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A Study of Metacognitive Skills and Psychological Well-Being Among Senior Secondary School Students of Central Kashmir

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Abstract

The present study explores the metacognitive skills and Psychological Well-Being among senior secondary school students of Central Kashmir. Metacognition, often described as "thinking about thinking," encompasses students' ability to plan, monitor, and evaluate their learning processes. Psychological Well-Being on the other hand is a state encompassing emotional stability, life satisfaction and effective coping with stress. Recognizing their critical role in academic success, this research aims to assess the levels of metacognitive awareness and Psychological Well- Being among senior secondary school students. The study also investigates potential gender differences in these domains. A quantitative research design was employed, involving a representative sample (i.e. 378, M=200, F=178) of senior secondary students. Standardized tool Metacognitive skills scale of Madhu Gupta and Suman (2017) was used to measure metacognitive skills and Psychological Well-Being Scale of D.S Sisodia and Pooja Chowdhary (2019) was used to assess Psychological Well-Being. Statistical analyses revealed no significant difference on MCS on the basis of gender. However, a significant difference was found on the variable Psychological Wellbeing among Senior Secondary School Students on the basis of their Gender. The findings underscore the importance of integrating metacognitive training and Psychological Well-Being into the school curriculum to enhance student learning outcomes. Implications for educators and recommendations for future research are discussed.

Keywords: Meta-Cognitive Skills, Senior Secondary School Students, Psychological Well-Being

Introduction

In the ever-evolving landscape of education, the holistic development of learners has emerged as a central goal. Cognitive competencies alone no longer suffice in preparing students for academic success and life challenges. Among the various psychological constructs gaining attention in educational psychology, metacognitive skills and psychological well-being stand out for their profound impact on learning, mental health, and personal growth. Metacognition, often referred to as "thinking about thinking," includes the awareness and regulation of one's own cognitive processes. It plays a vital role in how students plan, monitor, and evaluate their learning strategies. Students who possess strong metacognitive skills tend to be more independent learners, capable of adapting their learning approaches and solving complex problems effectively. Psychological well-being, on the other hand, encompasses an individual's emotional and mental health. It reflects how students perceive their lives, manage stress, maintain relationships, and

feel a sense of purpose. In the context of adolescence — a critical period of emotional, social, and academic transition — psychological well-being becomes a crucial determinant of overall development. In regions such as Central Kashmir**,** where sociopolitical conditions, educational challenges, and cultural contexts exert unique pressures on students, understanding the role of cognitive strategies and mental health is particularly important. Senior secondary students in this region often face academic competition, career uncertainty, and psychosocial stressors, making it imperative to investigate factors that influence both their academic and emotional well-being.

Rationale of the Study

While numerous studies have examined metacognition and Psychological Well-Being independently, there is a growing need to explore how these two dimensions interact, especially among adolescents in context-specific settings like Kashmir. Understanding this can help educators, counselors, and policymakers design better interventions to support students' academic success and mental health. Moreover, identifying disparities on the basis of Gender can provide nuanced insights into where support systems need to be strengthened. This study aims to bridge the gap in regional research by focusing specifically on the senior secondary school population of Central Kashmir.

Objectives of the study

1. To assess the level of metacognitive skills and Psychological Well-Being among senior secondary students of Central Kashmir.
2. To compare Male and Female Senior Secondary School Students on their Meta-Cognitive skills
3. To compare Male and Female Senior Secondary School Students on their Psychological Well-Being.

Hypotheses of the study:

1. There is a significant difference between Male and Female Senior Secondary School Students on Meta-Cognitive skills
2. There is a significant difference between Male and Female Senior Secondary School students on Psychological Well-Being.

Definition of Key Terms

- **Metacognitive Skills**: It refers to the ability of learners to understand, monitor, and regulate their own learning processes.
- **Psychological Well-Being**: It is a state encompassing emotional stability, life satisfaction, and effective coping with stress.
- **Senior Secondary School Students**: Students studying in Classes 11th and 12th.
- **Central Kashmir**: A region in the Union Territory of Jammu & Kashmir comprising three districts viz. Srinagar, Budgam, and Ganderbal.

