Deaf girls talk about math and their future

Patricia Spiecker

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DEAF GIRLS TALK ABOUT MATH AND THEIR FUTURE

Master's Project

Submitted to the Faculty
Of the Masters of Science Program in Secondary Education
Of Students who are Deaf and Hard of Hearing

National Technical Institute of the Deaf
Rochester Institute of Technology

By

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In Partial Fulfillment of the Requirements
For the Degree of Master of Science

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(Project Advisor)  (Program Director)
<table>
<thead>
<tr>
<th>I. Abstract</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>II. Introduction</td>
<td>4</td>
</tr>
<tr>
<td>III. Literature Review</td>
<td>5</td>
</tr>
<tr>
<td>IV. Method</td>
<td>9</td>
</tr>
<tr>
<td>V. Results</td>
<td>10</td>
</tr>
<tr>
<td>VI. Conclusion</td>
<td>15</td>
</tr>
<tr>
<td>VII. Appendix</td>
<td>17</td>
</tr>
<tr>
<td>VIII. References</td>
<td>40</td>
</tr>
</tbody>
</table>
Abstract

This study investigated the three variables of deaf girls' attributions for success and failure in mathematics. The three variables are confidence, usefulness of mathematics, and the impact of socializers. There are no research studies about deaf girls and mathematics. Parallel research studies from hearing populations have been done. This study was conducted at Rochester School for the Deaf in New York. The subjects were eleven deaf high school girls ranging from seventh grade to eleventh grade. Also included in the subjects were the eleven parents of the deaf high school girls. The study included both qualitative and quantitative techniques. Qualitative techniques were used to evoke responses in interviews of deaf high school girls and phone interviews from parents of deaf high school girls. Quantitative techniques were used to record grades of the deaf high school girls taking mathematics from their elementary to high school years. The findings of this study parallel the findings of the hearing populations except for two areas – a high percentage of boys and girls who are treated equally in math class and a low percentage of girls who consults their fathers for help with mathematics. Future research is recommended to explore other variables of deaf girls' attributions of success and failure in mathematics further. The findings may be parallel to the findings of the hearing populations.
Introduction

Having difficulty in learning mathematics was not rare among high school girls. Studies show high school girls tend to avoid mathematics for various reasons: lack of confidence in learning mathematics, no usefulness of mathematics for their future, societal influence, and the impact socializers. Further details of this area will be mentioned in Chapter 3 – Literature Review. There are no research studies on deaf girls. The hypothesis is that the results from the research studies on the hearing population are parallel to deaf population. The research questions for this project are: 1) How do deaf girls perceive the usefulness of mathematics for their future? 2) Do deaf girls feel confidence or anxiety in learning mathematics? and 3) What level of expectation do parents of deaf girls have for their daughters? This project will examine grades of deaf high school girls taking mathematics during their elementary and high school years and student/parent interviews to analyze the influence of parents' support for their daughters, deaf high school girls' personal decisions about mathematics and their perceptions of boys' attitudes toward girls.
Literature Review

A review of the literature indicates that confidence in one's own math abilities and usefulness of mathematics are two of the most important affective variables. Confidence influences a student's willingness to approach new material and to persist when the material becomes difficult. Confidence in mathematics is also reflected by continued participation in mathematics courses and career aspirations. Also of importance in this area of variables is the role of other people in students' lives. Individual differences in students' attitude toward the value of mathematics and toward themselves as learners of mathematics are assumed to result from their perceptions of the beliefs and expectations of major socializers. Parents and teachers are the socializers who have the most influence.

Parents as Socializers

Studies indicate that girls who take advanced mathematics are from well-educated families. Well-educated parents give positive influence to their children. Parents who use, enjoy, and have confidence in their ability to do mathematics have been shown to have a positive effect on students' attitudes toward the subject (Fox, 1976). Girls tend to consult their fathers more than their mothers for help with mathematics (Sherman, 1983). Parents who are poor in math often expect their children to be nonmathematical (Tobias, 1993). Parents seem to have
lower expectations for their daughters than for their sons. Girls more than boys respond to parents’ expectations and aspirations for them (Fennema, 1982).

