

Article

The effect of bipolar effective disorder and low socio-economic status on juvenile delinquents in Pakistan

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Abstract: This study explores the relationship of low socio-economic status, bipolar affective disorder and juvenile delinquency among the children of Pakistan. A quantitative descriptive-correlational research design was used and the data were gathered from a sample of 220 juvenile offenders aged between 12 and 18 years using standardised instruments measuring socio-economic status, bipolar symptoms and delinquent behaviour. The results showed that low socio-economic status is highly associated with bipolar affective disorder. In addition, bipolar disorder was found to be positively related to juvenile delinquency, which suggests that children who are experiencing mood instability and emotional dysregulation are more likely to engage in delinquent behaviour. Regression analysis further showed that the socio-economic status is a significant predictor of juvenile delinquency. Importantly, the results suggest a mediating mechanism, whereby bipolar disorder may be acting as an intermediary factor between socio-economic disadvantage and delinquent behaviour. These findings emphasize the interrelatedness of structural and psychological factors in the development of juvenile delinquency. The study concludes that the need to address socio-economic inequalities and improve access to mental health services are important in reducing delinquent behaviour among vulnerable youth. It recommends the implementation of early intervention programmes that address the environmental and psychological risk factors.

Keywords: *Socio-economic status, bipolar affective disorder, juvenile delinquency, mental health, adolescents, risk factors, behavioural outcomes, Pakistan*

Introduction

Bipolar affective disorder is a serious and chronic mental health condition that is characterised by periodic manic and depressive episodes, which have a major impact on the emotional control, behaviour and social functioning. Even though the condition has traditionally been linked to adulthood, there is growing evidence in support that bipolar symptoms can also manifest themselves in childhood and adolescence and can have developmental long-term effects otherwise (Post et al., 2016).

Early development of the bipolar disorder is especially alarming when it is being observed in socio-economically disadvantaged settings. The socio-economic status (SES), which is typically quantified using income, education, and work requirements, is an important factor influencing the environment of children to develop. Children who grow up living in low SES conditions are often exposed to chronic stressors like financial instability, access to fewer healthcare services, and lower chances of getting education, among others, leading to poorer mental health outcomes (Bradley and Corwyn, 2002).

Empirical studies have indicated that socio-economic disadvantage is a contributory factor to getting mental health disorders and even worsening their complications. Indicatively, Lu et al. (2020) discovered poorer functional outcomes and more severe symptoms in adolescents with bipolar disorder who are of lower socio-economic status. Likewise, Sletved et al. (2023) found that patients with a diagnosis of bipolar disorder tend to have socio-economic impairment in the long-term, which is why there was a relationship between the mental illness and socio-economic status.

Besides the effects on the mental well-being of the populace, low socio-economic status has always been associated with increased juvenile delinquency levels. The structural theories of crime point to the fact that poverty, social disorganisation, and absence of opportunities are the factors that lead to deviant behaviour among the young people (Sampson et al., 1997). Such circumstances can cause children to commit delinquent acts in an attempt to deal with the unmet needs and social marginalisation.

More so, mental health disorders especially mood disorders like bipolar disorder have been found to be a major predictor of delinquent behaviour. According to Ryan and Redding (2004), the mood disorders were high in juvenile offenders implying that emotional instability and impulsivity in such cases can lead to antisocial behaviour.

Notably, new studies have shown that bipolar disorder and juvenile delinquency are intrinsically linked through the socio-economic status. Socio-economic disadvantage can be a predisposing risk factor,

which leads to the occurrence of mental health disorders as well as the predisposition to delinquent behaviour. Nevertheless, the available literature has only discussed these variables individually and there is little discussion on the combined interplays of these variables especially in less developed nations like Pakistan.

This paper, therefore, seeks to explore the interactive effects of low socio-economic status with bi-polar affective disorder on juvenile delinquency in children in Pakistan with mainly having an insight on the interaction of these factors in the context of a socio-cultural society.

