# GLOBAL G·L·O·W

# Results from GLOW Club After One Year of Programming in Andhra Pradesh, India

*A Global G.L.O.W. Evaluation Report Prepared By Kajal Kotecha and Michele Coleman*

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# Table of Contents

A Case Study of Global G.L.O.W. programs administered in partnership with leaders and mentors from Holy Cross Social Service Society

# Key Findings

- Exposure to GLOW Club programming had a significantly positive impact on developing girls' capabilities relating to social and emotional learning, leadership, self-advocacy, positive future outlook, and gender equality beliefs.
- There is a significant positive relationship between girls' age and the overall girl survey outcome score, indicating girls gain more social emotional skills from programming as they age.
- Exposure to GLOW Club programming had a significantly positive impact on parents' and guardians' views on gender equality. Parents' and guardians' viewpoints towards their daughters' and sons' preferred education level, marital age and future outlook positively changed after one year of GLOW Club programming. This demonstrates the positive indirect impact GLOW Club programming has beyond program participants.

# Who We Are

Global G.L.O.W. is a 501(c)(3) organization that mentors girls to become powerful advocates and confident leaders. Global G.L.O.W. fuels mentor-facilitated GLOW Clubs in 30 countries. Since inception, GLOW Clubs have ignited the power of over 91,000 girls to do 3 transformative things: increase their confidence, strengthen their voice, and build their power. We sharpen girls' advocacy skills, by supporting specialty summits, sponsoring girl-led community advocacy projects, and engaging in U.N. advocacy, reaching 2 million people annually. Our outcomes evaluations demonstrate that girls experience growth in confidence and a more positive future outlook, along with measurable progress in their own lives and in their communities.

Global G.L.O.W. ignites the power of girls to advocate for a better world. Global G.L.O.W.'s programming is designed to equip girls with the skills and resources they need to thrive on any path. Working alongside grassroots organizations, key global stakeholders, NGOs and educational institutions, Global G.L.O.W. activates girl-driven change through its programming and partnerships. GLOW Club is an initiative of Global G.L.O.W. that enhances girls' social and emotional learning (SEL) skills to deal effectively with daily and societal challenges. Clubs are facilitated by trusted, and knowledgeable local mentors in a safe space where girls feel comfortable engaging in small-group dialogue. The program is arranged into three distinct years of programming: GLOW Create, GLOW Connect, and GLOW Community. Over these years, participants develop self-advocacy skills, connect to their community, and actively work towards making change locally and globally.

**The five eight-week modules included in GLOW Create (GLOW Club Year 1) are, in order:**

1. **Relationships 101** - A deep dive into relationships of all kinds, culminating in a celebration of teamwork and friendship.
2. **Decision Making** - This module teaches responsible decision-making, effective problem-solving, and goal-setting.
3. **Self Advocacy** - Participants learn to articulate their "Why" as they explore the meaning of advocacy and what it means to advocate for oneself.
4. **The Power of Girls 101** - The first of a three-part series, this module asks participants to think about what it means to be a girl in their community.
5. **Community 101** - An introduction to community engagement, this module has participants consider their community and what changes they would like to make within it.

GLOW Club was developed using principles of Social and Emotional Learning (SEL). SEL is an integral part of education and human development. SEL is the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions, achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions. SEL is a fundamental part of education and human development and is the process through which all young people and adults develop skills for life effectiveness (CASEL, 2007). The Collaborative for Academic, Social, and Emotional Learning outlines five main SEL competencies, namely, Self-Awareness, Self-Management, Social Awareness, Relationship Skills, and Decision-Making (CASEL, 2023), which we incorporate into our programming.

# Where We Work

Gender inequality continues to be a social issue in India and negatively results in women and girls facing lower levels of education, increased possibility of child marriage, poor access to healthcare, and lower wages than men (UNAIDS, 2021). The Global Gender Gap Report used by the World Economic Forum measures gender equality across four key indicators (Economic Participation and Opportunity, Educational Attainment, Health and Survival, and Political Empowerment) and ranks countries accordingly (WEF, 2022). According to the 2022 Global Gender Gap Report, India ranked 135 out of 146 countries (WEF, 2022). Although this rank is a slight improvement from 2021 (140 of 156 countries), the findings suggest that gender disparities continue to exist in India and additional interventions are required to address gender inequality. The statistics below also reaffirm the need for further interventions, especially in rural areas of India.

In 2021, India's national literacy rate was 74.0% (Census of India, 2021). Further, according to the National Family Health Survey (NFHS-5) for 2019-2021, the literacy rate among adult men (15-49 years) was higher at 84.4% than among adult women (15-49 years) at 71.5% (Government of India, 2022). In terms of geographical area, the literacy rate among adult women was lower in rural areas (65.9%) than in urban areas (83.0%) (Government of India, 2022). Specifically, the overall literacy rate in Andhra Pradesh is at 67.0%, of which the male literacy stands at 74.8% and female literacy at 59.5% (Population Census Data, 2022). The literacy rate in Andhra Pradesh is notably lower than the national literacy rate. According to the British Council (2021, p. 6), Andhra Pradesh has a low Gender Parity Index of 0.81 compared to the national parity of 1. The low GPI in Andhra Pradesh has been attributed to the low educational levels among women and girls (aged approximately 18-22 years), which "negatively impacts their awareness, skills, confidence and networks". Low completion rates at the secondary school level and low enrollment and retention rates at the higher education level are significant barriers to the social, economic and political empowerment of women and girls, which ultimately contributes to gender inequality (British Council, 2021).

Thus, education plays a critical role in empowering girls to develop their capabilities, and has strongly been associated with delayed marriage (Arends-Kuenning, 2001; NPF, 2001; Adams-Prassl & Andrew, 2019). For example, research suggests that "girls with primary education are twice as likely to marry or enter into a union as those with secondary or higher education" (UNPF, 2001). Further, education increases girls' self-efficacy and belief in oneself; increases life skills; enhances career opportunities; benefits family and community; and empowers girls to make their own decisions and choices (Raj et al., 2019).

The NFHS-5 for 2019-2021 further indicates that 23.3% of women aged between 20-24 years were married before 18 years (Government of India, 2022). Notably, a higher proportion of women in rural areas were married before 18 years (27.0%) compared to women in urban areas (14.7%). The NFHS-5 further revealed that 17.7% of men aged between 25-29 years got married before 21 years. A higher proportion of men in rural areas got married before 21 age (21.1%) than in urban areas (11.3%) (Government of India, 2022).

