EVALUATING THE GIRL POWER PROJECT

PRE- AND POST-INTERVENTION ANALYSIS OF PROJECT IMPLEMENTATION

(2023-24)

JUSTLIKEMYCHILD FOUNDATION

THE GIRL POWER PROJECT™

EXECUTIVE SUMMARY

This report presents findings from a pre- and post-intervention assessment of the Girl Power Project (GPP) programme implemented during 2023–24. The evaluation examined changes in adolescents' knowledge, attitudes, self-perception, access to mentorship, and educational aspirations following programme exposure. A paired pre–post design was used, and appropriate statistical tests were applied to assess the significance of observed changes.

The participant sample comprised adolescents drawn from multiple schools, with the majority in the mid-adolescent age group. This profile aligns with the programme's intended target population and provides an appropriate basis for assessing outcomes related to gender norms, health knowledge, and educational planning.

The assessment indicates statistically significant improvements across all major outcome domains. Self-perception improved substantially, with a higher proportion of students reporting positive self-assessment after the intervention. Awareness regarding the disadvantages of early marriage, which was already high at baseline, increased further following programme exposure. Knowledge related to menstruation and pregnancy showed marked improvement, characterised by a significant decline in misinformation and "don't know" responses, alongside increased biologically accurate understanding.

HIV prevention knowledge, which was extremely limited prior to the intervention, improved across all indicators, with statistically significant increases in awareness of preventive measures and a sharp reduction in lack of knowledge. Access to trusted female mentors outside the home also increased significantly, indicating strengthened support systems for adolescents. Educational aspirations showed a clear upward shift, with a substantially higher proportion of students aspiring to pursue post-graduate education after the intervention.

Overall, the findings demonstrate that the GPP programme was effective in improving adolescents' knowledge, attitudes, and aspirations within a relatively short period. The consistency and statistical significance of results across multiple domains provide strong evidence in support of the programme's continuation and further strengthening.

1. INTRODUCTION

This report presents findings from the pre- and post-intervention assessment conducted under the Girl Power Project (GPP) programme during 2023–24. The programme was designed to improve knowledge, attitudes, confidence, and future aspirations of adolescent participants, with a particular focus on gender norms, early marriage, reproductive health, HIV awareness, mentoring support, and education.

The evaluation examines whether the intervention led to measurable and meaningful change among the same group of participants over time.

2. PROFILE OF PARTICIPANTS

2.1 School-wise Distribution of Students

The assessment covered 198 students drawn from five schools. The highest representation was from DDVK, which contributed 38.9% students. This was followed by Daurala School with 24.8% students and Hapur School with 23.7% students. KGBV accounted for 9.6% students, while Composite School contributed 3.0% students (Fig. 1).

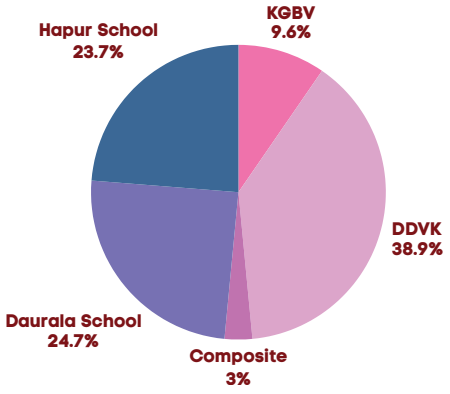

Fig.1: School-wise Distribution of Students

Overall, students were distributed across multiple schools, with participation concentrated primarily in DDVK, Daurala School, and Hapur School, which together accounted for approximately 87 percent of the sample. The presence of respondents from all five schools indicates that the intervention was implemented across different institutional contexts.

2.2 Age-wise Distribution

The age-wise distribution of students indicates that a majority of participants were in mid-adolescence. Students aged 15–16 years constituted the largest group, accounting for 56.2 percent of the sample. This was followed by students aged 14 years or below, who represented 23.4 percent of participants. Those in the 17–18 years age group accounted for 18.4 percent, while students aged 19 years or above constituted a small proportion of the sample at 2.0 percent (Fig. 2).

