

# A Comparative Study of Relationship between Mental Health and Academic Performance among Adolescent Orphan and Non-Orphan Students: A Cross-sectional Study of Two Districts of Jammu and Kashmir

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**Abstract**—This study attempts to seek psychosocial approaches to properly understand and address mental health services needed for orphans especially in conflict and post-conflict settings. The present research aims to establish the level of mental health problems with academic performance among 112 orphan students aged 9–16 years who were studying in various caregiving institutions of the two districts of Jammu and Kashmir. Further this study tries to find the relation between mental health and academic performance in orphans and non-orphan adolescent students for this purpose, 224 adolescent students were selected via purposive and random sampling method. Standardized DASS measurement scale and composite mental index was used to measure mental health constructs in both orphans and no orphans which was completed by the adolescent students and their main caregivers. While students to ta leverage score for last two years was used as an index of their academic performance.

Finally, the data were analyzed using correlation coefficient models and independent-test for mental health constructs and academic performance. The statistical analysis results showed that adolescent orphans demonstrated high rates of anxiety, depressive and post-traumatic stress reactions as compared to non-orphans and there was strong significant relation with their academic. According to the findings of this study it can be evidenced that better the mental health outcomes, better is their academic output, although hit seems that the other social interaction terms also affects the academic performance.

Implications of findings of this study include that we need an orphan centered comprehensive solution within the policy dimensions for care giving institutions especially orphanages and should include psychosocial syndemic determinants to tackle wider mental health constructs within the philosophy of inclusive holistic development.

## 1. Introduction

Mental health has evolved as one of the priority public health issues and crucial component of overall global holistic development as recognized by the fact that India has adopted global sustainable development goals 2030 (SDGs) which has taken mental health (part of SDG Goal-3) as the first and foremost priority in the upliftment and development of the country and which bears in mind that mental morbidity leads to inequality and disparities in wider inclusive ecosystem.

Globally mental health conditions lead to immense disease burden affecting quality and functioning of life; and in times result in premature disability, morbidity and mortality. Decades of research has provided convincing evidence that the adolescent age group has remained as the most sensitive strata of society, which is vulnerable for psychological distress and who have detrimental effect of social trauma and conflict on cognitive, behavioral, emotional, academic and social development and addressing adolescent mental health has been coalited as a significant developmental issue particularly in conflict-affected regions.

Addressing and reducing mental health morbidity during initial phases especially during adolescent life has emerged as focus area for fostering better mental health outcomes, In 2017, the WHO named depression as the single largest contributor to global disability and India has taken substantial measures as seen in recent National health policy 2017 and with launch of National Mental Health Programme (NHMP).

Globally one in every five children and adolescent suffer from a mental disorder and two out of five who require mental health services which they do not receive. It is expected that by 2025 childhood neuropsychiatric disorder will rise to over 30% and will

become one of five most common reasons of morbidity, mortality and disability among children and adolescent[1]It is estimated that, in India, the economic loss, due to mental health conditions, between 2012-2030, is 1.03 trillion dollars. India has the largest population of children under age 18 in the world that makes about 400 million youngsters and out of that about 55 million are orphans;and around 10% of these are under institutional care like orphanages[2]

Children living under Instructional care like orphanages are one of the most vulnerable risk groups of children in a society: many of them live in a state of repeated neglect or fear[3]and are at risk of many potential abuses and threats. The knowledge of mental health status of these orphan children is important in estimating burden of problem.

This study is an attempt to provide health professionals with reliable information on the magnitude of the problem which will be valuable for policy planning, priority allocation and mobilizing political commitment for orphan institutional care in conflict ridden and low resource setting regions like Kashmir Valley.

### 1.1 Mental Health and Adolescents.

Adolescence is a phase marked by “rapid biopsychosocial changes and increased focus on activities with a peer group and establishment of a basic self-identity” [4].WHO (1998) considers "adolescence" to be the period between 13 to 19 years of age which is highly sensitized by external structural and social determinants attributable to cognitive and behavioural changes? The adolescence period is full of stress and strain as the growing desires of adolescent in this period arises and leaves a great impact on the mental health of the children. Mental health is a priority discipline regarding with adolescents in a new field[5]. In adolescence stage harmonious functioning and multidimensional personality like cognitive and emotional is incomplete without mental health which provides satisfaction and realization of senses.

