

# **Psychological Problems of Intellectually Gifted Children**

## **A Cross-sectional Study**

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### **ABSTRACT**

*The study seeks to develop a more specific line of inquiry by stating that gifted adolescents are not at par in mental health, and may have mental health issues. As many of these disorders originate in childhood, the school and home personnel need to be aware of the broad range of signs and symptoms which children may demonstrate in their environment. The present study aimed to identify the psychological problems of clinically referred intellectually gifted children. A cross-sectional study with purposive sampling was used. Referrals from various clinicians of children with very high intelligence for over a year were included. Measurements include informed consent, socio-demographic data sheet, Standard Progressive Matrices (SPM), and Developmental Psychopathology Checklist (DPCL). Out of 81, 25 (31 per cent) children come under the category of Grade 1, above the 95 percentile. Findings on the psychopathology checklist reveal that about 50 per cent of the children with intellectual giftedness clustered under the category of internalising problems and about 40 per cent of children with intellectual giftedness tend to have externalising problems. About 20 per cent of children tend to be overlapped with both internalising and externalising problems. About 32 per cent of them tend to be overlapped within the cluster of externalising problems. Similarly, 36 per cent of them tend to be overlapped within the internalising cluster. Results of the present study suggest that intellectually gifted children are also vulnerable to mental health problems similar to or more than their peer group dealt with. It was also*

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*an eye-opener to the fact that gifted children exhibit behavioural or emotional problems, at least for minor groups requiring special interventions. By prioritising the social and emotional well-being of gifted students, schools can create inclusive and supportive learning environments where all students can thrive.*

**Keywords:** *Giftedness, mental health, psychological problem, cross-sectional study.*

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## Introduction

There has been a long-standing debate on the psychological problems of intellectually gifted children. Few reported giftedness as an obstacle to the mental health functioning of such children (Baudson, 2016), may make them vulnerable to psychological maladjustment (Silverman, 1994), and feel indifferent from peers (Lein, 2021). Commonly observed behavioural and emotional challenges in intellectually gifted children include anxiety (Guignard et al., 2012), social withdrawal, low self-esteem, and excessive perfectionism—all falling under the category of ‘internalising’ problems (Zahn-Waxler et al., 2000). On the other hand, externalising behaviour problems encompass issues that manifest in children’s outward behaviour, reflecting negative actions towards the external environment (Campbell et al., 2000; Eisenberg et al., 2001). Others portrayed as emotionally stable and well-adjusted individuals (Weynes et al., 2021; Lein, 2021), have high problem solving skills which may act as a resilience to mental health and well being (Neihart et al., 2002), cope with emotional problems (Alabassi et al., 2021), and have higher levels of global self-esteem compared to non-gifted peers (Paniagua Infantes et al., 2022). Most of the empirical studies in literature reported the positive output of psychological adjustment of intellectually gifted children. Systematic review of Francis et al., (2016) found that intellectual giftedness was associated with lower levels of anxiety, depression, psychopathology, and behaviour problems. Another meta-analysis concluded that anxiety disorders are less in gifted youth but there are comparable differences with peers in terms of suicide and depression (Martin et al., 2010).

The variations in the findings of various researches might be due to the methodological issues. The main methodological concern is the recruitment of samples from different settings

like, selection from institutions of intellectually gifted students, from clinics or hospitals, general population or specific academic programmes. The children who select from the clinics may overrepresent the psychological issues as they are in need of psychological aid. Similarly, there might be underestimation of emotional and behavioural problems in schools as majority would show good output in academics. Another controversy is selection of psychological tests used for assessing gifted individuals as there is no defined definition for identifying such children. Teacher nominations, intelligence or cognitive ability tests like, Raven Progressive Matrices and Weschler Intelligence Scale for Children and Peer nominations, Parent referral or portfolios, are the various tools used to identify intellectually gifted children. Since, most consensual definitions of intellectual giftedness suggest intelligence as one of the major factors, the IQ is considered to be a valid score to identify intellectually gifted children and adolescents.