**Girls’ Perceptions of Usefulness and Confidence in Mathematics**

Girls' perceptions of usefulness are associated with mathematics participation and achievement. If girls become frustrated with math, they will fail to see the usefulness in mathematics (Meyer & Koehler, 1993). If girls do not see mathematics-related careers as possibilities, they will also not see mathematics as useful. Girls in secondary schools as a group indicate that they do not feel that they will use mathematics in the future (Fennema & Sherman, 1978). If they were perceiving mathematics as more useful for their future, they would persist in studying mathematics.

Confidence in learning mathematics is related to self-esteem. High confidence is important in mathematics learning. Anxiety hinders students from achieving in mathematics (Fennema & Sherman, 1978). Confidence in mathematics is a belief that one has the ability to learn new mathematics and to perform well on mathematical tasks. Confidence increases when girls accomplish their math tasks. If they become frustrated in accomplishing their tasks, their confidence decreases (Fennema, 1982). The literature strongly supports the fact that there are sex-related differences in confidence-anxiety dimension. Girls do report more anxiety and less confidence toward mathematics than do males.
(Fennema & Sherman, 1978). If they were more confident, they would learn mathematics better.

**Social Influence During Early Adolescence**

Studies indicate quite clearly that the causes of reduced female achievement and loss of self-confidence are from differential socializations patterns. During the middle school years, girls’ attitudes toward some subjects, particularly math, change (Fennema & Meyer, 1989). Girls in elementary school describe themselves as confident in math. But when they go through middle school, this confidence and the degree to which girls consider math a subject in which it is appropriate for girls to achieve decline (Streitmatter, 1997).

Armstrong (1979) concluded that the development of attitudes that affect females’ math achievement begins around age 13. Armstrong’s research showed strong evidence that stereotypical expectation of parents, peers, and teachers influenced females’ decisions not to participate in math. Thus, females’ lack of positive attitudes toward math has been attributed to stereotyping rather than a lack of ability. Kerr (1988) contended that girls are rewarded for intellectual achievement at early ages; but by adolescence, they are rewarded for social conformity, which may include seeing math as masculine. Society expects males to be better than females in mathematics. Girls feel that mathematics is a male domain and this leads to math avoidance, not math abilities in girls (Tobias, 1993). Middle school girls become interested in boys and they want to be liked by boys.
They do not want to be smarter than boys in mathematics for the fear of never being asked for a date (Tobias, 1993).
Method

This study was conducted at Rochester School for the Deaf, a residential school in New York. The researcher received permission from the assistant superintendent to conduct the study.

The sample consisted of 11 deaf girls from seventh grade to eleventh grade. There were a total of 3 eight graders, 2 prep graders (between 8th and 9th grades), 2 tenth graders, and 4 eleventh graders. All the deaf girls were currently taking mathematics courses. Also in the sample were eleven parents of these deaf high school girls.

Deaf high school girls' mathematics scores from elementary years to current year were recorded. The recorded data was analyzed by a graphical method. Deaf high school girls were interviewed during a free period at their school. The nature of the study was explained to each girl. Girls were assured of the confidentiality of the results. The interview questions are shown in Appendix A. Interviews were written down and dictated immediately afterwards. Parents of high school girls were interviewed by TTY or telephone with the help of the Relay Service for these parents who do not have TTY. The nature of the study was explained to each parent. Parents were assured of the confidentiality of the results. The interview questions are shown in Appendix B. The records of the interview were printed on the TTY that has a printer.

A description of the nature of the data and results of the analysis are presented in the next chapter.
Results

Mathematics Scores

Mathematics scores are analyzed to determine how much the social influence during early adolescence has affected the girls. Table 1 shows the records of each girl's mathematics scores from first grade to eleventh grade. Not all of the girls' scores (from 1st grade to 11th grade) were documented because some of the girls were transferred to RSD at later years and some girls were still at their current grades. All of the girls scored higher in mathematics during their elementary years (grades 1 to 6) than during their middle school years (grades 7 to prep). Mathematics scores improved when girls were in their high school years (grades 9 – 11). The girls in this study exhibited a greater decrease in scores in their middle school years than during the elementary and high school years.