Methodology :

The study is descriptive in nature. The study has been delimited to Central Kashmir only. As per the available records, thirty four thousand one hundred and thirty six Senior Secondary school students were enrolled in Higher Secondary Schools of Central Kashmir. A sample of 378 students was chosen by the investigators using Krejcie and Morgan Method. The sample was chosen through simple random sampling

technique. The required data was obtained through Meta-Cognitive Skills Scale of Madhu Gupta and Suman (2017) and Psychological Well-Being Scale of D.S Sisodia and Pooja Chowdhary (2019).

Instruments:

1. **Metacognitive Cognitive Skills Scale:** This scale is developed by Madhu Gupta and Suman (2017), this standardized tool was used to assess students' metacognitive knowledge and regulation. The MCS scale consists of 42 items with four dimensions rated on a Likert scale and has been widely validated across age groups. The validity coefficient of the scale is 0.709 to 0.924 while as the reliability of the scale is 0.763
2. **Psychological Well-Being Scale:** This scale is developed by D.S Sisodia and Pooja Chowdhary (2019). The scale consists of 50 items divided into five dimensions viz. Satisfaction, Efficiency, Sociability, Mental Health and Interpersonal Relations.

Data Collection Procedure

Permission was obtained from the CEO'S and Principals of schools before administering the tools. The Metacognitive Skills Scale and Psychological Well-Being Scale was administered in a classroom setting under standardized instructions with appropriate consent and confidentiality measures in place.

Data Analysis

Quantitative data collected were analyzed using statistical techniques such as:

- **Descriptive statistics** (Percentage, mean, standard deviation) was used to summarize metacognitive skill levels and levels of Psychological Well- Being
- **t-test** was used to determine the differences in metacognitive skills and Psychological Well- Being among Senior Secondary School Students based on gender.

Ethical Considerations

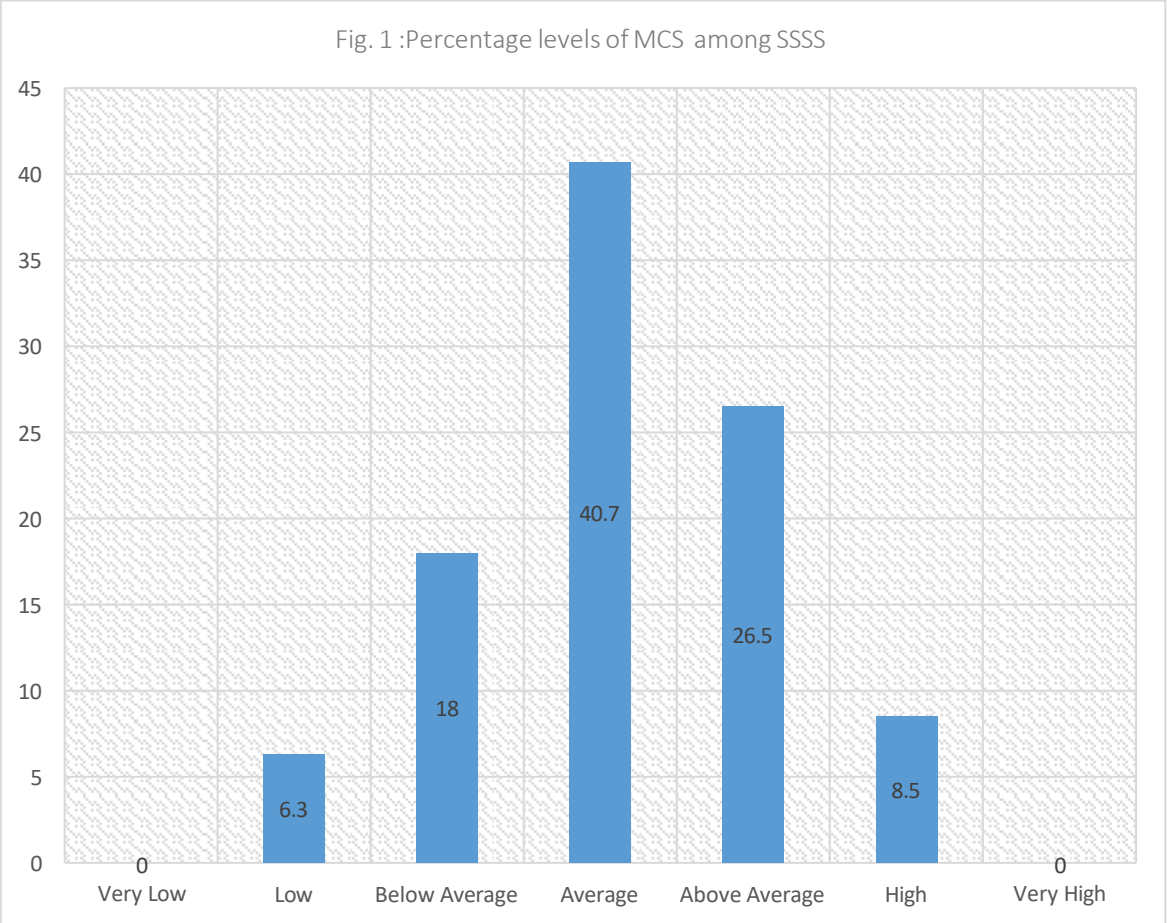
All participants were informed about the purpose of the study and their right to withdraw at any time. Informed consent was obtained, and confidentiality of all data was strictly maintained.