Summarising, our study investigated the identification of psychological problems of intellectually gifted children who are seeking help from mental health clinics. An array of mental health indicators was studied to identify the prevalence of internalising disorders such as, anxiety, emotional problems, somatic concerns, obsessive-compulsive symptoms and depressive symptoms as well as externalising disorders such as, conduct problems, hyperactivity, aggression, and other concerns. Children exhibiting externalising behaviours tend to receive more treatment compared to those with internalising disorders, as internalising behaviours may go unnoticed by parents, are less likely to be identified by teachers, and often receive inadequate attention from clinicians (Chavira et al., 2004; Kazdin and Weisz, 2003). Early identification of such disorders is crucial, as problem behaviours frequently lead to academic and social difficulties, which can escalate into more severe issues in later academic years (Masten et al., 2005). These challenges can be better understood by examining the characteristics of gifted adolescents and delving into their social environments. The current research framework primarily concentrates on identifying gifted children using the Standard Progressive Matrices (SPM) (Raven, 2008) and assessing their mental health through the Developmental Psychopathology Checklist (DPCL) (Kapur, 1995).

## **Objectives**

The current study aimed to explore the psychological problems experienced by intellectually gifted children. The main objectives of the study were:

- To identify intellectually gifted children referred for various mental health problems using the Standard Progressive Matrices (SPM) from clinics.
- To explore the socio-demographic profile of intellectually gifted children through socio-demographic data sheet.
- To elevate the psychological problems of intellectually gifted children using the developmental psychopathology checklist.

## **Research Method**

The study was in cross-sectional design with a purposive sampling technique.

## **Sample**

About 25 children of the age range of 11 to 16 years of both sexes were identified as intellectually gifted during the study period (SPM, 95 percentile and above) who came to the clinic either directly or referred from other places for management of various mental health issues. The cases presented with complaints such as, deterioration in the study from the past few years, disobedience, anger outbursts, not concentrating in studies, easily being distracted, anxiety and low self-esteem.

## **Procedure**

The study was conducted for a period of one year from November 2020 to October 2021. Children in the 11–16-year age group who were referred to the research scholar from clinical psychologist for the assessment and psychological management, after evaluation by psychiatrists, clinical psychologists, and other clinicians from various clinics during the study period were taken up for the study. Parental consent was taken. The other clinicians referred the children to the scholar with a provisional diagnosis of high intelligence. The children who score at or above the 95 percentile on SPM were only considered to be intellectually gifted. Children who scored above 92 percentile were also scored. Only children in the age range of 11 to 16 years of both sexes were chosen for the study. Children who seek psychological help for the first time were

considered for the study. Those children were excluded from the study who have pervasive developmental disorders. Children with severe visual, auditory, and speech impairment were also excluded. Children who were suggested or undercurrent psychological help like pharmacotherapy were also excluded. The ethical approval was obtained from the Institutional Review Board. For statistical analysis, descriptive analysis was used.

## Measures

### 1. Standard Progressive Matrices (SPM)

The Raven Standard Progressive Matrices (RPM) test was developed in the U.K. and is one of the best-known and most popular non-verbal group tests. The RPM can be administered to a group or individual and covers an age from five years through elderly adults. The test may be used with or without any time limit, and research supports the RPM as a measure of general intelligence. The Indian norms for Ravens' standard progressive matrices—a normative study in Delhi and Maharashtra was used to find out percentile age norms in our study.

### 2. Developmental Psychopathology Checklist (DPCL)

The Developmental Psychopathology Checklist (DPCL) was developed at the National Institute of Mental Health and Neurosciences, Bangalore by Kapur and colleagues in 1994 as a screening tool to assess psychopathology in children. The tool covers developmental history, developmental problems, psychopathology, psychosocial factors, temperament profile, and social support and assets. Cluster analysis carried out on 221 child psychiatric cases revealed 7 clusters, including emotion disorder, hyperkinesis, childhood psychoses, learning disorder, hysterical syndrome, conduct disorder, and autism. Interrater reliability exercises carried out for 25 cases by 2 independent raters showed an interclass correlation of 0.968. A validation study using the Child Behaviour Checklist showed the DPCL to have satisfactory external validity.