Table 1

<table>
<thead>
<tr>
<th>Math Scores at end of Marking Period</th>
<th>1-3</th>
<th>4-6</th>
<th>7-Prep</th>
<th>9-11</th>
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<tr>
<td>A</td>
<td>XX</td>
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<td>B</td>
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<td>XXX</td>
</tr>
<tr>
<td>F</td>
<td>X</td>
<td></td>
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</table>

Numbers of Students in Clustered Grades
Student Interviews – Data Results

To get the girls' perceptions of confidence in mathematics, several questions were asked. From the responses of 11 deaf high school girls, 64% said they enjoy math. Four girls reported that they enjoy math depending on the topics taught in class. They feel if the topics are too difficult to understand, they do not enjoy math. Although 55% said that they have confidence in learning mathematics, 45% said they have some confidence but lose that confidence when it comes to certain topics they have difficulty understanding, like fractions.

In questions related to their perceptions of usefulness in mathematics, 55% of the girls said they know what they would like to be in the future and only 36% of the 55% said that their future will require math knowledge. A total of 55% of the girls feel that math is important for their future while 45% feel that only basic math, like addition, subtraction, multiplication, and division, is sufficient for their future.

Related to gender equity, 99% of the girls reported that boys and girls are treated equally in math class. One girl reported that a "bully" male student who liked to degrade other students made some negative remarks about her inability to answer some questions. Questions were also posed to find out who are the girls' socializers, 64% reported that they do not get any help from their families. Instead, they get help from their teachers and their classmates. Only one girl responded that she gets help from her mom, two girls responded that they get help from their dads, and one girl responded that she gets help from her older sister. Related to what makes the girls take advanced courses, 45% said they need them for their
college future; 45% said they want more challenging courses; and 18% said they are forced to take them because they have no choice in taking other courses.

The most common responses from the girls when they were asked what they like about math class are: their teachers, hands-on experiences, and games. Responses from the girls on what they dislike about math class are: complicated problems, students who distract the class, repeated lectures, memorization of formulas, and student teachers with limited signing skills.

**Parent Interviews – Data Results**

In the parent interviews, only one dad was interviewed and the rest were moms. Some questions were set up to get the information about education level because the research shows that parents have a significant influence on their daughters' interest in mathematics. Of the parents interviewed, 56% of moms and 56% of dads have high school degrees and 36% of moms and 36% of dads have college degrees. In questions designed to get the parents' perception of their own confidence and the usefulness of taking math for their daughters, 45% of moms and 63% of dads said they enjoyed math during their high school years and 73% of parents said that math is important for their daughter's future. Two moms who are high school graduates reported that basic math is sufficient for doing the checking account and budget. Some of the quotes from the moms who feel that math is important are shown below:

"...we use math in just about everything we do."
"...it helps for her thinking and problem solving skills as well as having a math background is good for everyday."

"...not just the technical aspects but specifically the problem solving strategies. I think Math offers that better than many other core subjects."

Of those quoted, three are college educated and one is a high school graduate.

The percentage of parents who help their daughters with their math homework is significantly low. Only 27% of moms and 18% of dads help with their daughter's math homework.
Conclusion

The results from the mathematics scores indicate that there is a strong social influence during early adolescence on deaf girls. This research parallels that of Armstrong (1979) who concluded in his research that, beginning around the age of 13, attitudes are developed that affect hearing females’ math achievement and Tobias (1993) who drew conclusions about male dominance in a hearing society and the girls’ desire to be liked by males. Further study is needed to pinpoint the actual reason for this decline of interest in mathematics for deaf girls during the middle school years.

The percentage of boys and girls who are treated equally in math class is significantly high. It might be due to the fact that the students in a deaf residential school are in the same class from preschool to high school. That leads to development of a family-like closeness. Students know each other well and feel comfortable with themselves.