Additional research from UN Women (n.d.) reveals that in 2021, only 14.4% of seats in parliament were held by women in India and 14.8% of women held senior and middle management positions. India is also the only country where more girls die than boys. For example, the under-five mortality for girls in India remains 8.3% higher than for boys (UN IGME child survival Report 2019 as cited by UNICEF, n.d.). The adolescent birth rates in India slightly increased from 10.7 per1,000 women aged 15-19 in 2016 to12.2 per 1,000 in 2018 (UN Women, n.d.). In terms of employment rates, the employed population below the international poverty line among females aged 15 years and above is 9.5% compared to males at 8.2% (UN Women, n.d.).
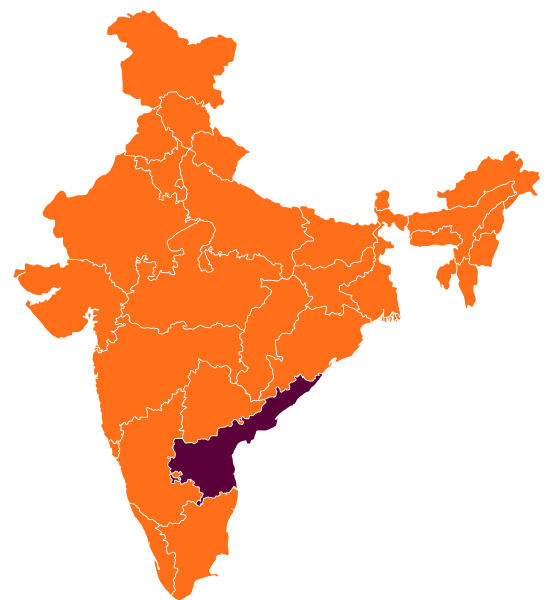
# What We Learned

We conducted a quasi-experimental outcome evaluation with a pre-post design to evaluate year 1 of GLOW Club programming at select implementing sites both in participants and their parents and guardians. The selection of implementing partners, sites and participants was purposive (Babbie, 2007, p. 184), and was based on convenience and a predefined selection criterion which included: having access to the internet, commitment to implement and track GLOW Club indicators for three years, having experience previously implementing our programs, and a large enough population size. These results are from year 1 of implementation of the GLOW Club by Holy Cross Social Service Society in Andhra Pradesh, India. Data was collected in two time periods: before programming (at baseline) in January 2021, and after one year of programming in January 2022. Baseline information served as a point of comparison for measuring progress toward achieving evaluation objectives.

## Girl Participant Demographics

At baseline, 250 girls were surveyed. 179 (71.6%) were the same girls after one year of programming; the findings presented below are based on 179 girl participants.

Table 1 presents girls' demographic characteristics at baseline and a year after programming. At baseline, participants' age ranged from 10 to 16 years (mean = 12 years; SD = 1.33). Most participants were aged between 10 to 12 years (58.3%). The majority of participants were in primary school, in Grade 5 (21.8%), Grade 6 (27.4%), and Grade 7 (26.8%). A total of 159 out of the 179 participants progressed to the next year of school (88.9%). Further, most girls reported to be unmarried (100%), had no children (99.4%), and were unemployed (100%). In total, 15 clubs participated in Glow Club. See Appendix 1 for more information.
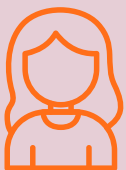
> **At baseline, a typical girl that completed the surveys was between the ages of 10 and 12, was in primary grade 6, was unmarried, had no children, and was unemployed.**

Table 1: Program Participants' Demographic Characteristics

| Demographic Characteristics | Baseline (January 2021) | | Year 1 (January 2022) | |
|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage |
| **Age Group** | | | | |
| 10-12 years | 102 | 58.3% | 73 | 41.7% |
| 13-16 years | 64 | 36.2% | 113 | 63.8% |
| **School Grade** | | | | |
| Primary 1 | 0 | 0% | 0 | 0% |
| Primary 2 | 1 | 0.6% | 0 | 0% |
| Primary 3 | 0 | 0% | 1 | 0.6% |
| Primary 4 | 3 | 1.7% | 0 | 0% |
| Primary 5 | 39 | 21.8% | 6 | 3.4% |
| Primary 6 | 49 | 27.4% | 39 | 21.8% |
| Primary 7 | 48 | 26.8% | 48 | 26.8% |
| Primary 8 | 34 | 19.0% | 46 | 25.7% |
| Secondary 1 | 5 | 2.8% | 33 | 18.4% |
| Secondary 2 | 0 | 0% | 3 | 1.7% |
| **Marital Status** | | | | |
| Unmarried | 179 | 100% | 177 | 98.9% |
| **Number of Children** | | | | |
| 0 | 178 | 99.4% | 176 | 99.4% |
| 1 | 1 | .6% | 1 | .6% |
| **Employment Status** | | | | |
| Unemployed | 179 | 100% | 177 | 98.9% |

# Girl Participant Outcomes

Notably, for all outcomes surveyed, the mean values increased from baseline to year 1. The overall mean value after programming was higher than before programming (see figure below). The increased change in mean values from baseline to year 1 suggests that GLOW Club programming improves girls' capabilities relating to social-emotional learning, self-advocacy, positive future outlook, leadership skills, and belief in their value as a girl.

However, it should be noted that the mean values at baseline for all outcomes were somewhat high as the mean scores ranged from 3.35 (decision-making) to 4.24 (relationship skills). This suggests that participants may have already developed some of the capabilities before programming and continued to build upon these skills in GLOW Club.

We conducted a paired samples t-test to determine if the mean differences between baseline scores and year 1 scores were statistically significant and if GLOW Club had an impact on participants. Table 2 below shows the results of the paired samples t-test for all outcomes and the overall.

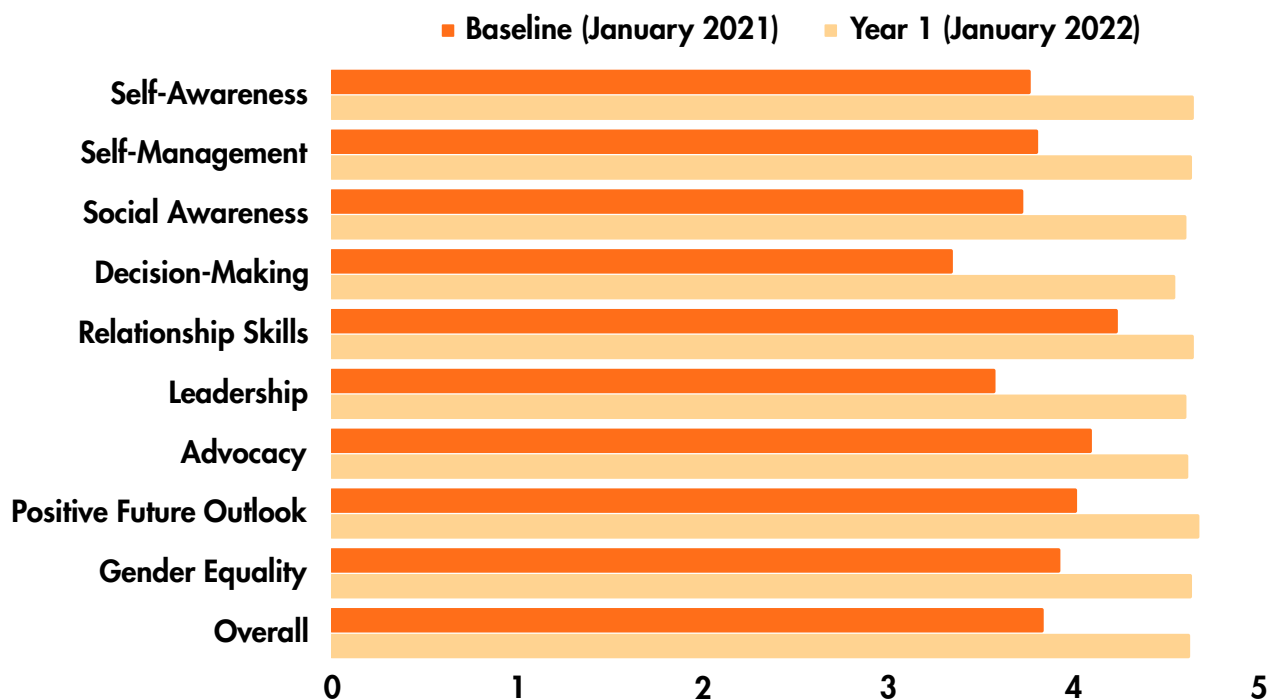Figure 1: Girl survey outcomes at baseline and year 1