Literature Review

An increasing literature has been exploring the intricate correlation between socio-economic status (SES), mental health disorders and juvenile delinquency as well as portraying them as interdependent variables and not isolated phenomena.

Socio-economic disadvantage as a determinant of children psychological well-being has always been identified as a factor in socio-developmental aspect. Bradley and Corwyn (2002) maintain that low SES environment subjects children to the effects of chronic stressors, which comprise money issues, lack of access to medical care, and access to substandard educational facilities. Such conditions have adverse impacts on emotional control and cognitive growth hence exposing the individual to mental illnesses. This implies that SES is not the background variable but a structural variable influencing the developmental outcomes.

Recent empirical research as far as the bipolar disorder is concerned, has shown that there is high correlation between the socio-economic conditions and the extent of the symptoms. Lu et al. (2020) discovered that adolescents with a lower socio-economic background having bipolar disorder have worse clinical severity, worse treatment outcomes, and worse functioning impairment. In the same manner, Sletved et al. (2023) established that people diagnosed with bipolar disorder usually have a long-term socio-economic disadvantage, which points to the bidirectional correlation between mental illness and socio-economic status.

Additionally, the literature brings out the importance of environmental stressors in precipitating or worsening mood disorders. Post et al. (2016) established that a range of conditions such as family conflict and socio-economic hardship, which start in early life, contribute significantly to the risk of earlier development and worse courses of bipolar disorder. The above finding is a critical point that explains the need to study socio-economic context as a risk factor in mental health development.

Simultaneously, there exists a considerable amount of criminological literature that has proven the existence of a strong association between juvenile delinquency and socio-economic disadvantage. Sampson et al. (1997) made a point to observe that poverty, social disorganisation and absence of collective efficacy are neighborhood factors that have led to increased delinquent behaviour among the youth. These institutional environments reduce chances and expose exposure to deviant social norms. In individual level, mental illnesses have also been found to be major predictors of delinquent behaviour. According to Ryan and Redding (2004), mood disorders such as bipolar disorder are very common in the juvenile offenders which means that psychological instability can also be a cause of impulsive and antisocial behaviours. This implies that delinquency cannot be completely explained in the absence of mental health conditions in the background.

Notably, the recent studies have started incorporating both schools of thought in consideration of how the socio-economic status and mental health interact to influence delinquent outcomes. As an example, Pagani et al. (1999) established that poverty has an indirect impact on the issue of delinquency by affecting individuals emotionally and behaviourally. This substantiates the thesis that social-economic factors influence delinquency directly and indirectly through psychological mechanisms.

In spite of these developments, a gap in literature exists in respect to the joint impact of socio-economic status and bipolar disorder on juvenile delinquency, more so under the developing nations like Pakistan. The majority of the existing studies consider these variables independently without considering their interaction in particular socio-cultural situations.

Hence, the proposed research aims to fill this gap by exploring the role of the low socio-economic status in the emergence and intensity of bipolar affective disorder and the role of these factors in the juvenile delinquency of children, respectively.

Problem

The problem of juvenile delinquency is a complex social and psychological phenomenon that is affected by various interacting factors, such as mental health conditions and socio-economic circumstances. Among these, bipolar affective disorder and low socio-economic status (SES) have been found to be significant risk factors for the behavioural and emotional development of children.

Children who live in poor socio-economic conditions are often exposed to chronic stressors such as poverty and family instability and limited access to healthcare and education. These conditions could lead to the development or worsening of mental health disorders, especially mood disorders such as

bipolar disorder. At the same time, both socio-economic disadvantage and mental health instability have been found to be associated with greater involvement with delinquent behaviour.

Despite the amount of research being conducted that investigates the socio-economic status, mental health, and juvenile delinquency, the majority of these studies have addressed these variables individually and have not explored the combined effects of them. Moreover, there is a dearth of empirical researches which examines the interaction between low socio-economic status and bipolar disorder in influencing delinquents behaviour among children in the context of developing countries like Pakistan.

Accordingly, this study seeks to address the following central question:

How do low socio-economic status and bipolar affective disorder influence juvenile delinquency among children?