### 3. Socio-demographic data sheet

The socio-demographic data sheet was prepared by the researchers to assess the socio-demographics including age, education, sex, socioeconomic data sheet, parental details, and educational details of the child.

**Table 1: Distribution of Intelligence Level of Participants**

| Intelligence                       | Frequency |
|------------------------------------|-----------|
| Grade I<br>(Above 95 percentile)   | 25        |
| Grade II+<br>(Above 92 percentile) | 53        |
| Grade II-<br>(Above 90 percentile) | 3         |

## Results

The results were analysed using descriptive statistics. A total of 81 probable cases of high intelligence were registered with the scholar and clinical psychologist through various referrals for psychosocial issues. The children with probable cases of high intelligence on clinical evaluation were assessed using SPM. Out of 81, 25 (31 per cent) children come under the category of Grade 1, above the 95 percentile (Table 1).

Children in the age group 14–16yrs were the majority (76 per cent). Females (52 per cent) outnumbered males (48 per cent). Majority were from CBSE standards (72 per cent). More were from rural area (52 per cent). More than half of the children were from high school (80 per cent) with 60 per cent of Grade 10 and 11 students. Previous assessment and management were done only in 16 per cent of children. About 84 per cent were self-referred by parents and the rest by teachers (16 per cent). Most of the children belong

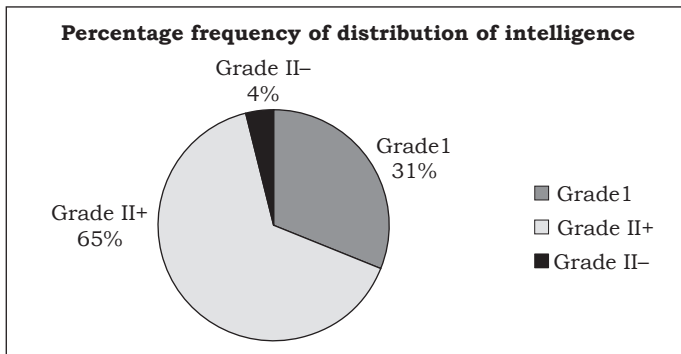


Figure 1: Percentage frequency of distribution of intelligence

**Table 2: Socio-demographic Variables of Students and Parents**

| Age (years)                | Frequency | Percentage |
|----------------------------|-----------|------------|
| 11-13                      | 8         | 24%        |
| 14-16                      | 17        | 76%        |
| <b>Gender</b>              |           |            |
| M                          | 12        | 48%        |
| F                          | 13        | 52%        |
| <b>Syllabus</b>            |           |            |
| State                      | 6         | 24%        |
| CBSE                       | 18        | 72%        |
| ICSE                       | 1         | 4%         |
| <b>Residence</b>           |           |            |
| U                          | 13        | 52%        |
| R                          | 12        | 48%        |
| <b>Class</b>               |           |            |
| 6                          | 3         | 12%        |
| 7                          | 2         | 8%         |
| 8                          | 1         | 4%         |
| 9                          | 4         | 16%        |
| 10                         | 6         | 24%        |
| 11                         | 9         | 36%        |
| <b>Previous assessment</b> |           |            |
| Yes                        | 4         | 16%        |
| No                         | 21        | 84%        |
| <b>Source of referral</b>  |           |            |
| Parents                    | 21        | 84%        |
| Teachers                   | 4         | 16%        |
| <b>Family</b>              |           |            |
| Joint                      | 9         | 36%        |
| Nuclear                    | 16        | 64%        |