Sherman (1983) reported that girls tend to consult their fathers more than their mothers for help with mathematics. This finding shows a different result from what Sherman concluded. It might be related to the findings of Thomas (1995) that hearing parents have limited signing abilities which makes the communication a bit difficult with their deaf children. The main reason why many deaf girls ask teachers and their classmates for help might be because they can communicate with each other fluently.
Parents who feel that math is important for their daughters' future are usually college educated as reported in Fox's study (1976). From this study, a high percentage of the parents who are college educated feel that mathematics is important for their daughters' future. This is indicated clearly from the parents' quotes mentioned earlier.

This study shows that deaf girls' confidence is high when they enjoy mathematics. Their confidence decreases when they have a difficult time accomplishing their math tasks. This study shows a parallel conclusion with what Fennema (1982) has concluded in her research about hearing girls' confidence.

Fennema and Sherman (1978) reported that the hearing girls in secondary schools do not feel that they will use mathematics in the future. It is the same finding in this study about deaf girls – only 36% mentioned that math is important for their future for their careers.

This study was limited to one residential school. The courses offered at this residential school are limited and the enrollment is small. Other conditions in this study may have contributed to the girls' perceptions. One example is that there are very few high achievers. More studies are needed from other residential schools to support the findings of this study.
Appendix A

Student Interview Questions

1) Do you enjoy math?

2) Do you feel math is important for your future?

3) Do you know what you would like to be in the future? Will that require math knowledge?

4) Do you have confidence in learning math or do you have anxiety in learning math?

5) What do you like about math class?

6) What do you dislike about math class?

7) What will make you take advanced courses?

8) Do you feel that both boys and girls get equal opportunity in math class?

9) Does anyone in your family help you with math homework?
Appendix B

Parent Interview Questions

1) Did you enjoy math during your high school years? What about your spouse?

2) Do you feel math is important for your daughter’s future?

3) Do you or anyone in the family help with her homework?

4) What is your highest degree in education? What about your spouse?
Appendix C
Student Interviews

1) Do you enjoy math?
   Yes

2) Do you feel math is important for your future?
   Only add, subtract, multiply, and divide

3) Do you know what you would like to be in the future? Will that require math knowledge?
   I want to be an elementary teacher.
   Yes, it requires only basic math.

4) Do you have confidence in learning math or do you have anxiety in learning math?
   I have some confidence depending on the topics.

5) What do you like about math class?
   Teacher - she makes the class easy.

6) What do you dislike about math class?
   Complicated problems

7) What will make you take advanced courses?
   I want to learn more.

8) Do you feel that both boys and girls get equal opportunity in math class?
   Yes

9) Does anyone in your family help you with math homework?
   No
1) Do you enjoy math?
    Yeah

2) Do you feel math is important for your future?
    Yes for my future career

3) Do you know what you would like to be in the future? Will that require math knowledge?
    I want to be a gym teacher. Of course, it will require math.

4) Do you have confidence in learning math or do you have anxiety in learning math?
    So and so, sometimes I have a difficult time understanding - I need more time.

5) What do you like about math class?
    Teachers and working with the numbers

6) What do you dislike about math class?
    Complicated problems

7) What will make you take advanced courses?
    I know I will need them for college.

8) Do you feel that both boys and girls get equal opportunity in math class?
    No, one bully student always pick on me when I don’t know the answer.

9) Does anyone in your family help you with math homework?
    Yes, my grandpa
1) Do you enjoy math?
   Yes
2) Do you feel math is important for your future?
   Yes
3) Do you know what you would like to be in the future? Will that require math knowledge?
   I haven’t decided yet. I am not sure if it will require math.
4) Do you have confidence in learning math or do you have anxiety in learning math?
   Yes, I have a lot of confidence.
5) What do you like about math class?
   I am not sure.
6) What do you dislike about math class?
   Repeated lectures
7) What will make you take advanced courses?
   That is where they put me. I have no choice.
8) Do you feel that both boys and girls get equal opportunity in math class?
   Oh, yes!
9) Does anyone in your family help you with math homework?
   No
1) Do you enjoy math?
   Yes and no - depends on the topics

2) Do you feel math is important for your future?
   Yes, for checking account and budget

3) Do you know what you would like to be in the future? Will that require math knowledge?
   I haven’t decided. I am not sure if it will require math.