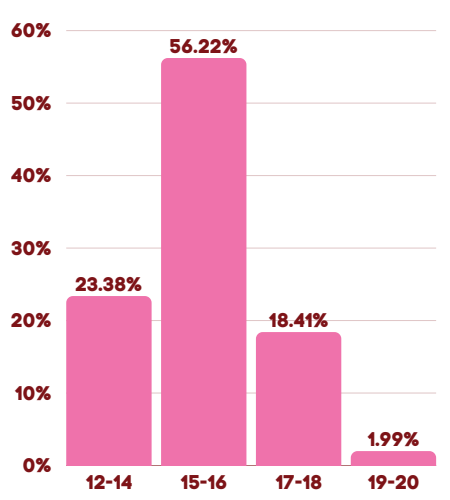

Fig.2: Age-wise Distribution of Students

Overall, nearly four-fifths of the participants (79.6 percent) were aged 16 years or below, and more than 98 percent were below 19 years of age, indicating that the sample largely comprised adolescents within the programme's intended age range.

3. METHODOLOGY

- **Study Design:** Pre–post intervention assessment
- **Sample Size:** 201 respondents
- **Analysis Tools:**
  - McNemar's Chi-square test for paired binary outcomes
  - Symmetry and Stuart–Maxwell tests for multi-category ordinal variables
- **Level of Significance:** $p < 0.05$

The use of paired tests ensures that changes reflect actual improvement among the same students, not differences between two separate groups.

4. KEY FINDINGS

4.1 Self-Perception: "Have Many Good Qualities"

Students were asked whether they agreed with the statement that they have many good qualities. At baseline, 80.6 percent of students reported agreement with the statement. Following the intervention, the proportion of students reporting agreement increased to 98.5 percent, indicating a substantial positive shift in self-perception (Fig. 3)

The change between pre and post-intervention responses was statistically significant, as indicated by McNemar's chi-2 value of 33.11 ($p < 0.001$) (Table 1). The exact McNemar significance probability was also $p<0.001$, confirming that the observed change is unlikely to be due to chance.

These findings suggest that the intervention was associated with a marked improvement in students' self-assessment and confidence, reflected in the increased proportion of participants expressing positive self-perception after programme exposure.

Table 1: McNemar Test (Self-Perception: "Have Many Good Qualities")

. mcc pre_many_good_qual post_many_good_qual

Cases	Controls: Exposed	Controls: Unexposed	Total
Exposed	157	1	158
Unexposed	36	2	38
Total	193	3	196

McNemar's chi2 (1) = 33.11 Prob > chi2 = 0.0000

Exact McNemar significance probability = 0.0000

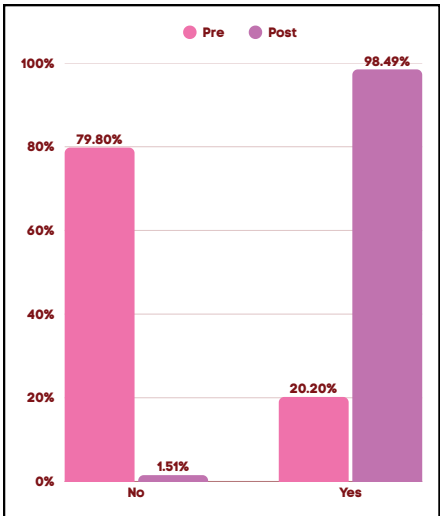

Fig.3: Self-Perception: "Have Many Good Qualities"

4.2 Attitudes Towards Marriage at an Early Age

Students were asked whether they believe there are disadvantages to marrying girls at a young age. Prior to the intervention, 95.5 percent of students reported that early marriage has disadvantages, while 4.5 percent did not hold this view. Following the intervention, agreement increased to 99.5 percent, with only 0.5 percent reporting that they did not perceive disadvantages (Fig. 4)

The change in responses between the pre- and post-intervention assessments was statistically significant. McNemar's chi-square test yielded a value of 6.40 (p = 0.011), and the exact McNemar significance probability was p = 0.0215, indicating that the observed increase in agreement is unlikely to have occurred by chance (Table 2).

Overall, the findings indicate a modest but statistically significant strengthening of already high awareness regarding the disadvantages of early marriage following the intervention.