Table 2: Paired Sample t-test Statistics

| Outcome | Mean Difference | Std. Deviation | t | Sig. (2-tailed) |
|---|---|---|---|---|
| Self-Awareness | .87 | .88 | 13.17 | .000 |
| Self-Management | .81 | .64 | 16.91 | .000 |
| Social Awareness | .87 | .75 | 15.48 | .000 |
| Decision-Making | 1.17 | 1.18 | 13.2 | .000 |
| Relationship Skills | .41 | .66 | 8.28 | .000 |
| Leadership | 1.01 | .89 | 15.21 | .000 |
| Advocacy | .52 | .53 | 13.02 | .000 |
| Positive Future Outlook | .66 | .64 | 13.7 | .000 |
| Gender Equality | .7 | .62 | 14.94 | .000 |
| Overall | .78 | .57 | 18.35 | .000 |

## Analysis by GLOW Club

The table below shows the mean values for each club before and after programming. Similar to the outcomes, the mean values for each club increased from baseline to year 1. At baseline, the mean values ranged from 3.16 (Glow Stars) to 4.59 (Vaayu Glow Club), while in year 1, the mean values ranged from 4.39 (Mighty Stars) to 4.87 (Amazing Stars).

Overall, GLOW Clubs provide safe spaces for girls, enabling them to develop capabilities relating to social-emotional learning, self-advocacy, positive future outlook, leadership skills, and gender equality.

*Table 3: Descriptive statistics by Glow Club*

| Club Name | Baseline | | Year 1 | | Mean Difference between baseline and year 1 |
|---|---|---|---|---|---|
| | Mean (SD) | N | Mean (SD) | N | |
| Aakash glow club | 3.99 (.30) | 9 | 4.58 (.14) | 9 | 0.59 |
| Agni glow club | 3.77 (.17) | 11 | 4.62 (.06) | 11 | 0.85 |
| Amazing stars | 3.81 (.42) | 15 | 4.87 (.09) | 15 | 1.06 |
| Blowing stars | 3.61 (.49) | 10 | 4.69 (.09) | 10 | 1.08 |
| Glowing stars | 3.31 (.56) | 11 | 4.53 (.09) | 11 | 1.21 |
| Jala stars | 4.04 (.08) | 9 | 4.57 (.08) | 9 | 0.53 |
| Mighty stars | 4.11 (.20) | 11 | 4.39 (.21) | 11 | 0.29 |
| Power stars | 3.16 (.20) | 11 | 4.83 (.10) | 11 | 1.67 |
| Prithvi stars | 3.25 (.51) | 13 | 4.74 (.13) | 11 | 1.50 |
| Rising stars | 4.34 (.28) | 15 | 4.60 (.08) | 15 | 0.26 |
| Shining stars | 4.36 (.24) | 11 | 4.46 (.07) | 11 | 0.10 |
| Supreme stars | 3.75 (.65) | 11 | 4.52 (.50) | 12 | 0.78 |
| Twinkle stars | 3.72 (.28) | 14 | 4.56 (.11) | 14 | 0.84 |
| Vaayu glow club | 4.59 (.17) | 11 | 4.77 (.09) | 11 | 0.18 |
| Super stars | 3.77 (.34) | 16 | 4.65 (.09) | 16 | 0.88 |
| **Total** | **3.83 (.53)** | **178** | **4.63 (.21)** | **177** | **0.78** |

## The relationship between Girls' Age and Survey Outcomes

The baseline data was used to determine if there is a relationship between girls' age and the survey outcomes. The findings are presented in the table below. A Pearson's correlation revealed a significant positive relationship between girls' age and the overall survey outcome score ($r = .37$, $n = 179$, $p < .05$, two tailed). This suggests that girls' capabilities seem to strengthen with age.

However, the strength of this relationship is interpreted according to the guidelines suggested by Cohen (1998, as cited in Pallant, 2009, p. 134):

- **Small effect:  r = .10 to .29**
- **Medium effect: r = .30 to .49**
- **Large effect:   r = .50 to 1.0**

Thus, there is a medium but significant relationship between girls' age and the overall survey outcome score. The findings further reveal that all outcomes are significant and positively associated with age, except for 'Relationship Skills' (r = .09, n = 179, p > .05, two-tailed). The results suggest girls tend to develop higher levels of social and emotional skills with age.

Table 4: Correlation between girls' age and survey outcomes

| Survey Outcomes (Baseline) | Girls' Age |
| --- | --- |
| Overall Outcome Score | .370** |
| Self-Awareness | .390** |
| Self-Management | .405** |
| Social-Awareness | .215** |
| Decision-Making | .334** |
| Relationship Skills | .093 |
| Leadership | .294** |
| Advocacy | .209** |
| Positive Future Outlook | .171* |
| Gender Equality | .274** |

** Correlation is significant at the 0.01 level (2-tailed).     * Correlation is significant at the 0.05 level (2-tailed).

Overall, GLOW Club programming had a significant impact on girls and improved their capabilities relating to social-emotional learning, self-advocacy, positive future outlook, leadership skills, and gender equality. In addition, the results showed that girls gain more social-emotional skills from programming as they age. It is anticipated that the social-emotional skills attained by girls will empower them to understand their self-worth and develop a greater sense of gender equality.

# Parent Demographics

At baseline, 227 parent and guardian participants were surveyed. One hundred and one of these (44.5%) also completed the survey after one year of GLOW Club programming, and the findings presented below are based on the 101 matched surveys.

Parents' and guardians' demographic characteristics at baseline and a year after programming are presented in Figures 1 and Figure 2. The sample was majority female (83.2%) compared to males (16.8%). At baseline, participants' age ranged from 26 to 54 years (mean = 35 years; SD = 5.3). Most participants were aged between 26 to 30 years (25.7%). See Appendix 2 for more information.