Analysis and Interpretation;

Objective No. 1; To assess the Meta-Cognitive skills and Psychological Well-Being of Senior Secondary School Students

Table 1 and Fig. 1: shows the description of Meta- Cognitive skills of Senior Secondary School Students

Levels of Meta-Cognition	Frequency	%age
Very Low	0	0
Low	24	6.3
Below Average	68	18.0
Average	154	40.7
Above Average	100	26.5
High	32	8.5
Very High	0	0
Total	**378**	**100**



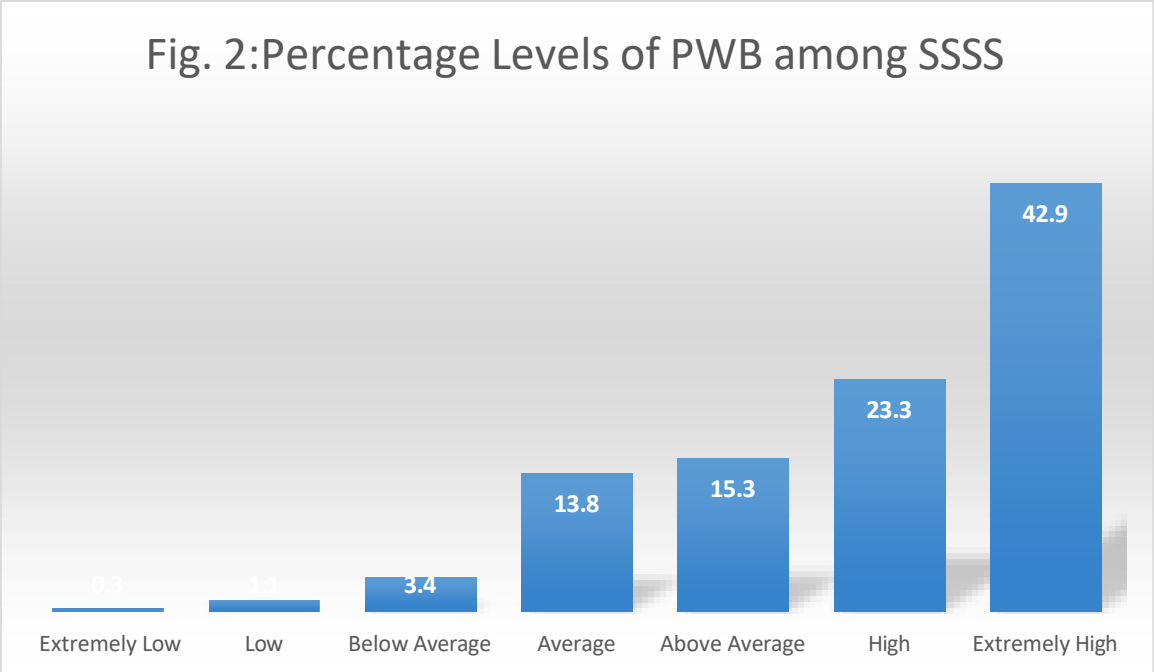
Interpretation of Table 1 and Fig. 1:

