

## From Home to Classroom: Investigating Girls' Participation in Secondary Level Mathematics

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### Abstract

This study explores the nuanced journey of girls' participation in secondary level mathematics, investigating the influences of early experiences at home and dynamics within the classroom. Focused on Grade IX students in Gurbhakot Municipality, Surkhet, the research adopts a quantitative approach through a survey design. Five secondary schools were selected using a convenience sampling method, aiming for diversity in community and geographical locations. Data collection involved Likert Scale points, encompassing 30 statements related to girls' participation in mathematics. The analysis revealed key insights, including positive attitudes towards academic engagement, varied opinions on gender perceptions, strong familial support, favorable learning environments at home, and diverse views on societal and parental influences. The study's significance lies in addressing a critical gap in literature by examining the transition from home to the classroom, offering valuable insights for educators and policymakers to enhance gender equity in mathematics education. The findings suggest areas for improvement, such as addressing gender perceptions, improving communication between parents and teachers, and enhancing the appeal of mathematics classes. Recognizing positive aspects, like strong family support and student interest, can contribute to fostering a more inclusive learning environment.

**Keywords:** Participation, dynamics, transition, gender disparities and educational equity

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### Background of the Study

The profound significance of mathematical knowledge manifests as an indispensable instrument in our societal framework, empowering individuals to surmount the myriad challenges that punctuate our everyday existence (Bishop, 1996). Mathematics has held a prominent position as one of the most crucial core subjects in school curricula worldwide, with a prevalence of lessons in schools and colleges surpassing those of any other subject. A prevailing belief suggests that girls are comparatively weaker in mathematics compared to boys concerning educational achievement. The "education for all" conferences in Jomtein and Dakar (1990-

2000) articulated a vision of inclusivity in national governments and funding agencies, asserting that education must be provided to every citizen for individual betterment and societal development. Zan and Martino (2008) highlight the fundamental role of perception in learning mathematics, emphasizing that it can be a positive or negative evaluation of objects, events, or ideas. The perception of mathematics, particularly in schools, is defined as an emotional disposition towards the subject (Han, 1961). Additionally, the perception of students and teachers' understanding of mathematics has been identified as a significant factor influencing children's attitudes toward the subject.

To achieve expected educational goals, it is imperative to address and appropriately manage the aforementioned factors that influence students' learning (Bhattarai, 2015). Globally, there exists a pervasive stereotype associating mathematics with adult males, contributing to the underrepresentation of women in science, engineering, and mathematics fields. The perception of gender differences in math skills among boys and girls influences the identification of their skills and interests from a young age (Cvencek et al., 2011). Students' self-perceptions regarding their academic abilities play a crucial role in their efforts to adapt to school tasks and responsibilities. Mathematics, being a creation of the human mind, is intimately linked with the development of civilization and it originated from practical experiences addressing human needs and has evolved alongside civilization (Giri, 2016). He emphasizes that mathematics is a necessity for the advancement of civilization, providing insight into the power of the human mind and challenging intellectual curiosity. Despite its significance, a considerable number of female students at the secondary level avoid selecting mathematics as a major subject due to the fear of failure in examinations (Chaudhari, 2014). This reluctance poses a significant challenge to educators and stakeholders, reinforcing the equity theory advocating equal educational opportunities for both genders (Mahatara, 2019). Mathematics, as a language utilizing various symbols, is an intelligent system that enhances logical reasoning in individuals (Ahmed & Bora, 2020). Its abstract nature involves consecutive abstractions and generalization processes formed by structures and relations.

In this study, the term "girls' participation in mathematics" extends

beyond mere enrollment in school; rather, it encompasses their active engagement in various mathematical learning activities across different settings. The scope of participation encompasses not only the classroom but also extends to the home environment, the community, and interactions with peers. Active involvement in diverse mathematical endeavors, such as classwork, homework, project work, and other related activities, is considered integral to the comprehensive understanding of girls' participation in mathematics. In the classroom, the study emphasizes the importance of girls' involvement in various aspects of mathematical education, including active participation in class discussions, collaborative projects, and individual homework assignments. The aim is to underscore the multifaceted nature of participation, recognizing that a comprehensive evaluation involves considering girls' contributions to a spectrum of mathematical activities.

### **Research Objectives and Questions**

To identify the girls' participation in secondary mathematics from home to classroom, this research aims to address the following research questions:

1. How do early experiences and perceptions of mathematics at home influence girls' participation in secondary mathematics?
2. What role do classroom dynamics, teaching methods, and peer interactions play in shaping girls' participation in secondary mathematics?