4) Do you have confidence in learning math or do you have anxiety in learning math?
   I feel confidence most of the time. I tend to get anxiety when it comes to fractions.

5) What do you like about math class?
   Teacher

6) What do you dislike about math class?
   Distracted students and student teachers - I have a hard time understanding her because her signing is hard to follow.

7) What will make you take advanced courses?
   I feel confidence that I can do it.

8) Do you feel that both boys and girls get equal opportunity in math class?
   Yes

9) Does anyone in your family help you with math homework?
   Not much - I sometimes ask Mom when needed but only basic math.
   No way that I will ask Dad because he doesn’t have common sense.
1) Do you enjoy math?
   Yes

2) Do you feel math is important for your future?
   Yes

3) Do you know what you would like to be in the future? Will that require math knowledge?
   I haven’t decided and I am not sure if it will require math.

4) Do you have confidence in learning math or do you have anxiety in learning math?
   Yes

5) What do you like about math class?
   Fun to learn new things

6) What do you dislike about math class?
   Student teacher - her signing is awful and I hate to memorize formulas.

7) What will make you take advanced courses?
   For college

8) Do you feel that both boys and girls get equal opportunity in math class?
   Yes

9) Does anyone in your family help you with math homework?
   Not really. Sometimes I ask my older sister for help.
1) Do you enjoy math?
   Yes

2) Do you feel math is important for your future?
   Very important.

3) Do you know what you would like to be in the future? Will that require math knowledge?
   I want to be a doctor. Yes, of course, it will require math.

4) Do you have confidence in learning math or do you have anxiety in learning math?
   I have confidence.

5) What do you like about math class?
   Fun - challenging us to think

6) What do you dislike about math class?
   Learning geometry

7) What will make you take advanced courses?
   For my future career

8) Do you feel that both boys and girls get equal opportunity in math class?
   Yes

9) Does anyone in your family help you with math homework?
   No
1) Do you enjoy math?
   Yes, I like to figure out. Sometimes I struggled but I like the challenge.

2) Do you feel math is important for your future?
   Some math – yes like add, subtract, multiply and divide – it’s important.
   But other kind of math, I don’t need it – it is for smart people.

3) Do you know what you would like to be in the future? Will that require math knowledge?
   I am not sure. I am not sure if it will require math.

4) Do you have confidence in learning math or do you have anxiety in learning math?
   Most of the time I feel confidence. Sometimes I get frustrated.

5) What do you like about math class?
   Playing games, working on the blackboard and independent work

6) What do you dislike about math class?
   I hate it when I don’t understand it.

7) What will make you take advanced courses?
   I want more challenges.

8) Do you feel that both boys and girls get equal opportunity in math class?
   Yes