Table 1 shows that none of the Senior Secondary school students possess very low levels of Meta-cognitive skills, 24 students which is 6.3 % of the sample students consist of Low level of Meta- Cognive Skills, 68 studets which is 18% of the sample students consist of Below Average level of Meta- Cognive Skills, 154 students i.e. 40.7% of the sample students consist of Average level of Meta- Cognive Skills. 100 students i.e. 26.5% of the sample students consist of Above Average level of Meta- Cognive Skills, 32 students i.e. 8.5% of the sample students consist of High level of Meta- Cognive Skills and none of the students consists of very high level of Meta- Cognive Skills.

Table 2 and Fig. 2: shows the description of Psychological Well-Being of Senior Secondary School Students.

Levels of Psychological Well-Being	Frequency	Percentage
Extremely Low	1	0.3
Low	4	1.1
Below Average	13	3.4
Average	52	13.8
Above Average	58	15.3
High	88	23.3
Extremely High	162	42.9

Total	**378**	**100**



Interpretation of Table 2 and Fig. 2 :

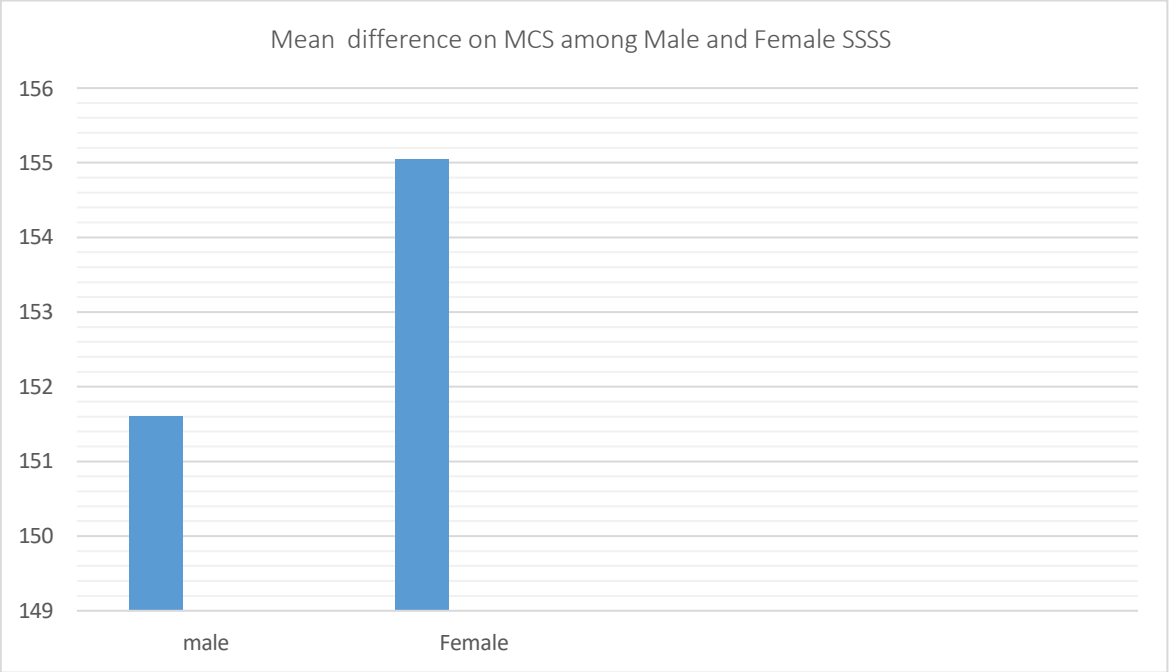
As evident from Table 2, 01 .student i.e.0. 3% of the students possess extremely low level of Psychological Well-Being, 04 students i.e. 1.1 % students possess low level of Psychological Well-Being, 13 students i.e. 3.4% students possess below average level of Psychological Well-Being, 52 students i.e. 13.8% students possess Average level of Psychological Well-Being, 58 students i.e. 15.3% students possess Above Average level of Psychological Well-Being, 88 students i.e. 23.3% students possess high level of Psychological Well-Being and 162 students i.e. 42.9% students possess Extremely High Level of Psychological Well-Being.