### **Mathematics from Home to Classroom for Girls**

In recent decades, there has been a growing recognition of the importance of gender equity in education, particularly in the field of mathematics. While strides have been made towards promoting equal opportunities

for both genders, a persistent gender gap in mathematics participation and achievement remains a concern in secondary education (Jones & Smith, 2019). This research seeks to delve into the dynamics that shape girls' participation in secondary mathematics, transitioning from the home environment to the classroom setting. Research indicates that, on average, girls tend to underperform in mathematics compared to boys, despite demonstrating equal aptitude and potential (Li et al., 2018). This gap is not simply a reflection of innate abilities but is influenced by a complex interplay of social, cultural, and environmental factors. One crucial aspect that has gained prominence in recent times is the impact of the transition from home to the classroom on girls' engagement with mathematics (Hyde, 2014).

While numerous studies have explored gender disparities in mathematics, there is a notable gap in understanding how the shift from the familiar home environment to the structured classroom setting influences girls' participation in secondary mathematics (National Center for Education Statistics, 2020). The home environment is often considered a foundational space where attitudes, beliefs, and self-perceptions regarding mathematics are formed (Smith & Davis, 2017). However, limited research has systematically investigated how these early experiences at home shape girls' subsequent interactions with mathematics in the secondary school context.

This study is significant for several reasons. First, it addresses a critical gap in the existing literature by focusing on the transitional phase from home to the classroom, a period that has received limited attention despite its potential impact on girls' attitudes and performance in mathematics.

Second, by understanding the factors that contribute to the gender gap in secondary mathematics, educators and policymakers can develop targeted interventions to create a more inclusive learning environment.

### **Research Methodology**

The purpose of this study is to investigate the participation of girls' participation in mathematics and their achievements at Grade IX in Gurbhakot Municipality, Surkhet. To accomplish this objective, the researcher employs a quantitative research design based on the survey approach. This research method relies on measuring variables using a numerical system, analyzing these measurements utilizing various statistical models, and reporting on the relationships and associations among the studied variables. These variables may include test scores or measurements of reaction time, and the gathering of quantitative data is geared towards comprehending, describing, and predicting the nature of the phenomenon, particularly through the development of models and theories.

The site of the study was chosen using a convenience sampling method from Gurbhakot Municipality. Five secondary schools within Gurbhakot Municipality were selected as the study sample. In this research, a non-probability sampling method was employed to collect information and data. Specifically, a convenience sampling method was judiciously applied due to geographical convenience and easy access. The population under study comprises regular girls studying mathematics at the secondary level, specifically Grade IX, in the academic year 2079 B.S. within Gurbhakot Municipality, which encompasses a total of 10 secondary schools. For the purpose of this research, 5 secondary schools were selected, deliberately

chosen from diverse communities and geographical locations, rather than selecting schools from the same community. This approach aims to capture varied background data. Given the impracticality of interviewing all students in Grade 9 across the 5 selected schools, a subset of students was chosen. Considering the average student population of 50 students in total, a representative sample was derived by selecting 10 girls from each school. In this study, conducted within a quantitative design framework, the data collection process involved the utilization of specific tools, namely a set of Likert Scale points. The research sought to enhance its effectiveness and depth by obtaining feedback through a structure of Likert Scale points.

#### Data Analysis and Interpretation

This chapter deals with the analysis and interpretation of collected information of the study. The collected information from the informants was analyzed and interpreted to find out the girl's participation in mathematics. It had already been mentioned that statistical analysis was used to find out the girl's participation in mathematics and descriptive analysis was used to determine the the girls' participation in mathematics learning.

This chapter deals with the statistical analysis and interpretation of data obtained from questionnaire from teaching learning process, social variables, time variables, school environment and home environment of the girl's participation in secondary level grade IX. It has already mentioned that there was one set of questionnaire written statement from with five alternative strongly agree, agree, undecided, disagree and strongly disagree with rating 5, 4, 3, 2, and 1 respectively in each statement.