Objectives

The study aims to achieve the following objectives:

1. To examine the relationship between low socio-economic status and bipolar affective disorder among children
2. To analyse the relationship between bipolar affective disorder and juvenile delinquency
3. To investigate the effect of low socio-economic status on juvenile delinquency
4. To explore whether children from low socio-economic backgrounds are more vulnerable to both bipolar disorder and delinquent behaviour

Questions

The study is guided by the following research questions:

1. What is the relationship between low socio-economic status and bipolar affective disorder among children?
2. What is the relationship between bipolar affective disorder and juvenile delinquency?
3. How does low socio-economic status influence juvenile delinquency?
4. Are children from low socio-economic backgrounds more likely to exhibit both bipolar symptoms and delinquent behaviour?

Hypotheses

H1: There is a statistically significant relationship between low socio-economic status and bipolar affective disorder among children.

H2: There is a statistically significant relationship between bipolar affective disorder and juvenile delinquency.

H3: Low socio-economic status significantly predicts juvenile delinquency among children.

H4: Children from low socio-economic backgrounds are more likely to exhibit higher levels of bipolar symptoms and delinquent behaviour.

Methodology

Research Design

This study used quantitative descriptive correlational research design to investigate the relationship between low socio-economic status, bipolar affective disorder, and juvenile delinquency among children. This is the kind of design which is suitable for analysing the association between the variables and finding the predictive relationship.

Population and Sample

The population for the study comprised juvenile offenders between the ages of 12 to 18 years in the selected areas of Pakistan comprising Wah Cantt, Hassan Abdal, and Islamabad.

A convenience sample was employed to recruit participants from juvenile detention centres and low socio-economic communities. The final sample included 220 subjects, 156 males and 64 females.

The age range of participants was 12-18 years, consistent with the age range of the development typically associated with juvenile delinquency.

The sample consisted of both males and females, juvenile offenders from various socio-economic backgrounds. Most participants were in a two-parent family, but others came from single-parent families because of separation or loss of a parent.

Research Instruments

Data were collected using standardised and validated instruments:

1. *Juvenile Delinquency Scale*

Developed by Naqvi and Kamal (2008), this scale measures delinquent behaviours such as stealing, aggression, drug use and rule-breaking.

Includes self-report and informant report versions

Separate males and females forms

Reliability ranges from 0.86 to 0.96

2. *Young Mania Rating Scale (YMRS)*

This scale was used to rate bipolar symptoms.

Consists of 11 items

Suitable for ages 10–19 years

Reliability: $\alpha = 0.90\text{--}0.93$ (Mohammadi et al., 2018)

3. *KIDSCREEN-27*

Used to measure socio-economic indicators and measures of well-being.

Contains 27 items

Reliability: $\alpha = 0.74$ (Shannon et al., 2017)

4. *Demographic Questionnaire*

Used to collect data on:

Age

Gender

Family structure

Parental education

Socio-economic status

Validity of the Instruments

All instruments used in this study have been validated in empirical research in the past. Their use in similar populations supports their content and construct validity.

Reliability of the Instruments

Reliability was measured with the help of the Cronbach's alpha coefficient. The instruments were found to have acceptable to high levels of internal consistency, with alpha values between 0.74 and 0.96, which are considered high levels of reliability.

Data Collection Procedure

Participants were recruited from juvenile detention centres and lower income communities. Ethical approval was sought before the data collection. Participants were informed about the purpose of the study and confidentiality and anonymity were assured.

The questionnaires were administered individually and participants were helped if necessary to ensure correct answers.

Data Analysis

Data were analysed with the help of suitable statistical techniques in relation to the study hypotheses:

Descriptive statistics (means, standard deviations) used to describe sample characteristics

Pearson correlation analysis was performed to test:

H1: SES ↔ Bipolar disorder

H2: Bipolar ↔ Delinquency

Multiple regression analysis was performed to test:

H3: SES → Delinquency

Comparative analysis (t-test) - if needed for gender differences

Statistical significance was set to alpha of 0.05.