Objective No. 2: To compare Male and Female Senior Secondary School Students on their Meta-Cognitive skills.

Table 3: shows the comparison of Male and Female Senior Secondary School Students on Meta-Cognitive Skills.

Variables	SES	N	Mean	Std. Deviation	t-value	Df	Sig. (2-tailed)	Remarks
MCS	M	200	151.60	20.446	-1.531	376	.127	Insignificant
	F	178	155.04	23.171				

Difference is insignificant at 0.05 level (2-tailed), MCS=Meta-Cognitive Skills, M=Male, F=Female



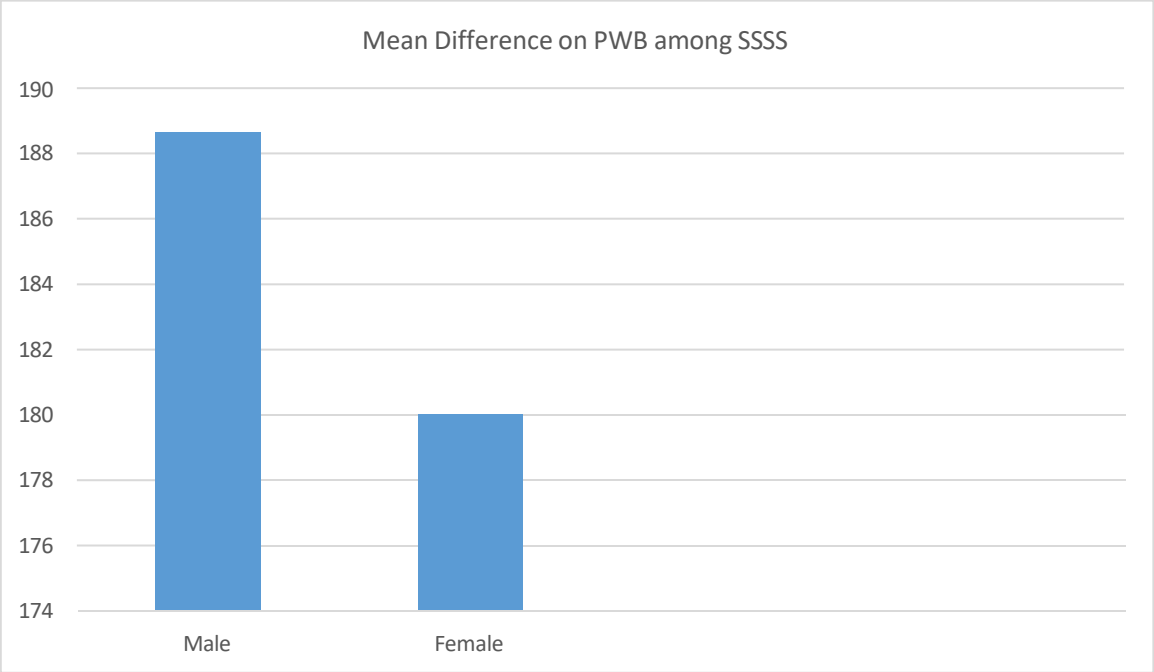
Interpretation of Table 3 and Fig. 3

Table 3 shows the comparison between Male and Female Senior Secondary School Students on the variable Meta-Cognitive Skills. As evident from the table, the mean score of Male Senior Secondary School Students was found to be 151.60 and for Female students it was found to be 155.04. The t-value comes to be -1.531 and p-value as .127 (Insig. 2- tailed) which is greater than the 0.05α level. The table also reveals that there is an insignificant difference between male and female Senior Secondary School Students on Meta-Cognitive Skills. Therefore the hypothesis "**There is a significant difference between Male and Female Senior Secondary School students on Meta-Cognitive skills**" stands rejected.