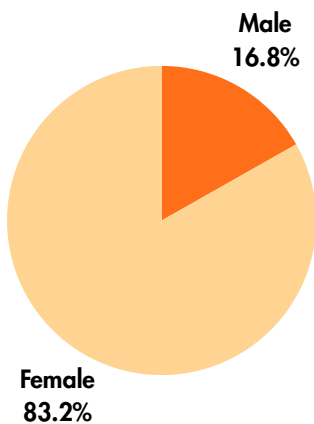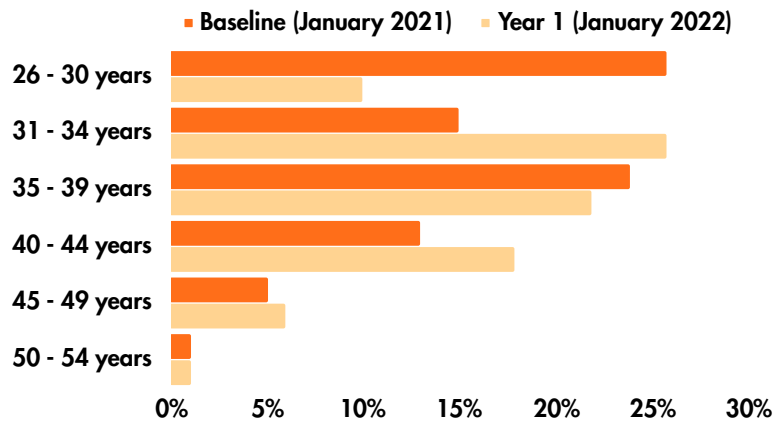*Figure 2: Parents' and guardians' gender*



*Figure 3: Parents' and guardians' age*

At baseline, a typical parent or guardian survey participant was likely female (83.2%) and in their mid-30s (mean=35).

# Parent and Guardian Outcomes: Views on Gender Equality

Parents' and guardians' attitudes towards gender equality was assessed through various Likert and non-Likert scale survey questions. The non-Likert scale questions assessed parents' and guardians' aspirations relating to their daughters' and sons' education level, preferred marital age, and future outlook. The responses reflect parents' and guardians' views on gender equality. The full results at baseline and year 1 are presented in Appendix 3.

## Parents and guardians preferred highest level of education for their daughters and sons

As seen in the figures below, at baseline, most participants preferred that their daughters "complete secondary education" (74.3%). This positively changed after a year of programming as almost all participants (96%) preferred that their daughters "complete education after secondary education" compared to only 22.8% at baseline.

Contrary, the preferred education level for sons at baseline and year 1 was "complete education after secondary education", which increased from 88.1% to 99%, suggesting that GLOW club programming positively impacts boys and girls. These findings suggest that the education aspiration from parents and guardians about their sons and daughters equalized after a year of GLOW Club. Specifically, there was a greater positive shift from baseline to year 1 in participants' viewpoints toward their daughters' education.

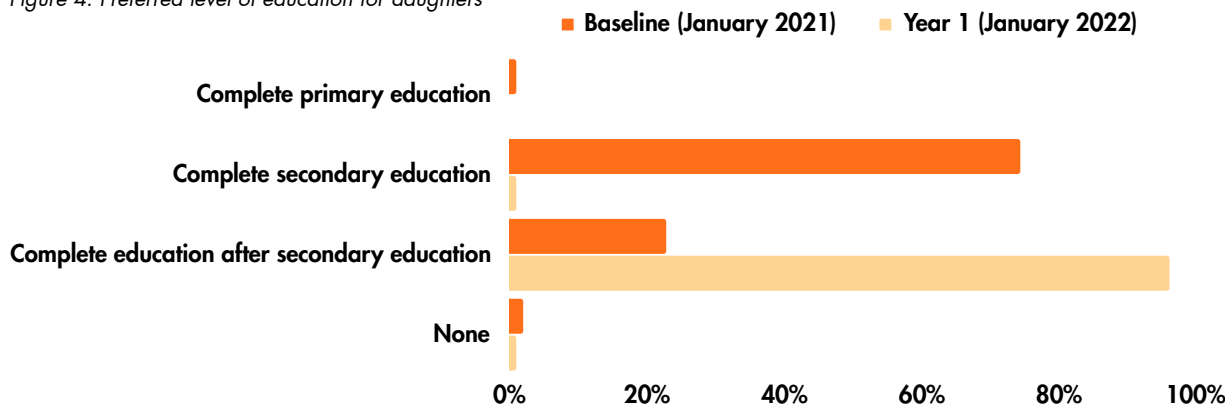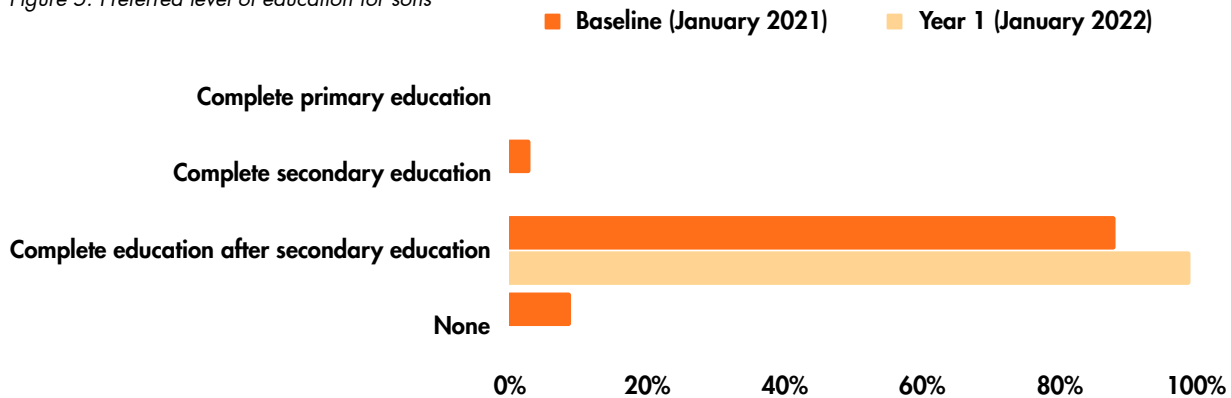Figure 4: Preferred level of education for daughters

■ Baseline (January 2021)　■ Year 1 (January 2022)



Figure 5: Preferred level of education for sons

■ Baseline (January 2021)　■ Year 1 (January 2022)



## *Parent and guardian preferred marital age for their daughters and sons*

As seen in the figures below, at baseline the preferred marital age for daughters participating in GLOW Club as shared by their parents or guardians ranged from 18 to 23 years (mean = 19.3 years; SD = 1.39). This slightly increased after a year of programming to 18 to 28 years (mean = 21.5 years; SD = 1.89). Thus, programming positively changed participants' preference for their daughters' marital age.

The preferred marital age for sons at baseline ranged from 21 to 32 years (mean = 25.7 years; SD = 2.3). This increased after a year of programming to 20 to 35 years (Mean = 26.9 years; SD = 2.9), suggesting GLOW Club programming impacts parent and guardian gender equality beliefs about boys and girls.

