, Qureshi & Arif, 2021; Ferrel, 2008; Gargiulo, 2006). A person's academics, learning, daily life and social performance all get disturbed (Basit, Qureshi & Arif, 2021). A student with physical condition may suffer from limitations in mobility and may require assistance with moving from classroom to lab or other places in the institution (Heubert, 2002). In addition to the dependence on others for mobility, they face stigma due to their body posture or disability (Smith et al., 2012). Despite possessing average or above average intelligence, children with physical disabilities are ignored by their classmates in inclusive setup (Cole, 2000; Doubt & McColl, 2003).

The mental health of persons with physical impairment is of significant concern. A research study by the Mental Health Commission of Canada (2012) suggested that 70% of all mental health disorders are normally experienced by adults and these may have been originated in childhood or adolescence. Children and adolescents with disabilities face an elevated risk of mental health problems as compared to their normal counterparts. It's crucial to remember that having a disability does not automatically lead to mental health concerns. However, specific conditions associated to disability can raise the likelihood of mental health symptoms (Smith, 2010; Turner et al., 2006).

Students with physical disability in all age groups face challenges in their schooling, but adolescents with physical condition face even more problems. Academics and education of adolescents with physical disability get badly affected due to limited social contact with their peers and pupils without disabilities (Doubt & McColl, 2003; Hemmingson & Borell, 2001). Among these students those with visible physical disability are at greater risk of being bullied (Anjeh, 2007; Maag & Katsiyannis, 2012). Grownups being sensitive feel more of the negative comments or humiliation due to their disability. When they are not included in group of non-disabled peers, this neglecting attitude of their classmates poses risk to their mental health (Hancova & Vavrova, 2016).

Despite the fact that a few studies have shown a link between physical disabilities and mental health issues (Smith, 2010; Tough et al., 2017) such as depression or anxiety (Kohner, 2017; Noh et al., 2016), yet studies on mental health problems of youth with physical disabilities in inclusive setting is scarce. Where students with physical disabilities in developed countries are prone to develop mental health problems, the risk may even be greater in a resource poor

country like Pakistan where awareness of disabilities and social acceptance are still in its inception phase. This study is an attempt to find out whether adolescents with physical impairment suffer from depression and anxiety in an inclusive educational setting in Pakistan or not.

Objectives of the study

Primary objectives of the investigations were:

1. To determine the level of depression in pupils with physical impairment.
2. To explore the level of anxiety in pupils with physical impairment.
3. To find out the level of stress pupils with physical impairment.
4. To identify the difference of stress, anxiety and depression across gender of students with physical impairment.

Research Methodology

This study being a descriptive research employed survey design to get insight of the issue.

Participants

The population of the study comprised adolescents with physical impairment studying in any educational institution in Pakistan. All the students between ages 13-24 years with physical impairment were considered potential participants of the study. As any public list of the students with physical disability studying in inclusive setting was not available at the time of this study, convenience sampling was considered appropriate. A sample of 160 students, including 80 girls with physical impairments and 80 boys with physical impairments, was conveniently selected from government higher secondary schools and colleges of Sharqpur, Lahore and Bahawalpur, University of the Punjab, University of Education, University of Engineering and Technology, Bahauddin Zakaria University and Islamia University Bahawalpur. Majority of the parents who participated in this study were from Lahore. Disability of the respondent included polio, amputee arm or leg, club foot, spina bifida, cerebral palsy and epilepsy.

Instrument of the study

A tool developed by The University of New South Wales in Australia known as Depression, Anxiety and Stress Scale (DASS) was used in this study. The tool is being translated in several languages including Urdu. A few versions of Urdu translations are available at University of New South Wales' website with an open permission to use the scale for research purpose. The Urdu translation of DASS used in this study was Huma Zafar's translation.

The total number of elements on the scale is 42, with 14 items on each subscale. A four-point scale measures the intensity and scope of each of their possible emotional states (Levibond, 1995). The participants are asked to tick the option which they think is an appropriate representation of their emotional state. Because non-clinical samples were used to design the DASS, it can be used to screen healthy adolescents and adults.