Table 4: shows the comparison of Male and Female Senior Secondary School Students on Psychological Well-Being.

Variables		N	Mean	Std. Deviation	t-value	Df	Sig. (2-tailed)	Remarks
PWB	**M**	200	188.66	24.265	3.188	376	.002	Significant
	F	178	180.16	27.560				

Difference is insignificant at 0.05level (2-tailed), PWB=Psychological Well-Being, M=Male, F=Female



Interpretation of Table 4 and Fig. 4:

Table 4 and Fig. 4 reflects the association between Male and Female Senior Secondary School Students on the variable Psychological Well-Being. The mean score of Male Senior Secondary School Students was found to be 188.66 and for Female students it was found to be 180.16. The t-value comes to be 3.188 and p-value as .002 (sig. 2- tailed) which is more than the 0.01α level. The table also shows that there is a significant difference between male and female Senior Secondary School Students on Psychological Well-Being. Therefore the hypothesis "**There is a significant difference between Male and Female Senior Secondary School Students on Psychological Well-Being**" stands accepted.

Findings of the study:

The following results were revealed in this study.

1. The results reveal a difference between means of male and female senior secondary school students on their Meta-cognitive skills
2. The results also reveal a difference between means of male and female senior secondary school students on their Psychological Well-Being.
3. No statistically significant difference was found between male and female senior secondary school students on Meta-cognitive skills.
4. A statistically significant difference was found between male and female senior secondary school students on Psychological Well-Being favouring Male students.

Discussion of the results:.

The present study, titled *"A Study of Metacognitive Skills and Psychological Well-Being among Senior Secondary School Students of Central Kashmir,"* aimed to investigate the levels of metacognitive skills and psychological well-being among students, with a particular focus on gender-based differences.

The results revealed that there was no significant difference between male and female students in terms of metacognitive skills. This suggests that both male and female students possess a comparable ability to plan, monitor, and evaluate their own learning processes. This finding aligns with previous research

indicating that metacognitive skills are more strongly shaped by educational experiences, instructional strategies, and individual motivation than by gender. In the educational context of Central Kashmir, this may reflect increasing parity in access to learning resources, classroom participation, and academic expectations across genders.

However, a significant gender difference was observed in psychological well-being, with male students demonstrating higher levels of psychological well-being compared to their female counterparts. This finding points towards a disparity in how male and female students experience and manage emotional, social, and psychological stressors. Several factors may explain this difference. Female students, particularly in conservative or conflict-affected regions like Central Kashmir, often face additional challenges such as restrictive social norms, safety concerns, limited freedom of expression, and higher academic and domestic expectations. These pressures may contribute to lower levels of psychological well-being among girls. On the other hand, male students may benefit from relatively greater autonomy, social mobility, and societal support, which can enhance their psychological resilience and coping mechanisms.

Moreover, gendered socialization patterns might also play a role. Boys are often encouraged to appear emotionally strong and independent, which might lead them to report higher well-being, even if their internal experiences are more complex. Girls, meanwhile, might be more expressive and reflective about their emotions, which can influence how they perceive and report their mental health. These findings underscore the importance of gender-sensitive mental health programs in schools. While both genders are developing cognitive strategies at similar levels, female students may require additional emotional and psychological support to navigate the unique challenges they face during adolescence. Interventions such as school counseling, peer support groups, life skills education, and family engagement can be instrumental in promoting the psychological well-being of female students.

Educational Implications:

The findings of this study provide meaningful insights for educators, school administrators, policymakers, and mental health professionals working with senior secondary school students in Central Kashmir. While no significant gender differences were found in metacognitive skills, the significant disparity in psychological well-being—favoring male students—has important educational implications.