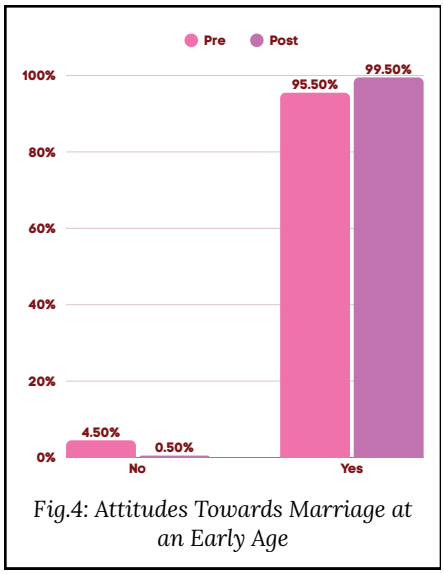

Fig.4: Attitudes Towards Marriage at an Early Age

Table 2: McNemar Test (Attitudes Towards Marriage at an Early Age)

. mcc Pre_early_marriage Post_early_marraige

Cases	Controls: Exposed	Controls: Unexposed	Total
Exposed	188	1	189
Unexposed	9	0	9
Total	197	1	198

McNemar's chi2 (1) = 6.40 Prob > chi2 = 0.0114

Exact McNemar significance probability = 0.0215

4.3 Knowledge about Menstruation

Students were asked to describe what menstruation or periods are, and responses were recorded across multiple categories reflecting varying levels of understanding. Prior to the intervention, 41.0 percent of students reported that they did not know about menstruation. A further 34.0 percent expressed the belief that menstrual blood becomes impure during periods. Correct biological understanding was limited at baseline, with 15.5 percent identifying ovulation as part of the menstrual process and 5.5 percent correctly describing menstruation as the monthly shedding of the uterine lining (fig. 5).

Following the intervention, a substantial shift in responses was observed. The proportion of students demonstrating correct biological understanding—specifically that a woman's ovaries release one egg per month—increased to 71.4 percent. The share of students identifying menstruation as the monthly shedding of the uterine lining rose to 9.6 percent. At the same time,

the belief that menstrual blood is impure declined to 6.5 percent, and the proportion of students reporting that they did not know about menstruation reduced to 9.6 percent (Fig. 5).

The change in the distribution of responses between the pre- and post-intervention assessments was statistically significant. The symmetry test yielded a chi-square value of 108.69 ($p < 0.001$), and the Stuart–Maxwell marginal homogeneity test yielded a chi-square value of 105.50 ($p < 0.001$), indicating a significant shift in students' understanding of menstruation following the intervention (Table 3).

Overall, the findings indicate a clear movement away from misinformation and lack of knowledge towards scientifically accurate understanding of menstruation after programme exposure.

