GLOBAL G·L·O·W

GLOW Clubs are empowering girls in Uganda by building their social and emotional learning skills

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

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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 was a significant negative relationship between girls' age and the survey outcome scores. This means that younger girls gain more social and emotional learning skills from programming than older girls.
- In general, positive perspectives were held by parents and guardians regarding their sons' and daughters' education, marital age, and future outlook on life.

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

Uganda's population is estimated to be approximately 43 million, of which 51% are female (Uganda Bureau Statistics, 2022). Further statistics show that 71% of the population live in rural areas while 29% in urban areas. Uganda is regarded as one of the youngest populations in the world with approximately 74% of the country's population under the age of 30, 22% of individuals aged 31-59 years, and 4% aged 60 years and above (Uganda Bureau Statistics, 2022). In terms of education, according to the Uganda Bureau of Statistics (UBOS) and Inner City Fund (ICF) (2018), most Ugandans have either no formal education or only some primary education. Specifically, the proportion of women aged 6 and older with no education was slightly higher at 19% compared to men at 13%. Although Uganda achieved gender parity on enrollment in primary school in 2014, the average primary school dropout rate is about 45% and is much higher amongst girls (Uganda Bureau Statistics, 2022; The Huracan Foundation, 2019; Okudi, 2022). Further, statistics reveal that only 6% of women and 8% of men have completed secondary school or have gone to higher education (UBOS & ICF, 2018). The years spent on schooling varies based on location; for example, UBOS & ICF (2018) reported that urban women (5.6 years) and men (6.1 years) spend longer in schools than rural women (2.9 years) and men (3.5 years).

Globally, Uganda is ranked 16th among 25 countries with the highest rates of child marriage (UNICEF, 2017 as cited in UNFPA Uganda, 2020). According to UBOS and ICF (2018), 43% of women in Uganda aged between 25-49 years were married before the age of 18. Further, the Ministry of Gender, Labour and Social Development and UNICEF (2022) reports that 8.9 million girls aged between 10-19 years are at risk of harmful practices, including child marriage. Child marriage is a violation of human rights and is a significant contributor to teenage pregnancy. Recent data from the UBOS and ICF (2018) indicates that teenage pregnancy in Uganda is considered one of the highest in Sub-Saharan Africa at 25%. Further, teenage pregnancy varies by region and is more common in rural (27%) than in urban areas (19%). Girls in Uganda who

encounter child marriage and teenage pregnancy face various vulnerabilities that have detrimental effects on their overall health and wellbeing. In addition, teenage pregnancy accounts for 22.3% of school dropouts among girls aged between 14-18 years (Ministry of Gender et al., 2022). Teenage pregnancy therefore disrupts girls' education, limits their opportunities and increases their risks of violence and abuse.

In Uganda, the average primary school dropout rate is about 45%. This number is much higher amongst girls.

The Global Gender Gap Report 2022 ranked Uganda 61 out of 146 countries in terms of addressing gender gaps in four key areas, namely, economic participation and opportunity, educational attainment, health and survival, and political empowerment (World Economic Forum (WEF), 2022). Although progress has been made to achieve gender equality in Uganda, more efforts are still required given recent statistics. For example, according to UN Women (n.d.), as of February 2021, 34.9% of seats in parliament were held by women. Further, in 2018, 26.1% of women aged 15-49 years reported to have been physically and/or sexually assaulted by a current partner or former intimate partner in the previous 12 months. Male et al. (2023) reported that 42% of Ugandans consider gender-based violence the most important women's-rights issue that the government and society must address, followed by unequal property rights (16%) and unequal access to education (15%).