**Table 1**

*I always present in the mathematics classroom.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	33	66
2	Agree	15	30
3	Undecided	1	2
4	Disagree	1	2
5	Strongly disagree	0	0
Total		50	100

Table 1 provides an analysis of students' responses regarding their presence in the mathematics classroom. 66% of the students, or 33 out of 50, strongly agree that they are always present in the mathematics classroom. 30% of the students, or 15 out of 50, agree that they are always present in the mathematics classroom. 2% of the students, or 1 out of 50, are undecided about their presence in the mathematics classroom. 2% of the students, or 1 out of 50, disagree with the statement that they are always present in the mathematics classroom. None of the students, or 0 out of 50, strongly disagree with the statement. The total number of students surveyed is 50, and the percentages add up to 100%, indicating that all responses have been accounted for. The majority of students, comprising 66%, strongly agree that they are always present in the mathematics classroom, while an additional 30% agree with the statement. Overall, a significant portion of the students express a positive attitude towards regular attendance in the mathematics classroom.

**Table 2**

*I always actively participate in mathematics period.*

S.N.	Statement	No. of students	Percentage
1	Strongly agree	37	74
2	Agree	8	16
3	Undecided	4	8
4	Disagree	1	2
5	Strongly disagree	0	0
Total		50	100

Table 2 presents the analysis of students' responses regarding their active participation in the mathematics period. 74% of the students, which is 37 out of 50, strongly agree that they always actively participate in the mathematics period. 16% of the students, or 8 out of 50, agree that they always actively participate in the mathematics period. 8% of the students, or 4 out of 50, are undecided about their active participation in the mathematics period. 2% of the students, or 1 out of 50, disagree with the statement that they always actively participate in the mathematics period. None of the students, or 0 out of 50, strongly disagree with the statement. This conclude that the total number of students surveyed is 50, with the percentages adding up to 100%, indicating that all responses have been accounted for. The majority of students express a positive attitude towards actively participating in the mathematics period, with a notable 74% strongly agreeing with the statement.

**Table 3**

*I consistently complete the homework assigned by my mathematics teacher.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	35	70
2	Agree	11	22
3	Undecided	3	6
4	Disagree	0	0
5	Strongly disagree	1	2
Total		50	100

Table 3 presents an analysis of students' responses regarding their completion of homework assigned by their mathematics teacher. 70% of the students, or 35 out of 50, strongly agree that they consistently complete the homework assigned by their mathematics teacher. 22% of the students, or 11 out of 50, agree that they consistently complete the homework assigned by their mathematics teacher. 6% of the students, or 3 out of 50, are undecided about consistently completing the homework assigned by their mathematics teacher. None of the students, or 0 out of 50, disagree with the statement that they consistently complete the homework. 2% of the students, or 1 out of 50, strongly disagree with the statement that they consistently complete the homework. The total number of students surveyed is 50, and the percentages add up to 100%, indicating that all responses have been accounted for. The majority of students, comprising 70%, strongly agree that they consistently complete the homework assigned by their mathematics teacher, while an additional 22% agree with the statement. Overall, a significant portion of the students express a positive attitude towards completing their mathematics homework consistently.

**Table 4**

*I attend math class regularly.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	33	66
2	Agree	17	34
3	Undecided	0	0
4	Disagree	0	0
5	Strongly disagree	0	0
Total		50	100

Table 4 indicates that 66% of the students strongly agree, and an additional 34% agree that they attend math class regularly. There are no students who are undecided, disagree, or strongly disagree with the statement. The total number of students surveyed is 50, and the percentages add up to 100%. This suggests a positive trend, with a significant majority of students (66%) expressing a strong commitment to attending math class regularly, and the remaining 34% also indicating agreement with this statement.

**Table 5**

*The teacher tends to focus more on boys than girls during class.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	3	6
2	Agree	6	12
3	Undecided	6	12
4	Disagree	14	28
5	Strongly disagree	21	42
Total		50	100

Table 5 reveals that 42% of the students strongly disagree, and an additional 28% disagree that the teacher tends to focus more on boys than girls during class. On the

contrary, 12% are undecided, 12% agree, and 6% strongly agree with the statement. The total number of students surveyed is 50, and the percentages add up to 100%. The majority of students (70%) express disagreement with the notion that the teacher favors boys over girls, with a notable 42% strongly disagreeing. This suggests a perception among the students that the teacher maintains fairness in attention and focus regardless of gender.