9) Does anyone in your family help you with math homework?
   No, I did it myself. When I was younger, I got some help from my mom. After 8th grade, I do it myself. I ask teacher for help if I need it.
1) Do you enjoy math?
   Yes and no – depending on the topics
2) Do you feel math is important for your future?
   Yes
3) Do you know what you would like to be in the future? Will that require math knowledge?
   Yes, I want to be an art designer. Oh, yes, designing requires a lot of math.
4) Do you have confidence in learning math or do you have anxiety in learning math?
   I have confidence learning math.
5) What do you like about math class?
   It is fun and challenging.
6) What do you dislike about math class?
   One student keeps distracting in class – a trouble maker.
7) What will make you take advanced courses?
   It is important for my future.
8) Do you feel that both boys and girls get equal opportunity in math class?
   Yes
9) Does anyone in your family help you with math homework?
   Yes – my dad – he used to be a math teacher.
1) Do you enjoy math?
   Sometimes
2) Do you feel math is important for your future?
   Some areas like basic math, not other areas
3) Do you know what you would like to be in the future? Will that require math knowledge?
   Social worker or lawyer - I am not sure if it will require math.
4) Do you have confidence in learning math or do you have anxiety in learning math?
   Depending on the topics
5) What do you like about math class?
   Hands-on experiences
6) What do you dislike about math class?
   Math itself
7) What will make you take advanced courses?
   School forces me. I have no choice.
8) Do you feel that both boys and girls get equal opportunity in math class?
   Yes
9) Does anyone in your family help you with math homework?
   No
1) Do you enjoy math?
   Yes
2) Do you feel math is important for your future?
   Yes
3) Do you know what you would like to be in the future? Will that require math knowledge?
   I haven’t decided and I am not sure if it will require math.
4) Do you have confidence in learning math or do you have anxiety in learning math?
   Yes, I have confidence.
5) What do you like about math class?
   Games - fun to learn new things
6) What do you dislike about math class?
   Difficult topics - I did not enjoy if I have a hard time to understand.
7) What will make you take advanced courses?
   For college
8) Do you feel that both boys and girls get equal opportunity in math class?
   Yes
9) Does anyone in your family help you with math homework?
   No
1) Do you enjoy math?
   Sometimes
2) Do you feel math is important for your future?
   Yes
3) Do you know what you would like to be in the future? Will that require math knowledge?
   Yes, I want to be a teacher. Yes, it will require math.
4) Do you have confidence in learning math or do you have anxiety in learning math?
   Yes
5) What do you like about math class?
   Games
6) What do you dislike about math class?
   Distracted students
7) What will make you take advanced courses?
   For college
8) Do you feel that both boys and girls get equal opportunity in math class?
   Yes
9) Does anyone in your family help you with math homework?
   No - I ask my teachers and my classmates for help.
Appendix D
Parent Interviews

P: Did you enjoy math during your high school years?
M: No

P: Your spouse?
M: I don't know. He is at not home.

P: Do you feel math is important for your daughter's future?
M: Yes

P: Do you or anyone in the family help with her math homework?
M: No, she doesn't ask for help. If she did, we would try to help explain, but she doesn't.

P: What is your highest degree in education?
M: Master's degree

P: Your spouse?
M: High school diploma
P: Did you enjoy math during your high school years?

M: Yes, I did. Limited availability of courses because of tiny south Dakota but I took all available course and enjoyed them.

P: Your spouse?

M: He LOVES math and is a whiz. He taught high school math and physics while I finished my undergraduate degree.

P: Do you feel math is important for your daughter's future?

M: Absolutely! Not just the technical aspects but specifically the problem solving strategies. I think Math offers that better than many other core subjects.

P: Do you or anyone in the family help with her math homework?

M: She is very independent but will ask for and receive help from both. She tends to trust her dad more than mine... boo hoo... I don't see why....

P: What is your highest degree in education?

M: Bachelor's degree

P: Your spouse?

M: Three master's degrees
P: Did you enjoy math during your high school years?
M: Somewhat.
P: Your spouse?
M: Very much.
P: Do you feel math is important for your daughter's future?
M: Yes, I do.
P: Do you or anyone in the family help with her math homework?
M: Not really. She is a resident student and receives help at school.
P: What is your highest degree in education?
M: High school equivalency
P: Your spouse?
M: Associate degree
P: Did you enjoy math during your high school years?

M: I don't really like math. I am not good at it. My daughter have better skill than me.

P: Your spouse?

M: Yes, he loves math.

P: Do you feel math is important for your daughter's future?

M: Yes, because she want become doctor. It's a lot of math.

P: Do you or anyone in the family help with her math homework?

M: No, she do it all herself. She frustrating sometimes because she is only one who take Regents. She got no help here.

P: What is your highest degree in education?

M: No high school degree

P: Your spouse?

M: High school degree
P: Did you enjoy math during your high school years?