What We Learned

We conducted a quasi-experimental outcome evaluation with a pre-post design to evaluate a one-year intervention that is comprised of GLOW Club programming: GLOW Create. Girls, aged 10-18 years, and their parents and guardians were surveyed before and after completing one year of GLOW Club curriculum. These results are from one of our implementing non-profit partners, Art of Child, which is based in Uganda, East Africa. They operate programs in Kampala and in four rural districts of Wakiso, Gulu, Fort Portal, and Masaka. Ideally, data was to be collected at two time periods: before programming (at baseline) in January 2021 and after one year of programming in January 2022. However, due to the COVID-19 pandemic and Ebola outbreak in Uganda, Art of a Child took twice as long to implement GLOW Club programming. As such, this slightly changed the data collection timelines for AoC with baseline data still

being collected in January 2021 and year 1 data being collected in August 2022 for girl participants, and December 2022 for parents and guardians.

The evaluation aligned with ethical standards and used non-random sampling strategies to select participants. The surveys were based on existing reliable and valid measures that required participants to indicate the extent to which they agreed or disagreed with each statement on a 5- point Likert scale. Girl participants responded to 45 statements relating to capabilities, while parents and guardians of girl participants responded to various non-likert scale questions relating to gender equality.

The data was cleaned and analyzed using the Statistical Package for Social Sciences (SPSS). In addition, the assumptions of parametric tests were first assessed before computing any statistical analyses on the girl survey data (see Appendix 1 for results). Both descriptive and inferential statistics were used to determine the changes from baseline to year 1 for survey outcomes.

Girl Baseline Demographics

At baseline, 270 girls were surveyed, of which 209 (77.4%) were the same girls after almost two years of programming. The findings presented below are based on 209 girl participants who completed both the baseline and year 1 girl survey. Table 1 presents girls' demographic characteristics. At baseline, participants' age ranged from 9 to 17 years (mean = 13.7 years; SD = 2.25). Most participants were aged between 15 to 18 years (41.1%).
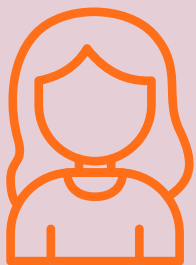
At baseline, a typical girl who completed the surveys was most likely in her early teens (mean = 13.7 years), in primary grade 7, unmarried, and unemployed with no children.

Further, the majority of participants were in primary grade 7 (30.1%), secondary grade 2 (19.1%), and primary grade 4 (14.4%). A total of 177 out of the 209 participants progressed to the next year of school (84.7%), while 3.8% of participants did not progress to the next year and 11.5% dropped out of school in year 1 (see Appendix 2 for more details). Further, most girls reported to be unmarried (99.5%), had no children (93.8%), and were unemployed (97.6%). In total, 17 clubs participated in this evaluation. See Appendix 3 for more information.

Table 1: Program Participants' Demographic Characteristics

Demographic Characteristics	Baseline (January 2021)		Year 1 (August 2022)	
	Frequency	Percentage	Frequency	Percentage
Age Group				
9 - 11 years	44	21.1%	23	11.0%
12 - 14 years	79	37.8%	75	35.9%
15 – 18 years	86	41.1%	111	53.1
School Grade				
Primary 3	1	0.5%	0	0%
Primary 4	30	14.4%	1	0.5%
Primary 5	23	11.0%	30	14.4%
Primary 6	13	6.2%	24	11.5%
Primary 7	63	30.1%	9	4.3%
Secondary 1	17	8.1%	53	25.4%
Secondary 2	40	19.1%	20	9.6%
Secondary 3	2	6.7%	30	14.4%
Secondary 4	8	3.8%	17	8.1%
Secondary 5	0	0%	1	0.5%
Dropped Out	0	0%	24	11.5%
Marital Status				
Unmarried	208	99.5%	208	99.5%
Number of Children				
0	196	93.8%	198	94.7%
1	13	6.2%	11	5.3%
Employment Status				
Unemployed	204	97.6%	205	98.1%

Girl Participant Outcomes

Notably, for all outcomes surveyed, the mean values increased from baseline to year 1, which 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. The overall mean value after programming (4.00) was higher than before programming (2.91) (see Figure 1 below). 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. **All results are statistically significant, which means that GLOW Club programming has a statistically positive impact on improving girls' capabilities.**