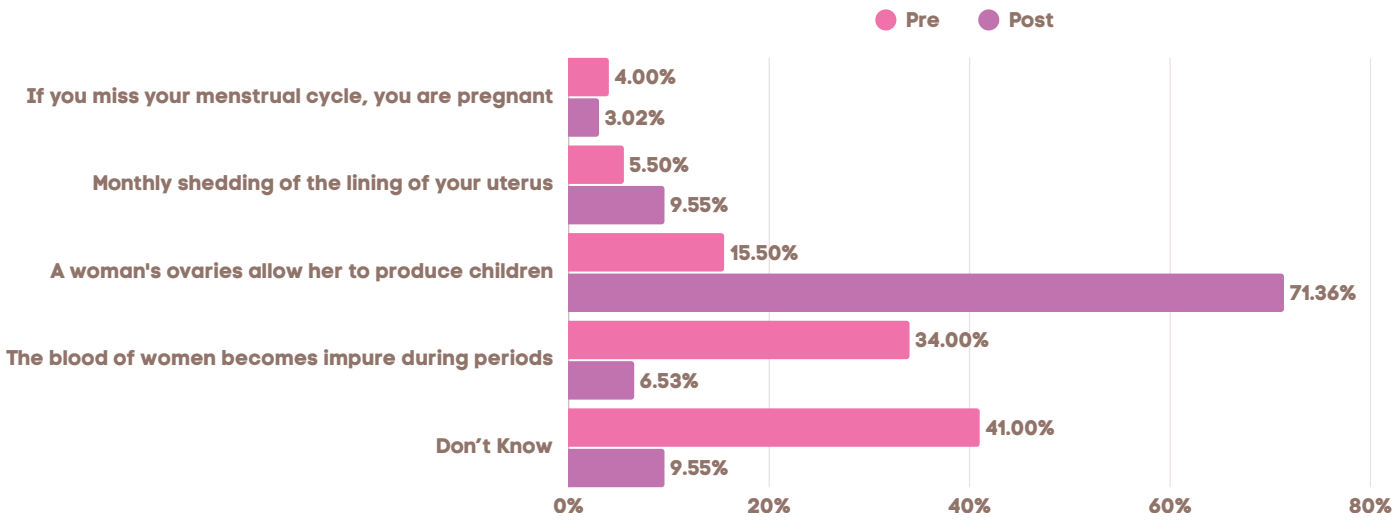

Fig.5: Knowledge about Menstruation

Table 3: Statistical Analysis of change in knowledge about menstruation

. symmetry pre_knowledge_mens knowledge_mens

What are periods/menstruation? Tell us as much as you know about them.	Post- What are periods/menstruation? Tell us as much as you know about them.					
	If you miss your menstrual cycle, you are pregnant	Monthly shedding of the lining of your uterus	A woman's ovaries allow her to produce children; the ovaries release one egg per month.	The blood of women becomes impure during periods	Don't Know	Total
If you miss your menstrual cycle, you are pregnant	0	1	7	0	0	8
Monthly shedding of the lining of your uterus	0	2	5	1	3	11
A woman's ovaries allow her to produce children; the ovaries release one egg per month.	1	2	22	2	4	31
The blood of women becomes impure during periods	2	7	46	7	5	67
Don't Know	2	7	62	3	7	81
Total	5	19	142	13	19	198

	Chi2	df	Prob>chi2
Symmetry (asymptotic)	108.69	10	0.0000
Marginal homogeneity (Stuart-Maxwell)	105.50	4	0.0000

4.4 Knowledge about Pregnancy

Students were asked to describe how a woman becomes pregnant, with responses reflecting varying levels of biological understanding. Prior to the intervention, a majority of students (64.5 percent) reported that they did not know how pregnancy occurs. Correct biological understanding—that pregnancy occurs when male sperm fertilises the female egg—was reported by 14.0 percent of students. A further 19.5 percent associated pregnancy with sexual intercourse without reference to fertilisation, while 2.0 percent reported incorrect beliefs, such as pregnancy occurring through physical contact like kissing (Fig. 6).

Following the intervention, the proportion of students reporting that they did not know how pregnancy occurs declined to 13.2 percent. Correct biological understanding increased to 53.3 percent, while 32.0 percent reported that pregnancy occurs when a woman has sex with a man. Incorrect beliefs, such as pregnancy occurring through kissing, declined marginally to 1.5 percent (Fig. 6).

The change in the distribution of responses between the pre- and post-intervention assessments was statistically significant. The symmetry test produced a chi-square value of 95.27 ($p < 0.001$), and the Stuart–Maxwell marginal homogeneity test produced a chi-square value of 93.25 ($p < 0.001$), indicating a significant shift in knowledge levels following the intervention.

Overall, the findings show a clear improvement in students' understanding of the biological process of pregnancy, accompanied by a substantial reduction in lack of knowledge after programme exposure (Table 4).