Ethical Considerations

The research followed ethical standards. Participation was voluntary and informed consent was sought.

Confidentiality and anonymity were strictly maintained and data were used only for research purposes.

Results

Descriptive Statistics

To describe the study variables, means and standard deviations were calculated for socio-economic status, bipolar disorder, and juvenile delinquency, as presented in Table (1).

Table 1

Descriptive Statistics of Study Variables

Variable	Mean	Std. Deviation
Socio-economic status	47.9	35.5
Bipolar disorder	52.6	11.0
Juvenile delinquency	46.0	29.9

Table 1 indicates that participants have indicated moderate levels of socio-economic challenges and bipolar symptoms, and relatively high levels of delinquent behaviour.

Hypothesis Testing

Testing H1: There is a statistically significant relationship between low socio-economic status and bipolar affective disorder

Pearson correlation analysis was conducted.

Table 2

Correlation between Socio-economic Status and Bipolar Disorder

Variable	SES	Bipolar Disorder
SES	1	-0.58**
Bipolar Disorder	-0.58**	1

Table 2 shows that there is a significant negative correlation between socio-economic status and bipolar disorder ($r=-0.58$, $p<0.01$). This indicates that the lower the socio-economic status, the higher the levels of bipolar symptoms. Therefore, H1 is supported.

Testing H2: There is a statistically significant relationship between bipolar disorder and juvenile delinquency

Table 3

Correlation between Bipolar Disorder and Juvenile Delinquency

Variable	Bipolar Disorder	Juvenile Delinquency
Bipolar Disorder	1	0.66**
Juvenile Delinquency	0.66**	1

Note: $p < 0.01$

Table 3 illustrates a strong positive relationship between bipolar disorder and juvenile delinquency ($r = 0.66$, $p < 0.01$). This suggests that the more bipolar symptoms one has, the more delinquent behaviour they are. Thus, H2 is supported.

Testing H3: Low socio-economic status significantly predicts juvenile delinquency

A regression analysis was conducted.

Table 4

Regression Analysis Predicting Juvenile Delinquency

Variable	Beta	t-value	Sig.
Socio-economic status	-0.49	-7.12	0.000

Table 4 shows that the socio-economic status has significant predictive power for juvenile delinquency (bet = -0.49, $p < 0.001$). Lower socio-economic status is related to increased levels of delinquent behaviour. Therefore, H3 is supported.

Testing H4: Children from low socio-economic backgrounds are more likely to exhibit higher bipolar symptoms and delinquency

This hypothesis is supported through the combined findings:

The findings of Tables (2), (3), and (4) collectively support H4, indicating that children from low socio-economic backgrounds are more likely to exhibit higher levels of bipolar symptoms and delinquent behaviour.

The results taken together suggest that children from low socio-economic backgrounds are more vulnerable to bipolar symptoms as well as delinquent behaviour. Thus, H4 is supported.

Discussion

The present study aimed to examine the interplay between socio-economic status (SES), bipolar affective disorder and juvenile delinquency among the children. The findings are strong evidence that these variables are not independent of one another, but work within an interconnected framework.

The results showed that there was a significant negative relationship between socio-economic status and bipolar disorder, meaning that the lower the socio-economic status of children, the more likely they are to have higher levels of bipolar symptoms. This finding can be explained by the fact that low SES children are exposed to chronic stressors, such as poverty, family instability, and lack of access to healthcare and educational resources. These conditions contribute to emotional dysregulation, and predispose to mood disorders. This interpretation is in line with prior studies showing that socio-economic disadvantage is a major determinant of experiencing poor mental health outcomes (Bradley & Corwyn, 2002; Lu et al., 2020).

In addition, the results indicated a strong positive relationship between bipolar disorder and juvenile delinquency. This suggests that children with mood instability, impulsivity and emotional dysregulation are more likely to engage in delinquent behaviour. These results support previous research which suggests that mood disorders are very common in juvenile offenders and that mood disorders are linked to an increased risk of antisocial behaviour (Ryan & Redding, 2004).