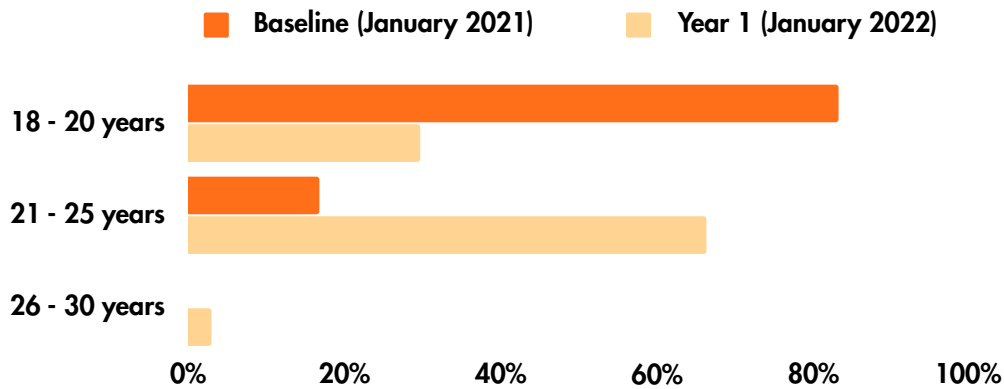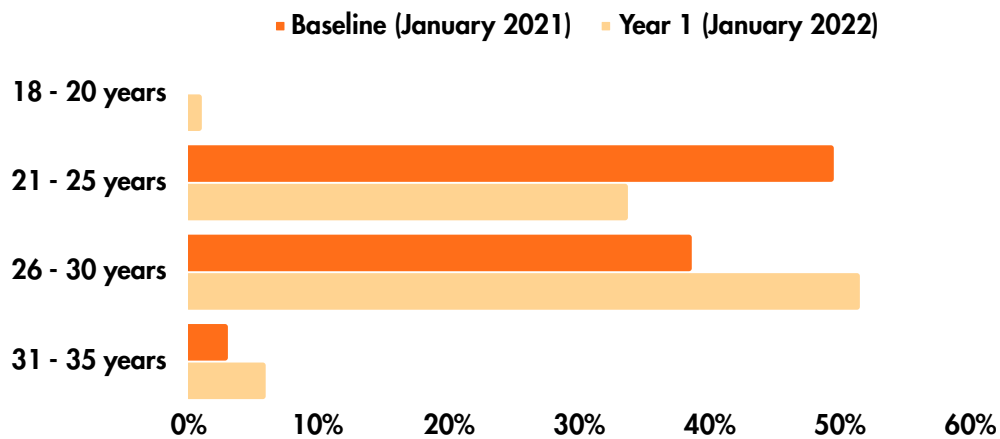*Figure 6: Preferred marital age for daughters*



*Figure 7: Preferred marital age for sons*



Overall, the preferred marital age for sons and daughters seems to align with India's legislation on the minimum legal marital age, which is 18 years for women and 21 years for men (Raj et al., 2019). However, should the minimum legal marriage age for daughters increase to 21 years, more efforts will be needed to change parents' and guardians' views and attitudes towards their preferred marriage age for their daughters.

## *Parents and guardians preferred future outlook for their daughters and sons*

As seen in Figure 8 and Figure 9, parents and guardians equally wish that their daughters' and sons' future are better than theirs. The trend was similar both at baseline and a year after programming.

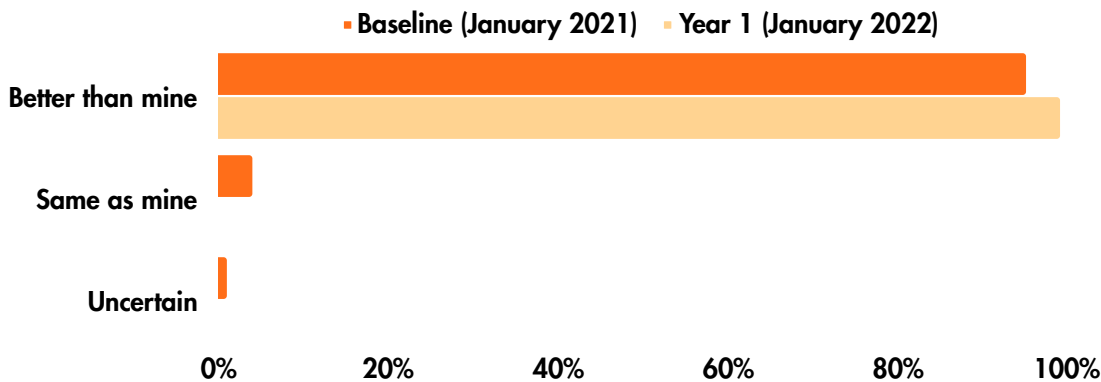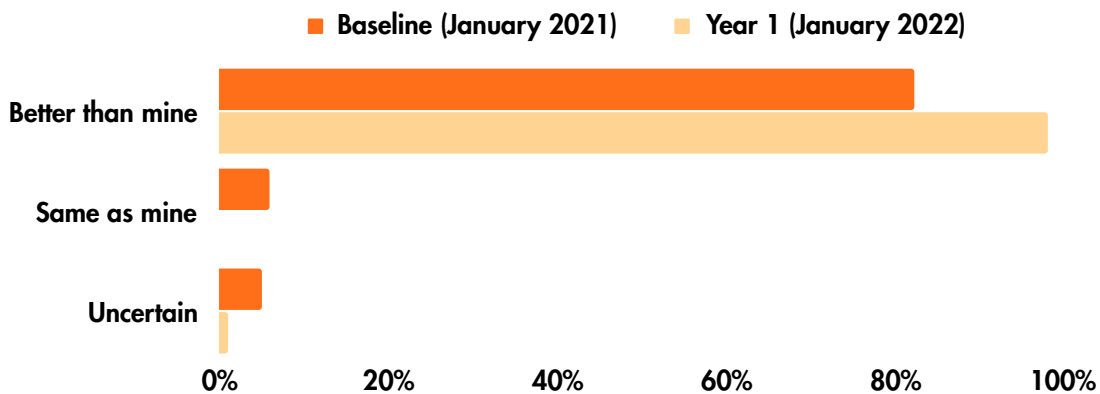*Figure 8: Preferred future outlook for daughers*



*Figure 9: Preferred future outlook for sons*



The full descriptive results for each of the 14 Likert scale questions at baseline and year 1 are presented in Appendix 4. The mean values for the majority of the questions increased from baseline to year 1. At baseline, the mean values ranged from 2.45 (Q13, A husband should be more educated than his wife) to 4.22 (Q5 Womens' options are valuable and should always be considered when household decisions are made). In year 1, the mean values ranged from 2.98 (Q2 A wife should obey her husband, even if she disagrees) to 4.22 (Q5 Womens' options are valuable and should always be considered when household decisions are made).

Overall, paired samples t-test results show that parents and guardians significantly scored higher after programming (mean = 3.68, SD = 0.72) than before programming (mean = 3.37, SD = 0.54), t(99) = -5.13, p < 0.05. Specifically, the following eight statements presented in Table 6 below were statistically significant. The findings highlight the indirect positive impact of GLOW Club programming on girls' communities, especially on parents' and guardians' views and attitudes toward gender equality.