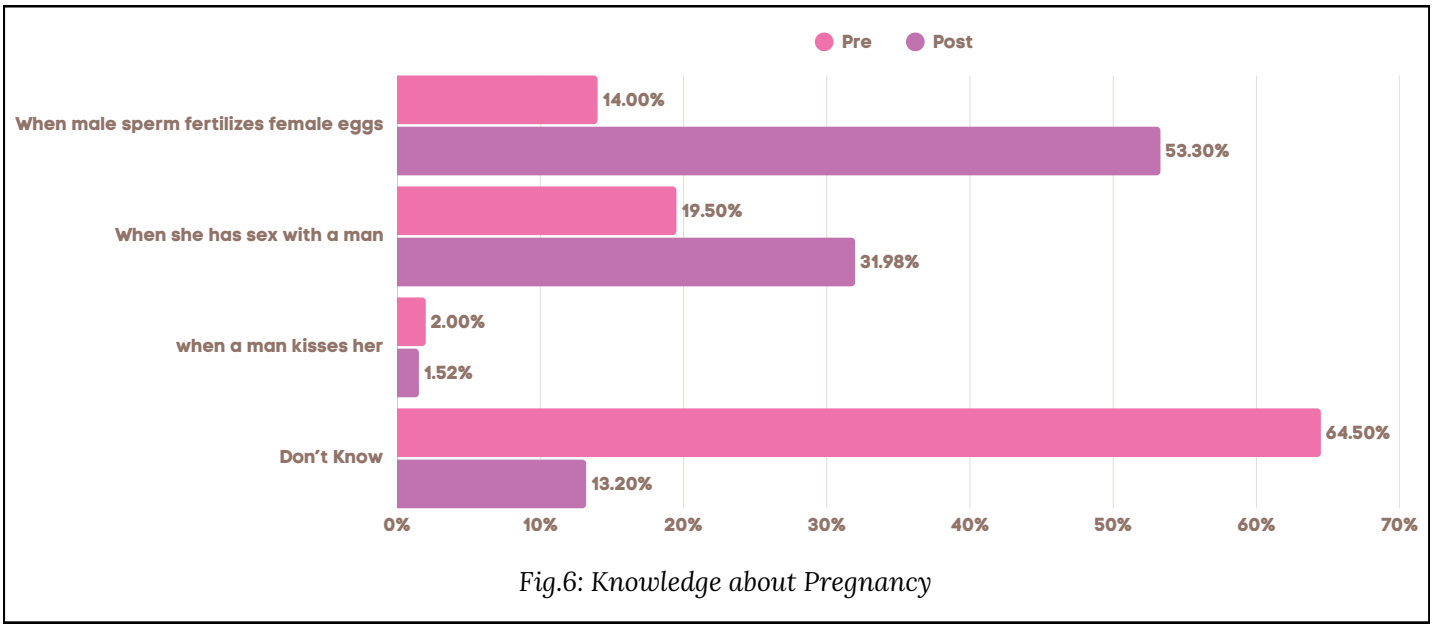

Fig.6: Knowledge about Pregnancy

Table 4: Statistical Analysis of change in knowledge about pregnancy

. symmetry pre_knowledge_pregnancy post_knowledge_pregnancy

What are periods/menstruation? Tell us as much as you know about them.	Don't Know	When male sperm fertilizes female eggs	When she has sex with a man	When a man kisses her	Total
Don't Know	21	70	34	1	126
When male sperm fertilizes female eggs	3	18	7	0	28
When she has sex with a man	2	14	21	1	38
When a man kisses her	0	2	1	1	4
Total	26	104	63	3	196

	Chi2	df	Prob>chi2
Symmetry (asymptotic)	95.27	6	0.0000
Marginal homogeneity (Stuart-Maxwell)	93.25	3	0.0000

4.5 Knowledge about protecting from HIV AIDS

Students were asked to identify ways to prevent HIV transmission, with multiple response options reflecting different levels of awareness. Prior to the intervention, HIV-related knowledge was extremely limited. 93.5 percent of students reported that they did not know how HIV can be prevented. Awareness of specific preventive measures was negligible, with 0.0 percent reporting knowledge of safe injections, safe blood, treatment, or general HIV-related knowledge, and only 2.5 percent reporting condom or safe sex as a preventive measure (Fig. 7).

Following the intervention, substantial improvements were observed across all indicators. Knowledge of condom use and safe sex increased to 57.2 percent, while awareness of safe injection practices rose to 48.3 percent. Knowledge regarding safe blood transfusion increased to 27.4 percent, and awareness of HIV treatment rose to 17.4 percent. Awareness of avoiding the use of used razors or sharp objects increased to 6.5 percent, and general HIV-related knowledge increased to 7.5 percent. Correspondingly, the proportion of students reporting that they did not know how HIV can be prevented declined sharply to 21.9 percent (Fig. 7).

All observed changes were statistically significant. McNemar's chi-square values ranged from 5.40 to 138.24, with p-values below 0.05 across all indicators, including condom use ($\chi^2 = 106.14$, $p < 0.001$), safe injections ($\chi^2 = 97.00$, $p < 0.001$), and reduction in "Don't know" responses ($\chi^2 = 138.24$, $p < 0.001$) (Table 5).

Overall, the results indicate a marked increase in awareness of HIV prevention methods following the intervention, alongside a substantial reduction in lack of knowledge among students.