**Mental health being a multidimensional construct has been defined as per its intended use, in case of adolescents it has been defined as “ability or capacity to adapt to various pressures and demands at that age and includes both cognitive and emotional elements [6].** Mental health is the fundamental to the well-being of adolescent and their ability to function more effectively. Mental Health is one of the crucial domains for adolescent health and wellbeing[7]. Optimal mental health for adolescent is required to recognize their abilities and handle stress and to contribute towards their academic fulfillments (WHO. 2012).

Mental distress or illness is generally reflected in the form of symptoms like lack of interest in daily activities, anxiety, tension, restlessness or hopelessness, lack of focus on academic activities among others. According to the findings of National Mental Health survey (2016), around 8% of adolescents suffer from some sort of mental illness and nearly 58 % do not get treated for these conditions (treatment gap). According to WHO, half of all mental illness begins by age of 14, but most cases go undetected and untreated.

### 1.2 Structural factors and Mental Distress in Orphans

Orphan well-being is multi-dimensional concept with multiple interlinked domains like mental health, economic wellness, educational opportunities, social and physical health[4]. The adolescent orphans constitute a most venerable and susceptible group among the children and adolescents which is at highest risk of multiple psychological distress. Literature has shown that variety of structural and environmental predictors interacting with each other are responsible for and increase the vulnerability of psychiatric problems in adolescent orphans.

Apart from psychological factors, mental health is greatly influenced by many environmental factors and life events such as armed and internal conflicts, physical and sexual abuse, poverty, parental psychopathology, instability in the family environment especially death of parents. Parental loss can lead to diverse psychological issues like depression, anxiety, stress, and poor self-concept[8].The literature also makes comparison reports between orphans and non-orphans about their emotional instability which, reveals that orphans suffer from high emotional problems as compared to non-orphans[9]. Orphan children are socially deprived and tend to encounter higher economic distress, hopelessness, and frustration than non-orphans [10].

The absence of social, emotional, psychological support such as parental support such as affection, attachment of family, self-efficiency, low self-esteem, social adjustment problems plays a vital role in the prevalence of risk behaviors among adolescents[11].According to Tadesse (2008), challenges faced by orphans are that they experience negative health, social and developmental outcomes resulting in poor school attendance and educational achievement and struggle to concentrate during lessons due to stress.

### 1.3 Institutional care and orphans

Emotional and behavioral problems are more among orphans because they are exposed to abuse, exploitation, neglect, lack of care and support of parents. In addition to these factors, most of them are brought up in institutional homes where individual care is inadequate making them socially and emotionally impair and insecure. In institutionalized adolescent orphans, many studies

have shown that there are higher prevalence rates of mental distress which affect their relationships, cognitive functions and result in functional impairment. Review of literature shows the prevalence of behavioral and emotional problems among orphans and other vulnerable children to be from 18.3% to 64.53% [12] while study by Gemechu and Lemibacha [13] showed prevalence of depression among orphans in orphanages was 24.1% and was slightly higher in females (27.2%) than in males (21.24%). One of studies showed that (95.4%) of the institutionalized orphan adolescents have below normal mental health and one in five (20.0%) orphan adolescents suffer from some kind of mental disorders [14], similar findings were given by other studies [15-16].

#### 1.4 Mental Health status of Orphans in Kashmir

Orphan numbers has grown manifold in conflict ridden Kashmir over the years, A study conducted by a UK based NGO "Save the Children" in December, 2006 mentioned that about 214, 000 children are orphans in Jammu and Kashmir in which most of these children are institutionalized and 37 % of them were orphaned due to the armed conflict while 55 percent were orphaned due to the natural death of parents. In the report of the United Nations General Assembly (2010), it was mentioned that UNICEF (United Nations Children's Fund) estimates that there are about 1 million orphans in Kashmir. According to a report, titled "Ignored Orphans of Jammu and Kashmir", published in Kashmir Watch under the Human Rights section in its December, 2011 issue, the number of orphans in the state is around 600, 000 children.