| Age (years)                        | Frequency | Percentage |
|------------------------------------|-----------|------------|
| <b>Ordinal Position</b>            |           |            |
| First born                         | 15        | 60%        |
| Second born                        | 5         | 20%        |
| Single born                        | 5         | 20%        |
| <b>Educational level of father</b> |           |            |
| Primary                            | 0         | 0          |
| High School                        | 2         | 8%         |
| Graduation                         | 15        | 64%        |
| Post-graduation and above          | 9         | 28%        |
| <b>Educational level of mother</b> |           |            |
| Primary                            | 0         | 0          |
| High School                        | 2         | 8%         |
| Graduation                         | 15        | 60%        |
| Post-graduation and above          | 8         | 32%        |
| <b>Employment status of father</b> |           |            |
| Unskilled labour                   | 1         | 4%         |
| Skilled labour                     | 11        | 40%        |
| Professional                       | 14        | 56%        |
| <b>Employment status of mother</b> |           |            |
| Unskilled labour                   | 1         | 4%         |
| Skilled labour                     | 4         | 16%        |
| Professional                       | 8         | 32%        |
| Unemployed                         | 12        | 48%        |

to the nuclear family (64 per cent). About 60 per cent of children were firstborns, followed by second born (20 per cent) and single born (20 per cent). About 64 per cent of fathers of intellectually gifted children were educated up to graduation followed by post-graduation and above (28 per cent), and high school (8 per cent).

About 60 per cent of mothers were educated up to graduation (60 per cent) followed by post-graduation and above (32 per cent), and high school (8 per cent). About 56 per cent of fathers of such children are employed as professionals followed by skilled labour (40 per cent) and unskilled labour (4 per cent). About 48 per cent of mothers were housewives, followed by professionals (32 per cent), skilled labour (16 per cent) and unskilled labour (4 per cent).

Findings on the psychopathology checklist reveal that about 50 per cent of the children with intellectual giftedness clustered under the category of internalising problems such as, emotional problems (27.77 per cent), obsessive-compulsive symptoms and somatic symptoms (18.51 per cent), and neurotic kind (3.70 per cent). About 40 per cent of children with intellectual giftedness tend to have externalising problems with ADHD problems (18.51 per cent), conduct problems (18 per cent), and learning problems (3.70 per cent). About 9.25 per cent of children have certain behavioural and emotional problems with not amounting to any specific cluster. None were ascribed under the cluster of psychosis.

Findings revealed that though there were seven clusters, there was a good deal of overlap among them.

**Table 3: Psychopathology of Children**

| <b>Psychopathology</b>                           | <b>Frequency</b> | <b>Percentage</b> |
|--------------------------------------------------|------------------|-------------------|
| Attention Deficit Hyperactive Problems (ADHD)    | 10               | 18.51             |
| Conduct Problems (CD)                            | 10               | 18                |
| Learning Problems (LP)                           | 21               | 3.70              |
| <b>Externalising Problems<br/>(ADHD, CD, LP)</b> | 40%              |                   |
| Emotional Problems (EP)                          | 15               | 27.77             |
| Obsessive-Compulsive Symptoms (OC)               | 10               | 18.51             |
| Somatic Symptoms (SS)                            | 2                | 3.70              |
| <b>Internalising Problems<br/>(EP, OC, SS)</b>   | 50%              |                   |
| Psychotic Symptoms (PS)                          | 0                | 0                 |
| Other behavioural and emotional problems. (OBE)  | 5                | 9.25              |



**Table 4: Overlapping Conditions Associated with Psychopathology**

| Comorbidity | Frequency | Percentage |
|-------------|-----------|------------|
| ADHD+CD     | 3         | 12%        |
| ADHD+LP     | 3         | 12%        |
| ADHD+CD+LP  | 2         | 8%         |
| ADHD+CD+EP  | 2         | 8%         |
| EP+OC+SS    | 1         | 4%         |
| EP+OC       | 8         | 32%        |
| CD+EP       | 2         | 8%         |
| ADHD+OC     | 1         | 4%         |
| Nil         | 3         | 12%        |

About 20 per cent of children tend to be overlapped with both internalising and externalising problems, i.e., ADHD, CD and EP (8 per cent), CD and EP (8 per cent), ADHD and OC (4 per cent). About 32 per cent of them tend to be overlapped within the cluster of externalising problems, i.e.; ADHD and CD (12 per cent), ADHD and LP (12 per cent) and ADHD, CD and LP (8 per cent). Similarly, 36 per cent of them tends to be overlapped within internalising cluster, i.e., EP, OC and SS (4 per cent), EP and OC (32 per cent). About 12 per cent of them were not ascribed to any overlapping.