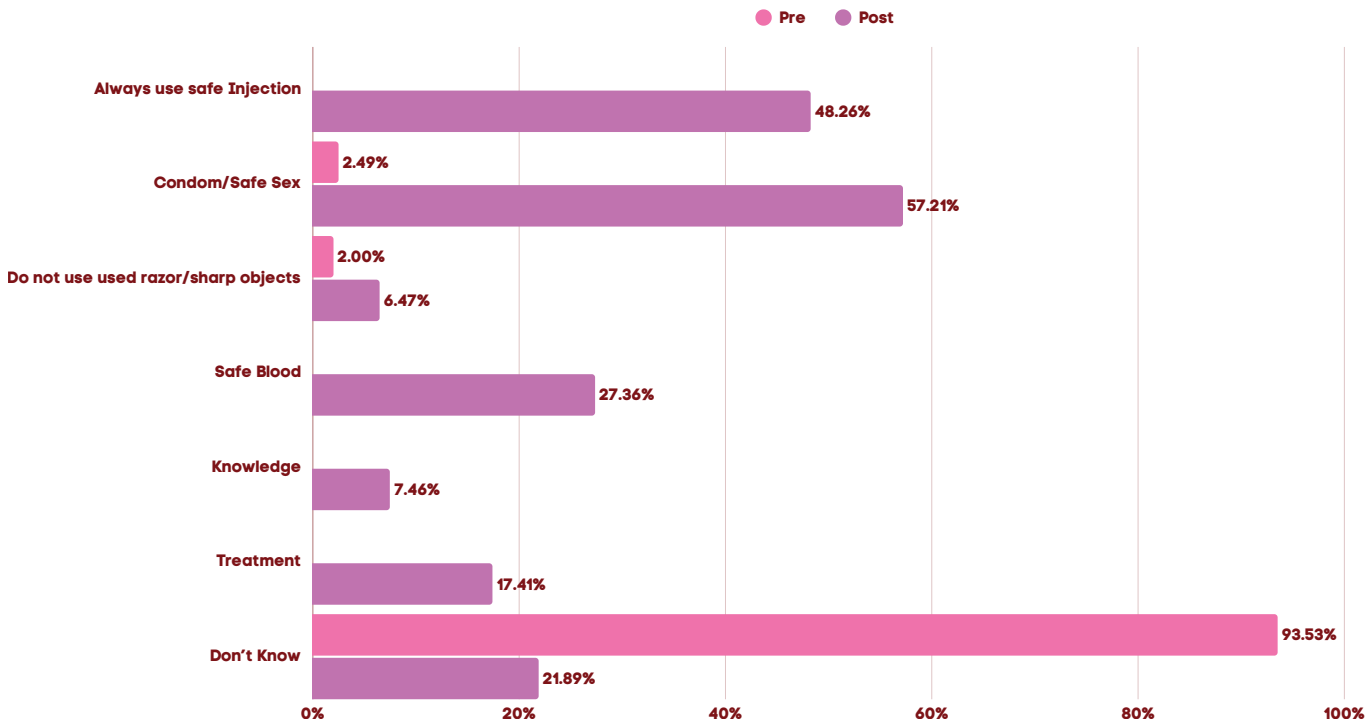

Fig.7: Knowledge about protecting from HIV AIDS

Table 5: Statistical Analysis of change in knowledge about protection from HIV AIDS

Indicators	Pre	Post	McNemar χ^2	p-value	Significance
Always use safe Injection	0.00%	48.26%	97.00	0.0000	Significant
Condom/Safe Sex	2.49%	57.21%	106.14	0.0000	Significant
Do not use used razor/sharp objects	2.00%	6.47%	5.40	0.0201	Significant
Safe Blood	0.00%	27.36%	55.00	0.0000	Significant
Knowledge	0.00%	7.46%	15.00	0.0001	Significant
Treatment	0.00%	17.41%	35.00	0.0002	Significant
Don't Know	93.53%	21.89%	138.24	0.0000	Significant

4.6 Access to Female Mentors Outside the Home

Students were asked whether they have a female mentor outside their home whom they can trust easily. Prior to the intervention, 31.6 percent of students reported having access to such a mentor, while 68.4 percent reported that they did not. Following the intervention, the proportion of students reporting access to a trusted female mentor increased to 82.3 percent, while those reporting no access declined to 17.7 percent (Fig. 8).

The change in responses between the pre- and post-intervention assessments was statistically significant. McNemar's chi-square test yielded a value of 82.36 ($p < 0.001$), and the exact McNemar significance probability was also $p < 0.001$, indicating a highly significant shift in access to female mentors after programme exposure (Fig. 8).

Overall, the findings indicate a substantial increase in the proportion of students reporting the presence of a trusted female mentor outside the home following the intervention (Table 6).