Literature gaps exist on the psychosocial health of orphans in Kashmir due to minimal studies. Conflict in Kashmir had an immense impact direct as well as indirect on children and adolescent, the impact has led to the economic hardships [17] emotional and relationship difficulties along with anxiety and depression, phobias, obsessive compulsive disorder and 30-50% suffer from post-traumatic stress disorder and psychosomatic conditions [18].

#### 1.5 Mental Health Constructs and Academic Performance

The constructs of mental health are composed of three elements, namely, depression, anxiety and stress. A wealth of research findings indicate that academic performance is affected by the mental health problems.

A mental health model introduced by Clark and Watson (1991) based on the framework that mental health is affected by the overlapping elements of depression, anxiety, and stress, these are the main contributing factors for mental wellbeing [19] This model has helped researchers strengthen and understand the symptoms and the relationship between these three parameters among adolescents. This study is based on the Clark-Watson mental health model of (DASS) Depression Anxiety Stress Scale to measure and explain the effect of mental health on academic achievement.

The term academic achievement is made of two words - academic and achievement. 'Academic' means any activity or action that is scholastic in nature - Achievement means the proficiency of performance in a given skill or body of knowledge. The academic achievement is assessed through overall abilities in academic process. There is not any particular test for assessing academic capabilities of a child. This study used average of percentile of previous two years grades obtained. A number of existing research findings have revealed that there is positive relationship between these parameters of mental health, and academic achievement in orphans and non-orphans [20-23]. Many studies [24-26] have shown that there is positive correlation between mental health and academic achievement and reveals that non orphans have better achievement as compared to orphan students.

Depression which is common problem among adolescents and jeopardizes academic performance [27-28] Results from many studies reveal that, depression in orphans' students leads to the difficulty in concentrating, lack of interest and motivation and poor attendance ultimately negatively affecting the performance of orphans in their academic. Results from number of studies have shown that orphan students suffering from anxiety disorder often do not perform well in lives and academics and there is significant negative correlation between anxiety and the achievement of grades [29-30].

Stress is the most common parameter of mental health existing in academic students, when Stress reaches to critical level when students fail to manage those problems [31].

## 2. Objectives and Value of study

Orphans and that too adolescents have emerged as the most vulnerable and suffering groups globally particularly in conflict ridden regions like Kashmir valley. The study adds to the existing literature and fills the information and knowledge gap about the extent and types of emotional and behavioral problems found in orphans and further this study tries to guide policy makers, academicians and institutional caregivers to guide and implement educational environment based on suitable intervention measures designed around orphan philosophy. The study was operationalized by objectives as:

- Assess and identify mental health distress and its effect on academic performance in institutionalized orphan students.
- To examine the differences in level of mental health and academic achievement of orphan and non- orphan adolescents.

- To suggest evidence-based solutions and best practices for effective interventions for institutionalization of orphan care especially in post-conflict reconstruction

### 3. Material and Methods

#### 3.1 Methodology employed

The study by design is a cross-sectional correlational employing triangulated approach helping in extending its ontological and epistemological scope. The study consisted of two gauged data collection survey instrument tools for measuring of mental health and academic achievement also a socio demographic questionnaire was also administered, the study used DASS 21 item mental health scale which has very high internal consistency and criterion validity it is a self-administered scale. Academic grade assessment was used for measuring academic achievement.

#### 3.2 Setting and Sampling strategy and eligibility criteria

<i>Districts</i>	Srinagar N (%) weighted	Budgam N (%) weighted
Institutional samples		
Orphanages	05 (41.6)	03 (43)
NGOs and other Caregiver Institutions	03 (25.1)	02 (28.5)
Special Schools	04 (33.3)	02 (28.5)
Total institutions	12	07
Adolescent student sample size		
Orphans (male:64, female: 48)	60	52
Non-Orphans (male:58, female: 54)	60	52
Total (male:122, female: 102)	120	104

Study was done between March-October 2019 across two districts Srinagar and Budgam of Jammu and Kashmir. The inclusion criteria of institutions included were academic services was provided and was both orphans and non-orphans were present. **Table: 1** depicts the sampling strategy used in the study for two districts. To ensure validity, fit and to minimize sampling biases and errors, samples of orphans and non-orphans were taken from same academic class and multiple sample design was operationalized. The statistical population consisted of non-orphans and “orphans” as defined, by (Skinner, 2008) The sampling was purposive for orphans and random for orphans of same academic class.