**Table 6**

*I'm not very curious or active when learning mathematics.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	17	34
2	agree	11	22
3	undecided	4	8
4	disagree	11	22
5	Strongly disagree	7	14
Total		50	100

Table 6 indicates that 34% of the students strongly agree, and an additional 22% agree that they are not very curious or active when learning mathematics. On the contrary, 14% strongly disagree, 22% disagree, and 8% are undecided about this statement. The total number of students surveyed is 50, and the percentages add up to 100%. The data suggests a mixed response, with a significant portion of students (56%) agreeing with the statement that they are not very curious or active in learning mathematics, while 36% express disagreement, with 14% strongly disagreeing. This indicates varying levels of engagement and curiosity among the students in the context of learning mathematics.

**Table 7**  
*I enjoy solving mathematical problems.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	14	28
2	Agree	26	52
3	Undecided	3	6
4	Disagree	4	8
5	Strongly disagree	3	6
Total		50	100

Table 7 reveals that a majority of the students, 80% in total, express positive sentiments towards solving mathematical problems. Specifically, 28% strongly agree, and an additional 52% agree that they enjoy solving mathematical problems. On the other hand, 14% express a neutral stance by being undecided, and 14% disagree, with 6% each in the categories of disagree and strongly disagree. The total number of students surveyed is 50, and the percentages add up to 100%. Overall, the data suggests a predominantly positive attitude among students regarding the enjoyment of solving mathematical problems, with a significant majority expressing agreement with this statement.

**Table 8**  
*Ifind the math class less interesting than others.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	9	18
2	Agree	22	44
3	Undecided	6	12
4	Disagree	5	10
5	Strongly disagree	8	16
Total		50	100

Table 8 indicates that a notable portion of students, 62% in total, find the math class less interesting than others. Specifically, 18% strongly agree, and an additional 44% agree with the statement. Conversely, 26% express a more positive view, with 10% disagreeing, and 16% strongly disagreeing. The total number of students surveyed is 50, and the percentages add up to 100%. Overall, the data suggests that a significant majority of students have a perception that math class is less interesting compared to other classes, indicating a potential area for improvement or adjustment in the teaching approach or content.

**Table 9**  
*Teacher always use teaching materials while teaching mathematics.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	8	16
2	Agree	10	20
3	Undecided	2	4
4	Disagree	17	34
5	Strongly disagree	13	26
Total		50	100

Table 9 reveals that there is a diversity of opinions among students regarding the use of teaching materials by the teacher during mathematics classes. A significant portion, 60% in total, expresses some level of disagreement with the statement that the teacher always uses teaching materials. Specifically, 34% disagree, and an additional 26% strongly disagree with the statement. On the contrary, 36% of students express agreement, with 16% strongly agreeing and 20% agreeing. The total number of students surveyed is 50, and the percentages add up to 100%. The data suggests a need for further

exploration of the teaching methods employed, as a considerable number of students seem to perceive a lack of consistent use of teaching materials in mathematics classes.

**Table 10**

*I study mathematics whenever I am free.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	13	26
2	Agree	25	50
3	Undecided	3	6
4	Disagree	8	16
5	Strongly disagree	1	2
Total		50	100

Table 10 shows that a majority of students, 76% in total, express a positive inclination toward studying mathematics whenever they are free. Specifically, 26% strongly agree, and an additional 50% agree with the statement. On the contrary, 18% of students express a negative stance, with 16% disagreeing and 2% strongly disagreeing. The total number of students surveyed is 50, and the percentages add up to 100%. The data indicates a generally positive attitude among students towards studying mathematics in their free time, suggesting a self-motivated approach to learning the subject.

**Table 11**

*I always complete the classwork of math given by the teacher.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	25	50
2	Agree	23	46
3	Undecided	1	2
4	Disagree	0	0
5	Strongly disagree	1	2
Total		50	100

Table 11 indicates a high level of commitment among students towards completing the classwork assigned by their math teacher. A significant majority, 96% in total, either strongly agree (50%) or agree (46%) with the statement. Only 2% are undecided, and there are no students expressing disagreement. The total number of students surveyed is 50, and the percentages add up to 100%. This data suggests a positive and proactive approach among students in completing their math classwork, showcasing a strong sense of responsibility and engagement with the assigned tasks.

**Table 12**

*My parents treat unequally with my brother and me.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	4	8
2	Agree	3	6
3	Undecided	3	6
4	Disagree	17	34
5	Strongly disagree	23	46
Total		50	100

Table 12 reflects that the majority of students, 80% in total, disagree with the statement that their parents treat them and their brothers unequally. Specifically, 46% strongly disagree, and an additional 34% disagree. On the contrary, 12% express some level of agreement, with 8% strongly agreeing and 6% agreeing. The total number of students surveyed is 50, and the percentages add up to 100%. Overall, the data suggests that a significant majority of students perceive equality in the way their parents treat them and their brothers, indicating a positive family dynamic.