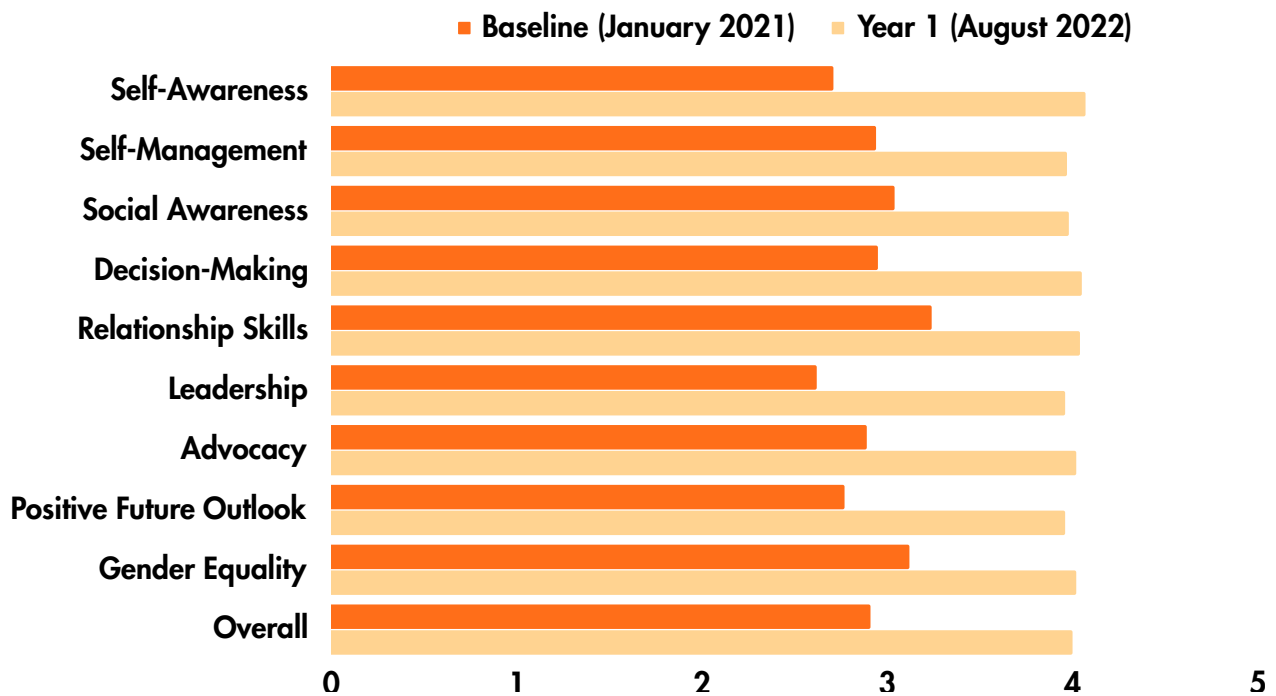*Figure 1: Girl survey outcomes at baseline and year 1*

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

Table 2: Paired Sample t-test Statistics

Outcome	Mean Difference	Std. Deviation	t	Sig. (2-tailed)
Self-Awareness	1.35	1.13	17.22	.000
Self-Management	1.03	.88	16.89	.000
Social Awareness	.94	.90	15.09	.000
Decision-Making	1.09	1.10	14.37	.000
Relationship Skills	.80	1.02	11.28	.000
Leadership	1.35	1.03	18.73	.000
Advocacy	1.13	.97	16.78	.000
Positive Future Outlook	1.19	1.05	16.23	.000
Gender Equality	89	.94	13.77	.000
Overall	1.09	.86	18.19	.000

Analysis by GLOW Club

Table 3 below shows the mean values for each club before and after programming. Similar to the outcomes, for 16 out of the 17 clubs (all but Dream Chasers), the mean values for each club increased from baseline to year 1. At baseline, the mean values ranged from 1.75 (The Queens) to 4.06 (Sparkling Minds Glow Club), while in year 1, the mean values ranged from 2.73 (Dream Chasers) to 4.17 (Dreamers and Morning Stars).