1. **Promote Metacognitive Skill Development Equally Across Genders**

Since both male and female students demonstrated comparable levels of metacognitive skills, schools should continue to emphasize the development of these skills across all students. Teachers can incorporate strategies such as self-reflection exercises, goal-setting tasks, and structured peer collaboration into regular classroom activities to reinforce students' abilities to plan, monitor, and evaluate their learning processes. This can further strengthen academic performance and independent learning habits.

2. **Address Gender Disparities in Psychological Well-Being**

The observed gender gap in psychological well-being, favoring male students, highlights the need for targeted mental health support for female students. Schools should consider integrating well-being programs that specifically address the emotional and social challenges faced by adolescent girls, especially in the socio-cultural context of Central Kashmir. These may include safe spaces for expression, mentorship programs, stress management workshops, and resilience-building activities.

3. **Incorporate Mental Health Education into the Curriculum**

Psychological well-being must be treated as a foundational component of student development. Introducing mental health awareness and emotional intelligence training as part of the curriculum can help students better understand and manage their emotions, seek help when needed, and support their peers. Female students, in particular, may benefit from such programs that challenge social stigma and encourage open discussion of mental health issues.

4. **Strengthen the role of school counsellors**

Trained school counselors should be made accessible to students to provide ongoing psychological support. Counselors can identify early signs of stress, anxiety, or low self-esteem—especially among girls—and intervene through individual or group sessions. Their role is critical in promoting inclusive mental health practices within the school system.

5. **Encourage Parental and community involvement**

Given the socio-cultural dynamics of Central Kashmir, involving parents and community leaders in mental health initiatives can reduce stigma and ensure continuity of support outside the school environment. Schools can organize workshops for parents to educate them about adolescent psychological needs, especially those of female students, and ways to foster a supportive home environment.

6. **Policy Support for Gender-Sensitive Education**

Educational policies should prioritize gender-sensitive approaches that consider the emotional and psychological needs of all students. Government and educational boards should invest in training programs for teachers on gender equity and psychological first aid to ensure a more empathetic and responsive school culture.

In summary, while cognitive development may be progressing equally across genders, the psychological disparities identified in this study call for immediate, thoughtful, and systemic intervention. Supporting students' emotional well-being, particularly of female students, is not only essential for their academic success but also for their holistic development as resilient, confident, and mentally healthy individuals.

Suggestions for further research :

1. A similar study should be carried out with a large sample size
2. A Longitudinal study can be carried out on the same variables to track changes in Meta-Cognitive skills and Psychological Well-Being over time.
3. A study can be carried out comparing students from Central Kashmir with those from other regions (e.g., urban vs. rural, Kashmir vs. Jammu).
4. A study can be carried out to examine the influence of teacher support, classroom climate, or school infrastructure on students' metacognition and. Psychological Well-Being
5. A study can be designed to study how digital tools, e-learning, or mobile usage affect metacognitive awareness and psychological health of students.

Conclusion:

The present study explored the levels of metacognitive skills and psychological well-being among senior secondary school students in Central Kashmir, with a specific focus on gender differences. The findings revealed no significant difference between male and female students in metacognitive skills, indicating that both genders possess similar capacities for planning, monitoring, and regulating their learning processes. This suggests that educational interventions in the region are effectively supporting cognitive skill development among all students, regardless of gender. However, a significant difference was

observed in psychological well-being, with male students showing higher levels of well-being compared to female students. This disparity highlights the continuing influence of socio-cultural, emotional, and possibly environmental factors that differentially impact the mental health of male and female students in this region.

These findings underscore the importance of maintaining equitable academic practices while also placing greater emphasis on supporting the psychological and emotional needs of female students. Addressing this imbalance through gender-sensitive mental health initiatives, curriculum design, and school-based interventions can contribute to the holistic development of all students. In conclusion, while cognitive equity appears to be taking shape, psychological well-being remains an area of concern—particularly for female students. A more integrated approach that combines academic, emotional, and social support is essential to ensure that all students in Central Kashmir can thrive both intellectually and psychologically.

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