The DASS has high internal consistency and validity ((Levibond, 1995; Tran et al., 2013). Reliability (Cronbach’s alpha) for the overall scale of DASS was 0.88 (Tran et al., 2013). Reliability of the translated version was 0.83 for overall DASS and 0.63, 0.60, and 0.60 for depression, anxiety, and stress scales, respectively (Zafar & Khalily, 2015).

Data collection and analysis

DASS was used to collect the data from 160 adolescents with physical Impairment who consented to participant in the study. The participants were explained about the purpose of the research and were also provided with the essential information on filling up the scale. The completed DASS forms were then analyzed with DASS scoring sheet.

Results

Table: 1. Scores of students with physical impairment on DASS Scale

DASS item summary	DASS scale			
	did not apply to me	applied to me to some degree	applied to me to a considerable degree	applied to me very much
DASS Depression				
Couldn’t experience positive	42	26	23	9
Couldn’t get going	40	30	25	5
Nothing to look forward to	41	38	15	6
Down-hearted, blue	22	54	20	4
Lost interest in everything	42	44	8	6
Not worth much as person	28	50	17	5
Life meaningless	28	47	20	5
Couldn’t get enjoyment	41	40	12	7
Unable to become enthusiastic	40	45	9	6
DASS Anxiety				
Dry mouth	21	65	13	1
Breathing difficulty	43	36	10	11
Feeling faint	31	43	18	8
Trembling	31	50	15	4
Panic, make fool of self	42	45	11	2
Terrified	29	48	20	3
Worried about situations/ panic	18	49	23	10
Scared without reason	21	59	16	4
DASS Stress				
Upset by trivial things	65	24	9	2

Over-react to situations	45	47	5	3
Difficult to relax	21	58	18	3
Upset easily	20	57	18	5
Impatient when delayed	21	56	17	6
Touchy	50	28	10	12
Irritable	28	46	21	5
Hard to calm down	35	41	17	7
Difficulty tolerating interruptions	50	32	11	7

Table: 1 shows the percentage of the scores of students with physical impairment (N=160), on the DASS Scale. The range of scores on the DASS scale against each item was 0-3, which means the respondent could score between 0 to a maximum of 3 on each item. Score below 1 shows the disagreement of respondents on the applicability of that particular DASS item. The score on the higher end of the scale shows the agreement of the respondent on the applicability of that item on them. The table shows that the overall scores of students with physical impairment on each item of DASS. These score were further analyzed by using DASS scoring sheet. Interpretation of the results based on DASS manual (Levibond, 1995; Tran et al., 2013) is presented in Table 2.

Table: 2. Scores of students with physical impairment on DASS subscale of severity rating

DASS subscales	Depression	Anxiety	Stress
Normal	46%	18%	58%
Mild	20%	26%	21%
Moderate	12%	19%	11%
Severe	18%	15%	7%
Extremely severe	4%	22%	3%

Table 2 indicates the interpretation of the results based on DASS scoring manual. It shows that nearly half of the respondents (46%) with physical impairment were on normal level i.e. they did not face depression, while 32% respondents faced mild and moderate level of depression. However, 18% faced severe depression and 4% faced extreme level of depression.

Table 2 also shows that only a few participants (18%) were on normal level of anxiety i.e. they did not face anxiety. A reasonable number of students with physical impairment (26%) who participated in this study were facing mild level of anxiety, while, 19% of the respondents faced moderate level of anxiety. The respondents who faced severe anxiety were 15%, whereas 22% of the respondents faced extremely severe level of anxiety.

Third subscale on DASS as presented in Table 2 shows that majority of the students with physical impairment (58%) who participated in this study were on normal level of stress i.e.

they did not face stress, while 21% of respondents faced mild stress, 18% faced moderate to severe level, 3% face severe or extremely severe level of stress.

Ho: 1: There is no significant difference between the level of stress, anxiety and depression faced by male and female students with physical impairment.