Table 3: Descriptive statistics by Glow Club

GLOW Club Name	Baseline		Year 1		Mean Difference between baseline and year 1
	Mean (SD)	N	Mean (SD)	N	
Backstreet Girls	2.35 (.24)	8	4.14 (.08)	8	1.79
Dream Chasers	2.93 (.00)	1	2.73 (.00)	1	-.02
Dream Followers	3.08 (.78)	12	3.82 (.32)	13	.74
Dreamers	1.83 (.39)	14	4.17 (.09)	13	2.34
Football Queens	2.60 (.09)	9	4.08 (.12)	9	1.48
Girls of Vision	2.52 (.17)	24	3.64 (.20)	24	1.12
Morning Stars	2.32 (.28)	13	4.17 (.11)	14	1.85
Rwotmamiyo	3.21 (.95)	4	3.94 (.22)	4	0.73
Shining Stars	2.47 (.29)	13	4.08 (.09)	13	1.61
Sparkling Girls GLOW Club	3.96 (.22)	36	4.16 (.09)	37	.2
Sparkling Minds GLOW Club	4.06 (.24)	15	4.13 (.09)	14	.07
The Mighty Girls	2.69 (.24)	20	4.13 (.11)	19	1.44
The Pride Girls	2.23 (.88)	8	4.12 (.14)	8	1.89
The Queens	1.75 (.37)	11	4.01 (.10)	11	2.26
Victorious GLOW Club	3.29 (.97)	6	3.80 (.13)	5	.51
World's Army	2.89 (.39)	4	3.62 (.26)	4	.73
Yelekeni	3.57 (.19)	4	3.70 (.15)	11	.13
Total	2.91 (.84)	209	4.00 (.26)	208	1.09

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 negative relationship between girls' age and the overall survey outcome score (r = -.28, n = 209, p < .001, two tailed). This suggests that younger girls tend to gain more social emotional learning skills from programming than older girls.

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 small but significant relationship between girls' age and the overall survey outcome score. The findings further reveal that all outcomes are significant and negatively associated with age. The strength of the relationship between each outcome and girls' age is small except for Social Awareness, where the strength is medium ($r = -.327$). This could be due to some of the data collection and program implementation challenges experienced during COVID-19. The COVID-19 pandemic and an Ebola outbreak in Uganda resulted in the GLOW Club program being implemented remotely and took twice as long to implement than expected for this particular partner. In addition, this could also be attributed to the 11.5% of girl participants who reported to have dropped out of school after the baseline assessment in 2021. The school dropout findings appear to reflect the current situation in Uganda, where the reported school dropout rate exceeded 45% in 2019 (Okudi, 2022). Further, the relationship between girls' age and the overall survey outcome score could vary due to other factors; for example, research shows that children are both reliant and independent at the same time, and their agency varies based on where they are, what they are doing, and who they are engaging with. Additionally, age, developmental stage, maturity, locality, cultural norms, family economic situation, and exposure are all interconnected with agency (Ballet et al., 2011). Children's agency is characterized by their interdependence with others and is nested inside their social relationships with adults and their peers.

Table 4: Correlation between girls' age and survey outcomes

Survey Outcomes (Baseline)	Girls' Age
Overall Outcome Score	-.282**
Self-Awareness	-.261**
Self-Management	-.204**
Social-Awareness	-.327**
Decision-Making	-.254**
Relationship Skills	-.260**
Leadership	-.236**
Advocacy	-.271**
Positive Future Outlook	-.293**
Gender Equality	-.268**

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

Parent Demographics

At baseline, 169 parents and guardians of participants were surveyed. One hundred of these (59.2%) also completed the survey after almost two years of GLOW Club programming, and the findings presented below are based on the 100 matched surveys. Parents' and guardians' demographic characteristics at baseline and a year after programming are presented in Figure 2 and Figure 3. The sample was majority female (67%) compared to male (33%). At baseline, participants' and guardians' age ranged from 20 to 85 years (mean = 38.4 years; SD = 10.9). Most participants were aged between 30 to 39 years (36.5%). See Appendix 4 for more information.