#### 3.3 Measuring mental health and academic performance

The data related to socio-demographic was collected through separate schedule and through field observations. In order to examine mental health, the mental health questionnaire DASS 21item short scale was used; this questionnaire contains 21 multiple-choice questions, classified in to three areas of depression, anxiety, stress with 7 items each and each item divide into a four-point severity scale with maximum score of 28 for each construct. The score was multiplied by 2 to make normative DASS data. Higher scores indicate lower level of mental health (Goldenberg, 1997). Grades are the most universally accepted indicators of achievement in educational setting that focus on the student and can be by their total average grade for last two previous years.

#### 3.4 Statistical analysis

Analysis of data was done using SPSS-25. Mental health level was assessed by a composite index using principal component analysis based on scores of DASS. Multiple Regression was done for parameters of mental health and academic achievement at the level of 95% and also using Pearson correlation coefficient and independent-test.

### 4. Findings

The age of orphan students ranged from 13-19 (mean 16 +/- 1.5) and of non-orphans was from 14-17 (mean 15 +/- 1.8). The respondents belonged to classes 8<sup>th</sup> to 12<sup>th</sup> while there were 122 males and 102 females out of total sample of 224. The results of DASS scores are shown in table 2. Anxiety was found to be more in females both in orphans and non-orphans than males, while as depression and stress scores were not significantly different in two genders. Scores of three constructs of mental health were highly correlated with each other. On analysis of association of academic classes with mental health scores it was seen that higher the class higher was the construct scores, anxiety ( $p=0.003$ ), depression ( $p=0.028$ ) and stress ( $p < 0.001$ ). Regression analysis showed that there was a significant relation between mental health score and educational performance in orphans as compared to non-orphans, higher the mental health score of students, the poor was their educational performance. Moreover, there was a significant relation between educational performance.

Table 2: Details of analysis of DASS scores of respondent students.			
Range of DASS score is (0-42), Min 0 value and Max 42 value			
Mean score (standard deviation)			
	Depression	Anxiety	Stress
Orphans	18.6 (4.5)	14.4(6.7)	21.3 (5.6)
Non -Orphans	16.4(5.6)	12.1(7.8)	18.9(8.9)
Correlation coefficient between 3 construct scores of Mental Health			
Students	Orphans		
Depression	1.00	0.567	0.76
Anxiety	0.567	1.00	0.69
Stress	0.76	0.69	1.00
Students	Non-Orphans		
Depression	1.00	0.367	0.65
Anxiety	0.367	1.00	0.56
Stress	0.65	0.56	1.00

Table 3: Analytical data related to mental health, its Constructs and Academic performance for orphans and non-orphans of Study in two Districts of Union Territory of Jammu and Kashmir					
Variables of Study	Number	Average and standard deviation	T Value	P Value	Results
Orphans					
GPA- Average for last two years (%)	112	56±6.32	5.85	-	-
Mental health Composite Score (Scale of ten)	112	8.8±1.7	1.98	0.019	Significant
Stress	112	1.9±0.2	2.11	0.036	Significant
Anxiety	112	2.8±1.5	1.71	0.021	Significant
Depression	112	4.1±1.9	0.92	0.015	Significant
Non-Orphans					
GPA- Average for last two years	112	69.9±4.56	7.85	-	-
Mental health Composite Score	112	5.6±2.9	2.25	0.047	Significant
Stress	112	0.8±0.2	4.12	0.189	Not Significant
Anxiety	112	1.7±0.5	3.70	0.074	Not significant
Depression	112	3.1±4.2	1.96	0.035	Significant