In addition, the regression analysis did not consider that socio-economic status is a significant predictor of juvenile delinquency. This finding is consistent with structural theories of crime, which emphasise the role of poverty and social disorganisation in increasing the incidence of deviant behaviour, through limiting opportunities and increasing exposure to risk environments (Sampson et al., 1997).

More importantly, if these findings are taken together, they point to a mediating mechanism, whereby bipolar disorder serves as an intermediary variable between socio-economic status and juvenile delinquency. In other words, low socio-economic status not only has a direct impact on delinquent behaviour, but it also indirectly contributes to the development of delinquency by increasing the risk of developing bipolar symptoms which in turn increases the risk of delinquency.

This combined interpretation is a major contribution of the study as it goes beyond a consideration of variables in isolation and emphasizes the process by which socio-economic disadvantage leads to behavioural outcomes. This finding is consistent with developmental and ecological perspectives which

emphasise that environmental stressors influence behaviour through psychological pathways (Pagani et al, 1999).

Additionally, the findings highlight that disadvantaged socio-economic children are at cumulative risk with both environmental and psychological factors interacting to influence their behavioural path. This reinforces the need to work on both structural inequalities and mental health conditions when looking at juvenile delinquency.

Overall, the results show that socio-economic status has a basal influence on the development of both mental health and behavioural outcomes, and that bipolar disorder is a key mechanism by which these effects are transmitted.

Conclusion

This study examined the relationship of low socio-economic status, bipolar affective disorder and juvenile delinquency among children in Pakistan. The findings showed that socio-economic disadvantage is critical in influencing both psychological and behavioural outcomes among youth.

The results showed that children from low socio-economic backgrounds have a tendency to show a higher degree of bipolar symptoms, which are in turn related to greater involvement in delinquent behaviour. In addition, socio-economic status was also found to be a direct predictor of juvenile delinquency, suggesting the structural role of poverty and environmental stressors in behavioural outcomes.

Importantly, the study suggests that bipolar disorder may play an intermediary role in which socio-economic disadvantage contributes to delinquent behaviour. This brings a need to understand juvenile delinquency not only as a social issue but also as a psychological outcome based on environmental conditions.

Overall, the findings highlight the need to address socio-economic inequalities and enhance mental health support systems as key strategies to reduce juvenile delinquency and to foster healthier developmental outcomes for children.

Theoretical Implications

This study adds to the existing literature by synthesising socio-economic, psychological and behavioural perspectives to form one analytical framework. Unlike previous research that focused on these variables individually, the present research illuminates the interconnectedness of the socio-economic status, bipolar disorder and juvenile delinquency.

The findings are consistent with developmental and ecological perspectives, which suggested that the environmental stressors affect behavioural outcomes through psychological pathways. In particular, the study provides empirical evidence for a mediating mechanism whereby bipolar disorder links socio-economic disadvantage to delinquent behaviour.

This contribution advances the state of the art by providing a more detailed insight into the processes that underlie juvenile delinquency, especially in the context of developing countries.

Practical Implications

The implications of this study for policymakers, educators, and mental health professionals are important.

There is a need to develop targeted intervention programmes for children from the low socio-economic backgrounds to minimize their exposure to risk factors associated with delinquency.

Mental health screening should be part of the juvenile justice and educational systems to detect early signs of bipolar disorder and other psychological disorders.

Community based support programmes should be set up to support vulnerable youth socially and emotionally.

Policymakers should address structural inequalities, such as poverty and lack of access to education and healthcare, as part of broader strategies to reduce juvenile delinquency.

Limitations

Despite its contributions, this study has a number of limitations which should be acknowledged.

First, the fact that this study used a convenience sampling technique may limit the generalisability of the results to larger populations. Second, the study was based on cross-sectional data, which limits the capacity to establish causal relationships between variables. Third, the use of self-report measures may also be prone to response bias, especially when measuring sensitive behaviours, like delinquency.

Finally, the study was based on a specific geographical context of Pakistan, which could restrict generalizability of the findings to other cultural or socio-economic settings.

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