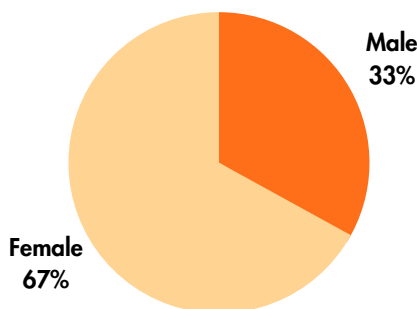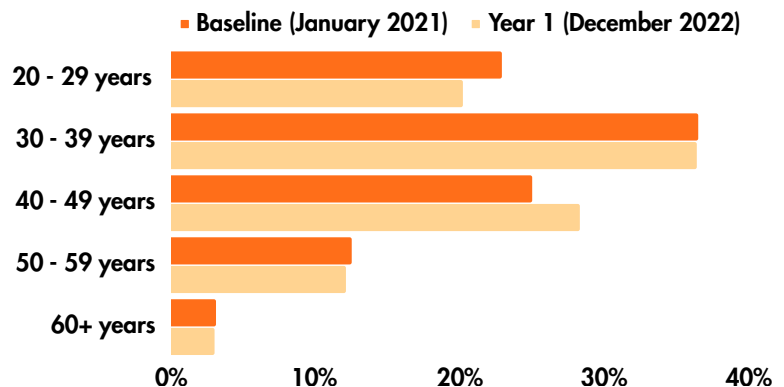Figure 2: Parents' and guardians' gender

Figure 3: Parents' and guardians' age

At baseline, a typical parent or guardian survey participant was likely female (67%) and in their mid-30s (mean=38.4 years).

Parent and Guardian Outcomes: Views on Gender Equality

Parents' and guardians' attitudes towards gender equality was assessed through various non-Likert scale survey questions. These questions assessed parents' and guardians' aspirations relating to their daughters' and sons' education level, preferred marital age, and future outlook on life. The full results at baseline and year 1 are presented in Appendix 5. In general, positive perspectives were held by parents and guardians regarding their sons' and daughters' education, marital age and future outlook on life before and after GLOW Club programming. As such, there were little to no gender differences in the viewpoints.

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

Parents and guardians of program participants were asked how much education they would like their sons and daughters to receive. As seen in Figure 4 and Figure 5 below, the preferred level of education at baseline and after almost two years of GLOW Club programming for both daughters and sons was "complete education after secondary education". For daughters, this increased from 81.8% to 87.9% and increased from 81.4% to 91.7% for sons. These findings are encouraging for two main reasons: firstly, the educational aspiration from parents' and guardians' about their sons and daughters are somewhat equal and shows progress towards closing the gender gap in education; and secondly, parents' and guardians' positive aspirations specifically for their daughters to "complete education after secondary education" creates a path for girls to develop their

voice, agency and power to advocate for themselves and make their own decisions relating to marriage, children and employment. Further, the results show that the positive effect of programming also extends to sons. **This suggests that programming can create a ripple effect of positivity that goes beyond just the individual girl and their immediate surroundings.**