**Discussion**

The purpose of the present study was to identify and understand the psychological problems of intellectually gifted children. The analysis was done based on socio-demographic data, SPM scores and DPCL scores.

In our study, we employed the Standard Progressive Matrices (SPM) as a screening tool to identify gifted children. Out of 81 children evaluated, 25 were classified as falling within the above 95 percentile, indicating intellectual superiority. The remaining children were categorised into Grade II + and II -. Our instructions to clinicians were to refer only children suspected of having 'very high intelligence' for research purposes, potentially contributing to the exclusion of children with average or below-average IQs during evaluation.

Some researchers have utilised cognitive ability assessment measures such as Raven's Progressive Matrices (RPM), focusing on children with high IQ percentiles above 95 (Messier and Ward, 1998; Milgram and Milgram, 1976). While these studies typically targeted children aged 8–11 years, our study specifically concentrated on the 11–16 age group. Unlike previous research that compared gifted and non-gifted children using RPM, and other outcome measures, we did not include a control group in our examination of gifted children.

Contrary to many studies where males tended to outnumber females (Guenole et al., 2013; Mueller, 2009), our study observed a slight majority of females (52 per cent) compared to males. Additionally, a significant portion of the participants (72 per cent) were from the CBSE syllabus. These variations may be attributed to our selection of children from clinics rather than the school population, with the majority coming from high schools. Parents and children may face a dilemma in seeking emotional support from clinicians at an earlier stage, leading to a delayed need for psychological assistance.

Parents emerged as a primary source for identifying psychological problems in children, while the majority of the participants had not undergone previous management. Teachers, who may focus more on academic achievements, might inadvertently overlook mental health aspects. Notably, children from nuclear families were more affected, and a higher prevalence of emotional and behavioural problems was observed among first-born gifted children. However, the study did not evaluate the impact of parenting style or other familial factors to draw definitive conclusions.

The clinic-based data results in providing more educated and professionally qualified parents with appropriate financial stability. Approaching for psychological help may not be a stigma among the group when compared to other economic strata.

Results show that clinically referred intellectually gifted children display significant, and varied behavioural and emotional problems. Findings also reveal that internalising problem (50 per cent) predominates over externalising ones in gifted children. Emotional problems such as, worrying, anxiety, crying easily, being withdrawn, talking little and being timid were higher in such children. The result is consistent with the findings of Dirkes (1983)

which suggest the presence of social and emotional problems in a group of gifted with an IQ of 120 or more. The results also confirm with the findings of Dirkes (1983) that anxiety might be more prevalent among gifted children which may accumulate and become more manifest during adolescence. Obsessive-compulsive features such as, rereading, preoccupied with perfectionism, excessive nature of following rules which results in slowness while performing exams or other tasks, difficulty in completing it, fear of failure, loss of interest in activities, excessive worry, anxiety and conflict with self, and others were reported to be present in gifted children. The findings were consistent with the results of Margolis (2006) that gifted children have a tendency for perfectionism and self-criticism. A study by Guignard et al. (2012) also concluded that anxiety and perfectionism seems to be the outcome of high ability group. Few reported somatic and neurotic kind of features like dizziness, headache and fainting spells, and stomach aches (Guignard et al., 2007). Hinshaw (2013) reported that there is high prevalence of disruptive behaviour problems across children with giftedness (ODD ranges from 1 per cent to 20 per cent and conduct disorder ranges from 1 per cent to 10 per cent). Our study also concluded with the prevalence rate of approximately 18 per cent conduct features and ADHD features among gifted children.