The baseline data was used to determine whether there is a relationship between parents' and guardians' age and the overall gender equality outcome. A Pearson's correlation revealed that there is no significant relationship between parents' and guardians' age and the overall gender equality outcome score (r = 0.15, n = 101, p > .05, two-tailed).

Table 5: Statistically significant statements

| Statements | t | df | Sig. (2 -tailed) |
|---|---|---|---|
| Q7: Daughters marry and leave the family, so they are not as useful as adults as sons. | -2.19 | 98 | .031 |
| Q8: Society determines how we should behave towards boys and girls.. | -3.29 | 99 | .001 |
| Q9: There is no discrimination against women. However, tradition and culture say that men and women have different roles in society. | -3.51 | 99 | .001 |
| Q10: It is better to be a man than to be a woman. | -6.05 | 98 | .000 |
| Q11: Boys should be allowed to get more opportunities and resources for education than girls. | -3.06 | 99 | .003 |
| Q12: Boys should be fed first and given more food compared to girls. | -2.59 | 99 | .011 |
| Q13: A husband should be more educated than his wife. | -9.48 | 99 | .000 |
| Q14: I would prefer sons to daughters. | -2.88 | 99 | .005 |

# How We Learned

This section presents an overview of the research design adopted by the current evaluation. The population and sample are described, followed by an overview of the measuring instruments used for the evaluation.

# Sampling Strategy

The evaluation aligned with ethical standards and guidelines such that participation was voluntary and the responses obtained from the surveys were kept confidential. Purposive and convenience non-random sampling strategies were used to select participants. Purposive sampling is based entirely on the evaluator's and/or researcher's judgement about certain attributes of a particular group of people who are selected for a study or evaluation (Babbie, 2007, p. 184). A sample is therefore selected based on a particular purpose. Convenience sampling is the ease by which participants can be selected to take part in a study or evaluation. Accordingly, Holy Cross was purposely selected as a partner to implement GLOW Club programs based on their similar vision, mission and values to Global G.L.O.W and their work with girls in vulnerable communities. As such, girl participants from Holy Cross were both purposively and conveniently selected to participate in GLOW Club programming. The evaluators acknowledge the limitations of both sampling methods such that the findings from the evaluation cannot be generalized to the entire population of girls as not every girl in the population had an equal chance of being selected. The sample size for the evaluation was determined using a 90% confidence level and 5% margin of error. This criteria was used to ensure that the sample is representative of the population being evaluated, allowing for reliable and credible results.

# Sample

The sample comprised of two target groups:

- **Direct beneficiaries/participants** – participants who directly participate in GLOW Club and who thus benefit from the program's existence. For example, girls aged between 10-16 years.
- **Indirect beneficiaries/participants** – participants who could potentially benefit from GLOW Club through direct beneficiaries. For example, members of the community or family members could benefit from the participation of their daughters in GLOW Club, also known as our 'ripple effect'.
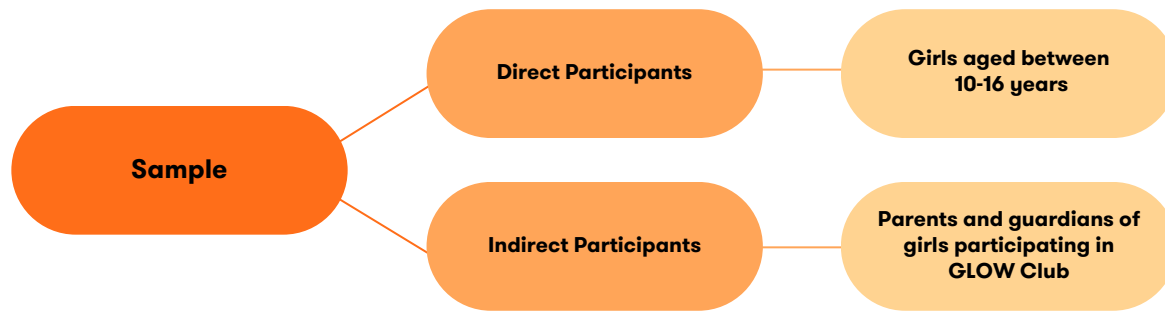
# Instrument Development

The evaluation largely drew on quantitative data from surveys completed by girls who received GLOW Club programming, and their parents and guardians. The measuring instruments used to collect data from both girl participants and parent and guardian participants were based on existing reliable and valid measures when available. Further, the measuring instruments were piloted by a focus group of girls who provided feedback on the wording and interpretation of questions that enabled the evaluators to make relevant changes.

## *Girl Survey*

The girl survey assessed girls' capabilities related to social-emotional learning, self-advocacy, positive future outlook, leadership skills, and belief in their value as a girl. Participants responded to 45 statements on a 5-point Likert scale by indicating the extent to which they agreed or disagreed with each statement. The same survey was administered to girl participants at Baseline and in Year 1.

The following are some examples of statements in the girl survey:
- **Self-Awareness:** "I know the emotions I feel".
- **Self-Management:** "I know ways to calm myself down".
- **Self-Advocacy:** "I stand up for what I believe in".
- **Positive Future Outlook:** "I feel good about my future".
- **Leadership Skills:** "I hold a formal leadership position at my school, in my community, or at home".
- **Gender Equality:** "I feel valued as a girl at school, in my community, or at home".

## *Parent and Guardian Survey*

GLOW programs are built on the idea of the "ripple effect"— the belief that our impact spreads beyond the individual girl. As girls develop the confidence and agency to advocate for themselves, their family, friends, and community members begin to recognize the inherent power of girls. The ripple effect was measured by surveying family and community members' viewpoints on gender equality before and after one year of GLOW Club. Participants responded to 14 statements on a 5-point Likert scale by indicating the extent to which they agreed or disagreed with each statement. The same parent and guardian survey was administered to parent and guardian participants at baseline and in year 1

**The following are some examples of statements:**
- "Gender equality, meaning that men and women are equal, has come far enough already"
- "A husband and wife can share power"
- "Women's' opinions are valuable and should always be considered when household decisions are made"

It should be noted that 11 of the 14 statements in the Parent and Guardian Survey are negatively phrased (see Appendix 5). Accordingly, prior to analyzing the data, the scores for the negatively phrased statements were reversed so that a high score indicates a positive attitude towards gender equality while a low score represents the opposite. The scores for the 11 negatively phrased statements were reversed as follows: 'Strongly Disagree' (1) was reversed to 'Strongly Agree' (5); 'Disagree' (2) was reversed to 'Agree' (4); 'Neither agree nor disagree' (3) remained as 'Neither agree nor disagree' (3); 'Agree' (4) was reversed to 'Disagree' (2); and 'Strongly Agree' (5) was reversed to 'Strongly Disagree (1).

# Data Analysis and Management

Data from the baseline and year 1 girl and parent and guardian surveys were captured electronically into Microsoft Excel and thereafter exported to the Statistical Package for Social Sciences (SPSS). Prior to conducting any descriptive and inferential statistics, the data was first screened and cleaned.