Table: 3. t-test statistics for H0: 1

	<i>Gender</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>Df</i>	<i>P</i>
Depression	Male	80	2.12	.424	.830	128	.408
	Female	80	2.06	.324			
Anxiety	Male	80	2.24	.494	1.044	128	.298
	Female	80	2.16	.296			
Stress	Male	80	2.24	.370	1.206	128	.230
	Female	80	2.18	.225			
Total	Male	80	2.20	.343	1.286	128	.201
	Female	80	2.13	.220			

Table 3 indicates a non-significant difference ($t=1.286$, $P =.201 >.05$) between mean scores of male students with physical impairment and female students with physical impairment based on their overall score of stress, anxiety and depression. Although mean score for male students with physical impairment (2.20) was slightly higher than their female counterparts (2.13) for depression, anxiety and stress, but no significant difference was found between depression ($t= 830$, $p= 0.408$), anxiety ($t= 1.044.$, $p= 0.298$), and stress ($t= 1.206$, $p= 0.230$) faced by male students with physical impairment and female students. Ho: 1, stating no significant difference between the level of stress, anxiety and depression faced by male and female students with physical impairment was accepted.

Discussion

The present study found that the students with physical impairment face depression, anxiety as well as stress in an inclusive educational setting. The results are in line with a research conducted by Hankova and Vavrova (2016) who reflected on the reasons for emotional problems of students with physical disability in inclusive setting. They found that adolescent students with physical impairment experienced distrust from their nondisabled classmates and reluctance of teachers in accepting their specific needs. The findings are also streamed with Maag & Katsiyannis (2012) and Doubt & McColl (2003) who highlighted the reasons for mental health problems in students with physical impairment including limited social contact with their classmates without disabilities, bullying, humiliation and negative comments.

The results of this research are also in line with Noh et al., (2016) who stated that physical disability is closely linked to depression. Among females, the link between the disability and depression was shown to be even stronger (Smith, 2010; Noh et al., 2016). The conclusions

of this investigation are supported by Kohner (2017) who suggested that discrimination from nondisabled peers, inaccessible environment, unemployment and financial stress can cause depression and other mental health concerns for those with physical impairments.

The results of current research also indicated insignificant differences of depression, anxiety and stress faced by male or female students with physical impairment. These results are in line with previous studies on association between gender, physical disability, and mental health problems. No significant difference was found between male and female persons with or without disability regarding different aspect of mental health including depression and anxiety (Park et al., 2012; Pirkis, et al., 2009; Papadopoulos, et al., 2005).

On the contrary, Noh et al. (2016) reported that adolescent girls with physical disability face more depression than their adolescent counterparts. Although no significant different was found in this study in scores based on gender, yet mean scores of male students were slightly higher in all subscales of anxiety, depression and stress. This may give slightly different picture than Noh et al. (2016) who found girls at greater risk of mental health problems. One possible explanation for the differences in results may be cultural context (Girgus and Yang, 2015). In addition to physical disability, cultural factors may play their part in determining mental health across gender. The possible reason for this difference may be cultural context of our country. As the physical disability may hinder the way to earn a decent living; unemployment, financial burden and missing the joy of working may lead to anxiety and depression among many adolescents (Kohner, 2017). Men are supposed to earn for their families in Pakistan, having the fear of not getting a suitable job may give rise to depression and anxiety among male adolescents with physical disabilities in our context. Girls and boys with physical impairment both face social stigma and challenges in social acceptance and marital status (Kohner, 2017; Noh et al., 2016), and depression and other mental health problems are more common in unmarried individuals (Papadopoulos, et al., 2005). Yet in addition to the problems associated with marriage, men in our culture have to take financial responsibility of the family which may make them more prone to mental health issues. Further research on the issue in our cultural context may lead to a better conclusion.

Conclusion

Results from this study showed that adolescents with physical impairments experienced stress, anxiety, or depression while attending an inclusive educational environment. There was some mild to moderate depression, anxiety and stress among the participants, but one in three participants had severe levels of stress, anxiety, and depressive symptoms. Male and female students with physical disabilities did not differ significantly in their mean scores on depression, anxiety, or stress, either.

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