The present study also suggests that many children displayed externalising behavioural problems or a mixed pattern of both internalising and externalising problems. The result is consistent with the study of Rost and Czeschlik (1994) that both anxiety, neuroticism and behavioural problems were high among such children even though they would not research on association between giftedness, and psychopathology which is similar with our study. A minor group of clinically referred gifted children in our study displayed behavioural and emotional problems in the low symptomatic range also who do not fit into the specific cluster. Few studies observed that gifted children with behavioural impairment tend to minimise their problems.

We found that children with very high IQs were not an exception for leading behavioural and socio-emotional problems. This finding is contradictory to the results of Martin et al. (2007) and Eklund et al. (2015) whom concluded that high level of intelligence as a protective factor against internalising problems, and they seem to be better adjusted.

## **Conclusion**

The study investigated the identification of psychological problems of intellectually gifted children who are seeking help from mental health clinics. An array of mental health indicators was studied to identify the prevalence of internalising disorders such as, anxiety, emotional problems, somatic concerns, obsessive-compulsive symptoms and depressive symptoms as well as externalising disorders such as, conduct problems, hyperactivity, aggression and other concerns. Gifted children are no longer exempt from experiencing psychopathological features, highlighting the importance of early identification and addressing behavioural and emotional concerns. Findings on the psychopathology checklist reveal that about 50 per cent of the children with intellectual giftedness clustered under the category of internalising problems and about 40 per cent of children with intellectual giftedness tend to have externalising problems. About 20 per cent of children tend to be overlapped with both internalising and externalising problems. About 32 per cent of them tend to be overlapped within the cluster of externalising problems. Similarly, 36 per cent of them tend to be overlapped within the internalising cluster. The misconception that gifted children, being academically advanced, do not require emotional support must be dispelled. Many gifted children may excel academically but still have unmet psychosocial needs, which could have long-term consequences. Therefore, it is crucial to provide appropriate education, support, and psychological care to meet the emotional needs of gifted children. This study can contribute to raising public awareness, especially among parents and teachers, to ensure that gifted children receive the necessary support to develop into healthy adults across biological, psychological, and social dimensions.

## **Implications**

Though the study focused on clinically referred intellectually gifted students the findings could be generalised to community or school settings as they are the realm of society. The study helps to brief up the prevalence of psychological problems of intellectually gifted children in clinical settings which would further enhance the clinicians to educate schools about the problems of gifted children, implement appropriate support systems, can ensure that all children have the opportunity to reach their full potential. School authorities should be aware of emotional and behavioural issues

to help them recognise the unique needs of gifted students and respond appropriately. Gifted children are not immune to mental health challenges, and they may be at increased risk for issues such as anxiety, depression or stress due to academic pressure, perfectionism or feelings of alienation like other children. The social and emotional well-being is closely linked to academic success. When gifted students feel understood, supported and emotionally secure, they are more likely to thrive academically and reach their full potential. This may include implementing Social-emotional Learning (SEL) programmes, providing counseling services, offering peer mentorship opportunities or creating safe spaces for gifted students to connect with like-minded peers. In short, educating school authorities about the social and emotional issues of gifted children is essential for fostering understanding, preventing mislabeling, providing appropriate support, promoting positive mental health, and facilitating academic success. By prioritising the social and emotional well-being of gifted students, schools can create inclusive and supportive learning environments where all students can thrive.

### **Limitations**

Several limitations must be acknowledged when interpreting the results of our study. The first one is the definition of giftedness on a single basis of high IQ with SPM as it specifically focusing one domain, non-verbal reasoning. Secondly, the study is a purely private clinic-based data resource and hence, most children are from middle to high socio-economic status, the majority are from the CBSE syllabus and their parents seem to be highly professional. Parents of low socio-economic status and from state syllabus of vernacular language might be unaware of children's emotional concerns or might be going to government health sectors for psychological help. Thirdly, due to the small sample size generalisation is not possible in this research. Another limitation of the study is the absence of a control group to determine the prevalence rate of behavioural problems among adolescents and also does not give the lead to a significant difference among different control groups as the study focuses only on the identification of gifted children and related prevalence of psychopathology among them. Also, study did not focus into the psychosocial correlates of mental health issues among such children. Lastly, the study does not look into any association between IQ and psychological problems among children.

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