M: Umm, it was okay. It was not my favorite subject, I had some difficulty with it. But in high school I was fortunate to have good teachers who were helpful and encouraged me in my studies.

P: Your spouse?

M: Oh. Umm, well, umm, I guess... hang on... (asking her husband that question) yes, he liked math when he was in high school.

P: Do you feel math is important for your daughter's future?

M: Uhh... well... umm... I think that it's important. Umm, as to whether she can make a future, with or without math, it's hard to say... I certainly think that it helps you be more successful in college.

P: Do you or anyone in the family help with her math homework?

M: Not usually... she, umm, usually does not ask us for any help.

P: What is your highest degree in education?

M: Master's degree

P: Your spouse?

M: Bachelor's degree
P: Did you enjoy math during your high school years?

M: Ummm.. I did until it got difficult ...(laugh)..I didn't like the problem solving questions.

P: Your spouse?

M: Uhh..I don't think he enjoyed anything.. it's ex-husband.

P: Do you feel math is important for your daughter's future?

M: Yes, I do because we use math in just about everything we do.

P: Do you or anyone in the family help with her math homework?

M: Uhhh... huh!.. well..we have tried...but she can be very difficult..and we end up arguing.

P: What is your highest degree in education?

M: Umm..well..I quit school in my junior year ..but then went and got my GED.

P: Your ex-husband?

M: I think he finished high school.
P: Did you enjoy math during your high school years?

M: Oh, it was long time ago...sort yes...but not really love it.

P: Your spouse?

M: Oh, he went to bed but I think yes.

P: Do you feel math is important for your daughter's future?

M: Yes, just the basic math for checking account or like that.

P: Do you or anyone in the family help with her math homework?

M: Rarely ask me.

P: What is your highest degree in education?

M: College diploma

P: Your spouse?

M: High School diploma
P: Did you enjoy math during your high school years?

GP: Uhh.. Yes, I did enjoy math.

P: Your spouse?

GP: Uhh… I don’t know for sure, I don’t think she did. I doubt it.

P: Do you feel math is important for your daughter's future?

GP: Yes, I feel that it is very important.

P: Do you or anyone in the family help with her math homework?

GP: Uhh.. I would help her if she requested help and I have told her to let me look at her homework to see if she needs any homework but she is reluctant to get any help from me.

P: What is your highest degree in education?

GP: I have a masters degree.

P: Your spouse?

GP: She has a high school diploma.
P: Did you enjoy math during your high school years?

M: Oh, yeah, that's my favorite math - always enjoying math

P: Do you feel math is important for your daughter's future?

M: Some of them, yes. Some of them not need it for future… important as like checking personal as useful, but some for job. I think math is important sometimes too deep as tough, which don't need whatever kids don’t need to learn for future.

P: Do you or anyone in your family help with your daughter's homework?

M: Some of them, I never learn that kind of math. I don’t not understand cuz I learned math up to 7 grade, never learn algebra, but I did learn from NTID only six months, not much but my daughter knows as no problems with math.

P: What is your highest degree in education?

M: High school diploma. Went to NTID for six months, did not graduate.
P: Did you enjoy math during your high school years?

M: Oh, yes, I love math.

P: Your spouse?

M: Huh, he never talking about what is his favorite subject, huh…

P: Do you feel math is important for your daughter's future?

M: Oh, yes.

P: Do you or anyone in your family help with her math homework?

M: Yes, I do help my daughter most of time.

P: What is your highest degree in education?

M: High school diploma.

P: Your spouse?

M: High school diploma.
P: Did you enjoy math during your high school years?

M: Yes, I did.

P: Your spouse?

M: Yes, he says.

P: Do you feel that math is important for your daughter's future?

M: Yes, because it helps for her thinking and problem solving skills as well as having a math background is good for everyday.

P: Do you or anyone in your family help her with her math homework?

M: Not anymore. When she was younger, she would show me how she did her homework but now she does it herself.

P: What is your highest degree in education?

M: High school graduate and LPN Nursing graduate about 3 years of college but not final degree.

P: Your spouse?

M: High school graduate.