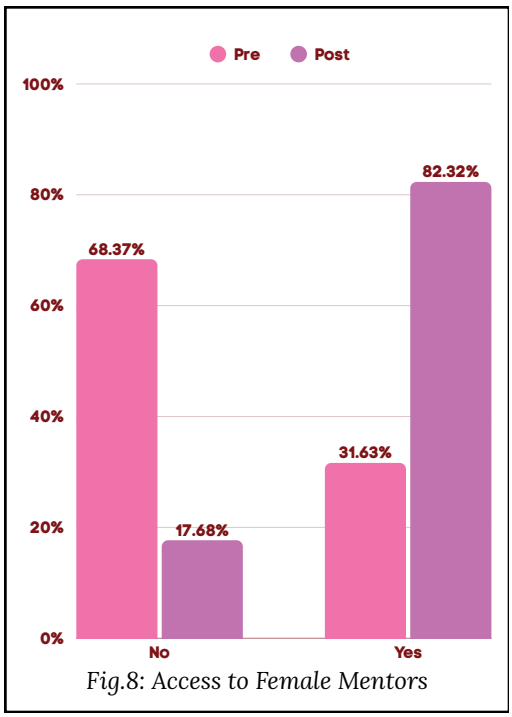

Fig.8: Access to Female Mentors

Table 6: McNemar Test (Access to female mentors)

. mcc pre_female_mentors post_female_mentors

Cases	Controls: Exposed	Controls: Unexposed	Total
Exposed	50	10	60
Unexposed	109	24	133
Total	159	34	193

McNemar's chi2 (1) = 82.36 Prob > chi2 = 0.0000

Exact McNemar significance probability = 0.0000

4.7 Educational Aspirations

Students were asked about the level of education they expected to complete. Prior to the intervention, educational aspirations were distributed across multiple levels. Aspirations for post-graduation were reported by 26.9 percent of students, while 27.9 percent expected to complete graduation. A further 22.4 percent aspired to complete higher secondary education, and 19.9 percent reported aspirations for a diploma or certificate. A small proportion reported aspirations limited to secondary education (2.0 percent) or indicated no clear plan (1.0 percent).

Following the intervention, a marked upward shift in educational aspirations was observed. The proportion of students aspiring to post-graduation increased to 61.2 percent, while aspirations for graduation declined to 20.9 percent. Aspirations for higher secondary education and diploma

or certificate courses declined to 9.7 percent and 7.1 percent, respectively, while aspirations limited to secondary education remained low at 1.0 percent (Fig. 9).

The change in the distribution of educational aspirations between the pre- and post-intervention assessments was statistically significant. The symmetry test yielded a chi-square value of 85.02 ($p < 0.001$), and the Stuart–Maxwell marginal homogeneity test yielded a chi-square value of 80.40 ($p < 0.001$), indicating a significant shift in educational aspirations following the intervention (Table 7).

Overall, the findings indicate a clear movement towards higher levels of educational aspiration after programme exposure.