The data cleaning process involved the following:

- Identifying duplicate entries and missing values
- Matching the same participant from the baseline surveys and year 1 surveys
- Checking for "out-of-range errors" by computing frequencies and descriptive statistics for each of the variables to ensure that the scores obtained were within the accepted range of values. For example, ensuring that the rating scale responses are between 1 (Strongly Disagree) to 5 (Strongly Agree)
- Verifying and validating data discrepancies by directing communicating with implementing organization

Furthermore, the assumptions of a parametric test were first assessed before computing any of the statistical analyses. These assumptions include the following: normally distributed data, homogeneity of variance, interval data, and independence (Field, 2009, p. 138) . The findings from the normality tests reveal that the data is approximately normally distributed for both the girl and parent and guardian survey (see Appendix 6). According to Pallant (2007, p. 204), "with large enough sample sizes (for example, 30+), the violation of [normality] should not cause any major problems". For this reason, parametric tests such as paired-sample t-test and Pearson's correlation were used to determine the impact of GLOW Club and the relationship between variables.

# Limitations

Overall, the paired-sample t-test suggests a year of GLOW Club programming significantly improves girls' capabilities relating to SEL, leadership skills, self-advocacy, positive future outlook, and gender equality. However, the findings should be interpreted in light of some of the design limitations. For example, causality cannot be assumed as non-random sampling strategies were used to select participants for the evaluation, such as purposive and convenience sampling (Babbie, 2007, p. 184). Further, both surveys rely on self-reported data, which are known to be subjective and susceptible to various response biases, including social desirability bias (van de Mortel, 2008, p. 45; Grimm, 2010, p. 1). In addition, since the surveys lacked anonymity, this may have also influenced participants to respond in a socially acceptable manner, thereby leading to inaccurate responses (Grimm, 2010, p. 1).

The findings could have further been influenced by bias in power dynamics as the evaluation is being conducted by the funder (Global G.L.O.W.), who compensates partners for their time and skills to implement GLOW Club programming. As such, this could have created a conflict of interest that may have led the funder to overlook or downplay any negative aspects of the program. Alternatively, implementing partners could have responded in a social desirability manner to justify the need for funding irrespective of program effectiveness. Lastly, the Covid-19 pandemic may have affected program implementation as Clubs may have struggled to maintain normal face-to-face sessions and collect data from participants due to lockdown and social distancing restrictions and thus the program may not have been implemented as originally intended.

# Conclusion

**Overall, GLOW Club programming had a significant impact on girls and improved their capabilities relating to social-emotional learning, self-advocacy, positive future outlook, leadership skills, and gender equality.** In addition, the results showed that girls gain more social-emotional skills from programming as they age.

It is anticipated that the social-emotional skills attained by girls will empower them to understand their self-worth and develop a greater sense of value in being a girl.

Parents' and guardians' viewpoints towards their daughters' and sons' preferred education level, marital age and future outlook positively changed after a year of GLOW Club. Firstly, in terms of education level, participants equally hoped that their sons and daughters complete their education after secondary education. Secondly, although the preferred marital age for daughters increased slightly after a year of programming and aligns with India's legal marriage age, the average marital age for daughters was still lower than compared to sons. This possibly indicates the existence of social and gender norms within the girls' community where girls/daughters are expected to get married at a younger age compared to boys/sons. Finally, participants equally hoped that the future of their daughters and sons would be better than theirs. The positive change in parents' and guardians' viewpoints toward gender equality is encouraging.

# Appendix 1. Descriptive Statistics for Glow Club

| GLOW Club | Baseline (January 2021) | | Year 1 (January 2022) | |
|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage |
| Aakash glow club | 9 | 5.1% | 9 | 5.1% |
| Agni glow club | 11 | 6.2% | 11 | 6.2% |
| Amazing stars | 15 | 8.4% | 15 | 8.5% |
| Blowing stars | 10 | 5.6% | 10 | 5.6% |
| Glowing stars | 11 | 6.2% | 11 | 6.2% |
| Jala stars | 9 | 5.1% | 9 | 5.1% |
| Mighty stars | 11 | 6.2% | 11 | 6.2% |
| Power stars | 11 | 6.2% | 11 | 6.2% |
| Prithvi stars | 13 | 7.3% | 11 | 6.2% |
| Rising stars | 15 | 8.4% | 15 | 8.5% |
| Shining stars | 11 | 6.2% | 11 | 6.2% |
| Supreme stars | 11 | 6.2% | 12 | 6.8% |
| Twinkle stars | 14 | 7.9% | 14 | 7.9% |
| Vaayu glow club | 11 | 6.2% | 11 | 6.2% |
| Super stars | 16 | 9.0% | 16 | 9.0% |

# Appendix 2. Demographic Profile of Parents and Guardians

| Demographic Characteristics | Baseline (January 2021) | | Year 1 (January 2022) | |
|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage |
| **Gender** | | | | |
| Male | 17 | 16.8% | 17 | 16.8% |
| Female | 84 | 83.2% | 84 | 83.2% |
| **Age Group** | | | | |
| 26 - 30 years | 26 | 25.7% | 10 | 9.9% |
| 31 - 34 years | 15 | 14.9% | 26 | 25.7% |
| 35 - 39 years | 24 | 23.8% | 22 | 21.8% |
| 40 - 44 years | 13 | 12.9% | 18 | 17.8% |
| 45 – 49 years | 5 | 5% | 6 | 5.9% |

# Appendix 3. Parents' and Guardians' Aspirations for their Daughters and Sons

| Parents and Guardians Aspirations | Baseline(January 2021) | | Year 1(January 2022) | |
|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage |
| **Preferred highest level of education for daughters / female children in the household** | | | | |
| Complete primary education | 1 | 1% | 0 | 0% |
| Complete secondary education | 75 | 74% | 1 | 1% |
| Complete education after secondary education | 23 | 23% | 97 | 96% |
| None | 2 | 2% | 1 | 1% |
| **Preferred highest level of education for sons / male children in the household** | | | | |
| Complete secondary education | 3 | 3% | 0 | 0% |
| Complete education after secondary education | 89 | 88% | 99 | 99% |
| None | 9 | 9% | 0 | 0% |
| **Preferred marital age for daughters / female children in the household** | | | | |
| 18-20 years | 84 | 83% | 30 | 30% |
| 21-25 years | 17 | 17% | 67 | 66% |
| 26-30 years | 0 | 0% | 3 | 3% |
| **Preferred marital age for sons / male children in the household** | | | | |
| 18-20 years | 0 | 0 | 1 | 1% |
| 21-25 years | 50 | 50% | 34 | 34% |
| 26-30 years | 39 | 39% | 52 | 52% |
| 31-35 years | 3 | 3% | 6 | 6% |

# Appendix 3. Parent and Guardians' Aspirations for their Daughters and Sons Cont.

| Future outlook for daughters / female children in the household | | | | |
|---|---|---|---|---|
| Better than mine | 96 | 95% | 100 | 99% |
| Same as mine | 4 | 4% | 0 | 0% |
| Uncertain | 1 | 1% | 0 | 0% |
| Future outlook for sons / male children in the household | | | | |
| Better than mine | 83 | 82% | 99 | 98% |
| Same as mine | 6 | 6% | 0 | 0% |
| Uncertain | 5 | 5% | 1 | 1% |