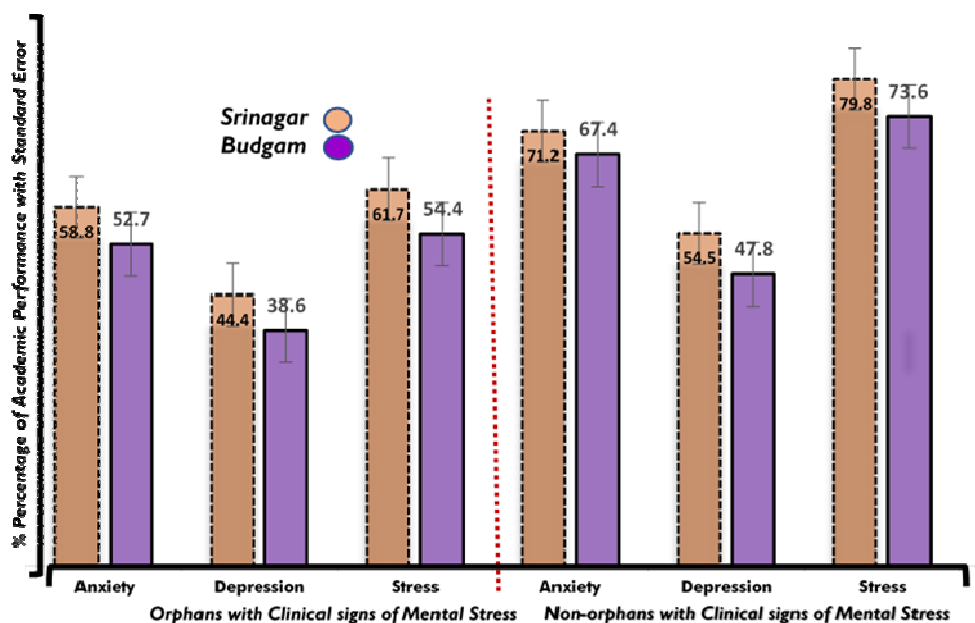
and components of mental health% depression, anxiety; and stress in orphans while as in non-orphans there was no significant relationship at 95% CI for anxiety and stress. Summary of correlational analysis is shown in table 3.

The prevalence of stress was found to be most followed by anxiety and depression in both the districts. While parameters of mental health were worst in Budgam district as compared to Srinagar district. Status of Mental health components of orphans and non-orphans in two districts of Jammu and Kashmir is shown in figure 1.

### 5. Discussion and Conclusion

In this study significant relations were found between educational performance and mental health components, such as depression and anxiety, it seems that orphan students who have a better mental health status, that is those who obtained lower scores in the mental health questionnaire, have a better educational performance. These finding were in agreement with findings of the many studies [32-34], [21-22], [24].

while as in non-orphans there was significant relation in some of components of mental andnon-agreement can be ascribed to the various predictors affecting both non orphans and orphans such as difference among, living environment, social/economic conditions, and seemed that the students' educational status is influenced by other factors as well.



**Figure 1: Shows Mental health Constructs and Academic Performance levels in Orphans and Non-Orphans for two districts of Jammu and Kashmir**

Our findings suggest that we should take psychological distress in adolescents especially in orphans seriously and intervene at early phase of distress so that negative effect of mental health on the academic side and on their daily activities do not worsen and students are able to cope efficiently and effectively to their academic, personal and time management issues. The psychosocial and mental health services for traumatized adolescents especially orphans need to be addressed strengthened and more specifically integrated into existing institutional care platforms within the National mental health policy in line with SDG.

Our policies should not only promote treatments but provide overarching directions and infuse interventions on broader issues for ensuring mental health in distressed adolescents especially orphans. Institutions especially orphanages need to incorporate development model for education with stress free approach for inclusive development of orphans. Our research tries to assess orphan students on the basis of academic achievement and compare them with non-orphan adolescents; the research will guide the educationists, institutional administrators, policy makers to frame the suitable interventions for optimization of both mental health and academic activities. Further the study aimed at providing interventions for optimization of institutional care as shown in **box 1**.

**Box 1: Key points for Optimizing Mental health Care in orphans**

- Augment interaction between institutional orphans and mental health system.
- Improve adherence to mental health protocols and guidelines around orphans.
- Delivering and practicing orphan centered care.
- Capacity building for mandated maternal services.
- Leveraging quality care evidences based on implementation research of NMH programme.
- Inclusion of primary mental care service for children with special needs.
- Multisectoral engagement and a life-course approach towards adolescents.

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