**Table 13**

*My parents do not discuss my performance with my math teacher.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	9	18
2	Agree	19	38
3	Undecided	2	2
4	Disagree	16	32
5	Strongly disagree	4	8
Total		50	100

Table 13 suggests that there is a range of opinions among students regarding whether their parents discuss their performance with their math teacher. The data shows that 56% of students either strongly agree (18%) or agree (38%) with the statement, indicating that a significant portion feels that their parents do not discuss their performance with the math teacher. On the contrary, 40% express some level of disagreement, with 32% disagreeing and 8% strongly disagreeing. The total number of students surveyed is 50, and the percentages add up to 100%. The data implies that for a considerable number of students, there may be limited communication between parents and math teachers regarding the students' academic performance.

**Table 14**

*I have no more time to study mathematics at home.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	7	14
2	Agree	13	26
3	Undecided	4	8
4	Disagree	18	36
5	Strongly disagree	8	16
Total		50	100

Table 14 indicates that a majority of students, 62% in total, either disagree (36%) or strongly disagree (26%) with the statement that they have no more time to study mathematics at home. Conversely, 22% express agreement (14% strongly agree and 8% agree), and 8% are undecided. The total number of students surveyed is 50, and the percentages add up to 100%. Overall, the data suggests that a significant portion of students believes they have adequate time to study mathematics at home, while a smaller proportion feels time-constrained.

**Table 15**

*The learning environment of mathematics is better for me at home.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	21	42
2	Agree	19	38
3	Undecided	2	4
4	Disagree	6	12
5	Strongly disagree	2	4
Total		50	100

Table 15 reveals that a majority of students, 80% in total, express positive sentiments regarding the learning environment of mathematics at home. Specifically, 42% strongly agree, and an additional 38% agree with the statement. On the contrary, 16% express a more negative view, with 12% disagreeing and 4% strongly disagreeing. The total number of students surveyed is 50, and the percentages add up to 100%. The data indicates that a significant majority of students find the learning environment for mathematics at home to be favorable, suggesting a preference for studying in that setting.

**Table 16**

*My parents always tell me not to spend more time in mathematics at home.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	11	22
2	Agree	10	20
3	Undecided	1	2
4	Disagree	15	30
5	Strongly disagree	13	26
Total		50	100

Table 16 indicates that there is a diversity of opinions among students regarding parental advice on spending time on mathematics at home. A significant portion, 52% in total, either agrees (20%) or strongly agrees (22%) with the statement that their parents always advise them not to spend more time on mathematics at home. Conversely, 56% express some level of disagreement, with 30% disagreeing and 26% strongly disagreeing. The total number of students surveyed is 50, and the percentages add up to 100%. The data suggests a split in parental guidance, with a notable portion of students feeling that their parents advise against spending excessive time on mathematics at home.

**Table 17**

*My family covers tuition and coaching classes of mathematics if needed.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	32	64
2	Agree	15	30
3	Undecided	2	4
4	Disagree	1	2
5	Strongly disagree	0	0
Total		50	100

Table 17 indicates a strong level of support from students' families for covering tuition and coaching classes in mathematics if needed. A significant majority, 94% in total, either strongly agree (64%) or agree (30%) with the statement. Only 4% are undecided, and 2% disagree. None of the students strongly disagree. The total number of students surveyed is 50, and the percentages add up to 100%. The data suggests a robust financial support system within the families for students to access additional tuition or coaching classes in mathematics when required.

**Table 18**

*Females have an inferior position in our society.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	11	22
2	agree	18	36
3	undecided	3	6
4	disagree	15	30
5	Strongly disagree	3	6
Total		50	100

Table 18 illustrates that students have varied opinions about the societal position of females. A considerable portion, 58% in total, either agrees (36%) or strongly agrees (22%) with the statement that females have an inferior position in society. On the contrary, 36% express some level of disagreement, with 30% disagreeing and 6% strongly disagreeing. The total number of students surveyed is 50, and the percentages add up to 100%. The data highlights a range of perspectives among students regarding gender roles and societal positions, with a significant portion acknowledging or perceiving an inferior position for females in their society.