# Appendix 4. Descriptive Statistics of Gender Equality Scale

| Statement | Baseline (2021) Mean (SD) | Year 1 (2022) Mean (SD) |
|---|---|---|
| Q1: Gender equality, meaning that men and women are equal, has come far enough already. | 3.55 (1.17) | 3.70 (1.35) |
| Q2: A wife should obey her husband, even if she disagrees. | 2.80 (1.14) | 2.98 (1.53) |
| Q3: It is the job of men to be leaders, not women. | 3.49 (1.38) | 3.71 (1.46) |
| Q4: A husband and wife can share power. | 4.00 (0.88) | 3.82 (1.50) |
| Q5: Womens' opinions are valuable and should always be considered when household decisions are made. | 4.22 (0.96) | 4.22 (1.27) |
| Q6: It is more important that a boy go to school than a girl. | 3.53 (1.49) | 3.62 (1.52) |
| Q7: Daughters marry and leave the family, so they are not as useful as adults as sons. | 3.35 (1.22) | 3.67 (1.32) |
| Q8: Society determines how we should behave towards boys and girls. | 3.03 (1.04) | 3.51 (1.41) |
| Q9: There is no discrimination against women. However, tradition and culture say that men and women have different roles in society. | 2.65 (1.03) | 3.18 (1.42) |
| Q10: It is better to be a man than to be a woman. | 3.59 (1.20) | 3.78 (1.40) |
| Q11: Boys should be allowed to get more opportunities and resources for education than girls. | 3.08 (1.26) | 3.53 (1.42) |
| Q12: Boys should be fed first and given more food compared to girls. | 3.76 (1.21) | 4.10 (1.18) |
| Q13: A husband should be more educated than his wife. | 2.45 (0.90) | 3.79 (1.23) |
| Q14: I would prefer sons to daughters. | 3.42 (1.36) | 3.88 (1.41) |
| **Overall** | **3.37 (0.54)** | **3.68 (0.72)** |

# Appendix 5. Parent and Guardian Gender Equality Statements

| Statement | Negatively Phrased Statement (Y/N) |
|---|:---:|
| Q1. Gender equality, meaning that men and women are equal, has come far enough already. | N |
| Q2. A wife should obey her husband, even if she disagrees. | Y |
| Q3. It is the job of men to be leaders, not women. | Y |
| Q4. A husband and wife can share power. | N |
| Q5. Womens opinions are valuable and should always be considered when household decisions are made. | N |
| Q6. It is more important that a boy go to school than a girl. | Y |
| Q7. Daughters marry and leave the family, so they are not as useful as adults as sons. | Y |
| Q8. Society determines how we should behave towards boys and girls. | Y |
| Q9. There is no discrimination against women. However, tradition and culture say that men and women have different roles in society. | Y |

# Appendix 6. Assumption of Normality Tests

**Histogram and Q-Q Plot for Girl Data:**
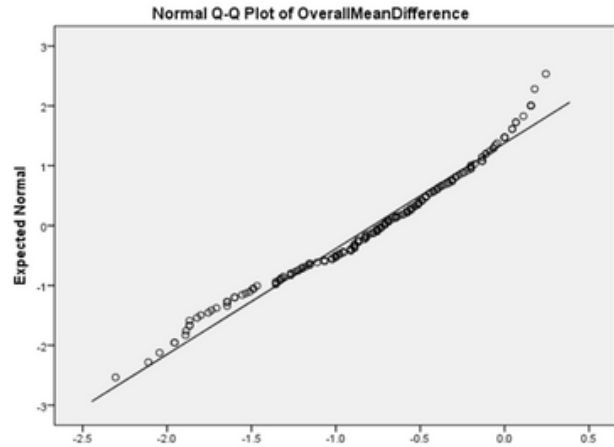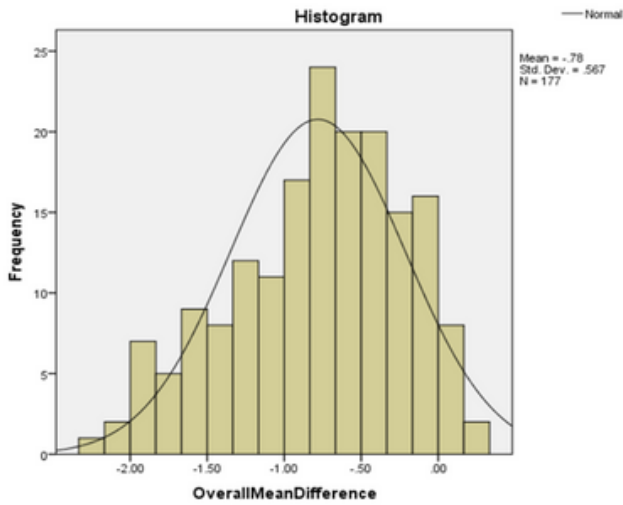


**Histogram and P-P Plot for Parent and Guardian Data**
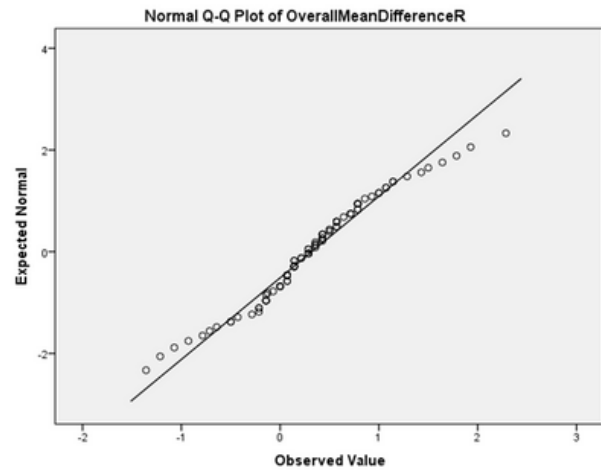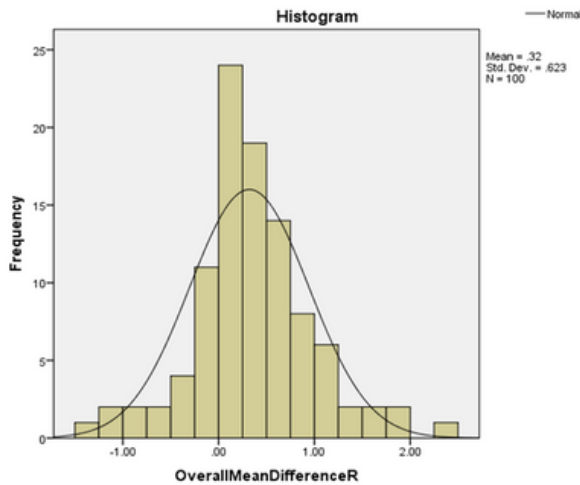
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