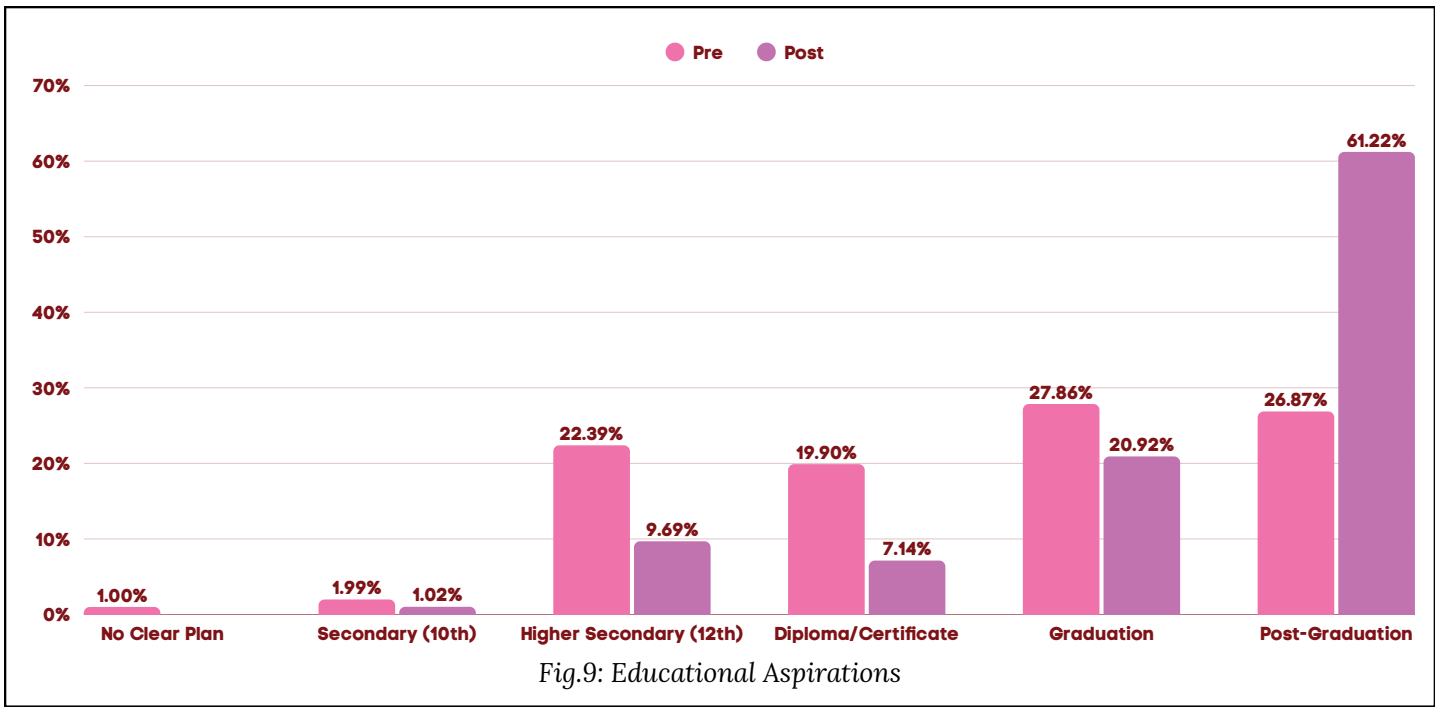

Fig.9: Educational Aspirations

Table 7: Statistical Analysis of change in Educational Aspirations

. symmetry pre_edu_aspiration post_edu_aspiration

What do you think about how much you will study?	Secondary (10th)	Higher Secondary (12th)	Diploma/Certificate	Graduation	Post-Graduation	Total
No Clear Plan	0	0	0	0	2	2
Secondary (10th)	0	0	1	1	2	4
Higher Secondary (12th)	1	12	2	13	16	44
Diploma/Certificate	0	2	4	9	23	38
Graduation	0	5	4	9	37	55
Post-Graduation	1	0	3	9	40	53
Total	2	19	14	41	120	196

	Chi2	df	Prob>chi2
Symmetry (asymptotic)	85.02	12	0.0000
Marginal homogeneity (Stuart-Maxwell)	80.40	5	0.0000

5. CONCLUSION

The pre- and post-intervention assessment indicates that the Girl Power Project (GPP) programme was associated with statistically significant changes across multiple domains related to adolescents' knowledge, attitudes, and aspirations. Improvements were observed in self-perception, attitudes towards early marriage, understanding of menstruation and pregnancy, awareness of HIV prevention, access to female mentors, and educational aspirations. In each of these areas, the direction of change was consistent, and statistical tests confirmed that the observed shifts were unlikely to have occurred by chance.

Notably, areas characterised by limited baseline knowledge—such as menstruation, pregnancy, and HIV prevention—showed substantial reductions in "don't know" responses alongside increases in scientifically accurate understanding. Similarly, educational aspirations exhibited a clear shift towards higher levels of attainment following the intervention. While awareness regarding the disadvantages of early marriage was already high at baseline, the intervention contributed to further consolidation of this understanding.

Overall, the findings suggest that the intervention was effective in strengthening adolescents' knowledge base and shaping attitudes during a critical developmental period. The consistency of statistically significant results across diverse outcome indicators supports the internal validity of the evaluation.

6. RECOMMENDATIONS

Based on the evaluation findings, the following recommendations are proposed:

1. Continuation of the Intervention:

Given the statistically significant improvements observed across key indicators, the programme should be continued to sustain and reinforce gains in knowledge, attitudes, and aspirations among adolescents.

2. Strengthening Content on Sexual and Reproductive Health:

While notable improvements were observed in knowledge related to menstruation, pregnancy, and HIV prevention, continued emphasis on these topics is recommended to further consolidate accurate understanding and address remaining gaps.

3. Institutionalisation of Mentorship Components:

The substantial increase in reported access to trusted female mentors suggests that mentorship is a valuable programme component. Formalising and sustaining mentorship structures within

schools may help ensure long-term support for students.

4. **Focused Support for Educational Planning:**

Given the upward shift in educational aspirations, future programme cycles may incorporate guidance on educational pathways, career planning, and access to higher education to translate aspirations into achievable outcomes.

5. Improved Collection of Background Information:

Future assessments may benefit from the systematic collection of socio-economic and household-level data, which would allow for more nuanced analysis of differential programme effects across subgroups.

6. Periodic Follow-up Assessments:

Conducting follow-up assessments at regular intervals would help determine whether observed changes are sustained over time and inform necessary programme adaptations.