**Table 19**

*Society and individuals admire girls in their pursuit of learning mathematics.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	27	54
2	Agree	19	38
3	Undecided	2	4
4	Disagree	1	2
5	Strongly disagree	1	2
Total		50	100

Table 19 suggests that a significant majority of students, 92% in total, either strongly agree (54%) or agree (38%) with the statement that society and individuals admire girls in their pursuit of learning mathematics. Only 4% are undecided, and 4% express some level of disagreement, with 2% each for disagree and strongly disagree. The total number of students surveyed is 50, and the percentages add up to 100%. The data indicates a positive perception among students that society and individuals appreciate and admire girls who are engaged in learning mathematics, fostering a supportive environment for girls in their educational pursuits.

**Table 20**

*Our society treats boys and girls unequally in different activities.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	7	14
2	Agree	6	12
3	Undecided	17	34
4	Disagree	18	36
5	Strongly disagree	2	4
Total		50	100

Table 20 suggests that students have mixed opinions about whether society treats boys and girls unequally in different activities. A notable portion, 46% in total, either agrees (12%) or strongly agrees (14%) with the statement. On the contrary, 40% express some level of disagreement, with 36% disagreeing and 4% strongly disagreeing. The total number of students surveyed is 50, and the percentages add up to 100%. The data highlights varying perceptions among students regarding gender equality in different activities within their society, with a significant number expressing uncertainty or disagreement with the statement.

**Table 21**

*Girls aren't inspired to learn mathematics in your society.*

S.N	Statement	No. of students	Percentage
1	Strongly agree	8	16
2	agree	13	26
3	undecided	12	24
4	disagree	10	20
5	Strongly disagree	7	14
Total		50	100

Table 21 indicates that students have diverse opinions about whether girls are inspired to learn mathematics in their society. The data shows that 42% of students either agree (26%) or strongly agree (16%) with the statement, expressing a perception that girls lack inspiration for learning mathematics. On the contrary, 34% express some level of disagreement, with 20% disagreeing and 14% strongly disagreeing. The total number of students surveyed is 50, and the percentages add up to 100%. The data suggests a range of perspectives among students regarding

the level of inspiration for girls in learning mathematics in their society, with a notable portion expressing uncertainty or disagreement with the statement.

Finally, the data provides insights into students' perspectives on various aspects, including their academic experiences, family support, societal perceptions on gender roles, and attitudes toward learning mathematics. Overall, the data indicates a mix of positive and challenging sentiments. While many students express commitment to their studies, support from their families, and a positive learning environment for mathematics, there are also concerns regarding perceptions of gender inequality in society and varying levels of engagement in the subject. The findings suggest a need for continued efforts to foster an inclusive and supportive educational environment.

### **Conclusion**

The research set out to identify different aspects of how girls engage with secondary-level mathematics, looking at their experiences both at home and in the classroom, as well as societal attitudes. After analyzing the data collected, several key findings emerged, giving us insights into what affects girls' involvement with math during their secondary education.

To begin with, we looked into how early experiences and views of math at home influence girls' participation in secondary-level mathematics learning. We found that families generally provide strong support for education, including financial help for extra classes. However, there were concerns about the lack of communication between parents and teachers regarding students' academic progress and social values and norms, which could impact girls' learning experiences in mathematics.

Next, we explored how classroom dynamics, teaching methods, and interactions with peers shape girls' involvement in math. The data showed that most students actively participate in class, complete their homework, and attend regularly, suggesting a positive classroom atmosphere. Students also felt that teachers treat everyone fairly, regardless of gender, which is crucial for creating an inclusive learning environment. We also delved into societal perceptions and gender roles, finding a range of opinions among students. While many recognized society's appreciation for girls pursuing math, there were worries about unequal treatment and the level of encouragement girls receive. Addressing these societal attitudes is essential for fostering girls' confidence and interest in math.

Overall, our findings suggest some important steps for encouraging girls' participation in secondary-level math. Firstly, improving communication between parents and teachers could help create a more supportive home environment. Secondly, educators should continue fostering inclusive classrooms where all students feel valued and encouraged. Lastly, addressing societal norms and stereotypes can empower girls to pursue math with confidence. In conclusion, this research provides valuable insights into the factors influencing girls' engagement with secondary-level mathematics learning. By addressing these factors and promoting inclusivity and equality, we can create an environment where all students, regardless of gender, can thrive in mathematics.

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