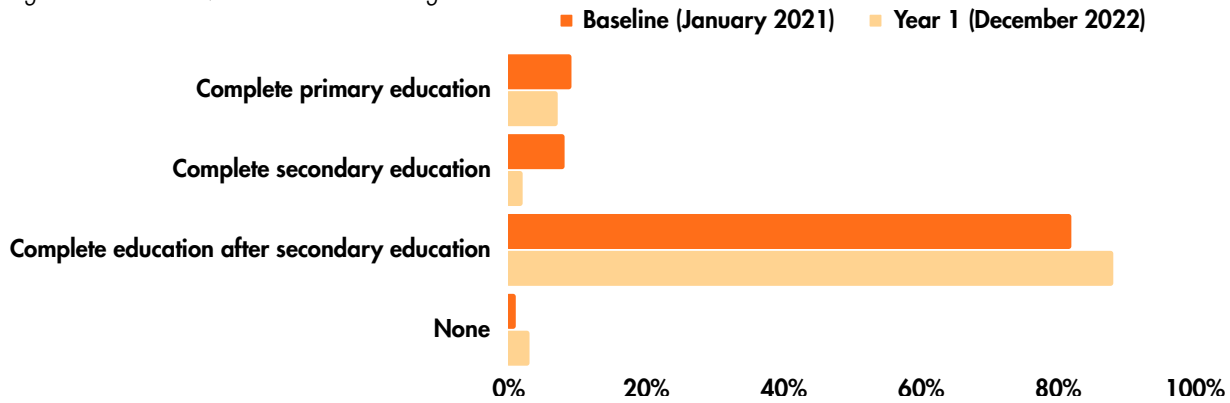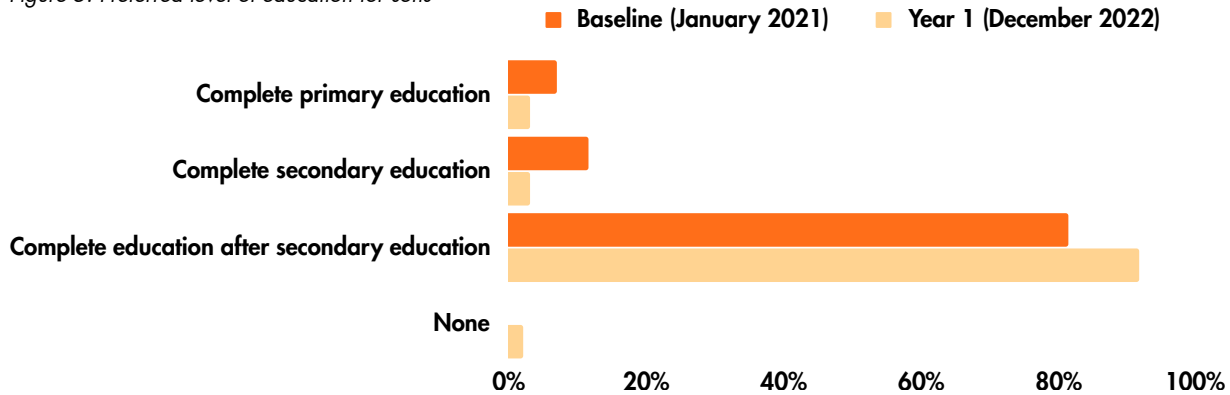*Figure 4: Preferred level of education for daughters*

Figure 5: Preferred level of education for sons

Parent and guardian preferred marital age for their daughters and sons

Parents and guardians of program participants were asked about at what age they would like their sons and daughters to get married. As seen in Figure 6 and Figure 7 below, the preferred marital age for daughters participating in GLOW Club as shared by their parents or guardians ranged from 18 to 39 years at baseline (mean = 26.6 years; SD = 4.35) and stayed the same after programming (mean = 26.6 years; SD = 4.23). Similarly, the preferred marital age for sons at baseline ranged from 18 to 38 years (mean = 27.3 years; SD = 4.42) and slightly increased after programming to 18 to 39 years (mean = 27.7 years; SD = 4.41).

The preferred average marital age for daughters is higher than expected given Uganda's common practice of both girls and boys getting married off before the legal age of 18 years (UNFPA Uganda, 2020, p. 1). Furthermore, "Uganda is home to 5 million child brides. Of these, 1.3 million are married before age 15" (UNICEF Global Databases, 2020). Although progress has been made to end child marriage, 34% of women aged 25-49 years are married before the age of 18 and 7.3% before the age of 15 (UBOS, 2016 as cited in UNFPA Uganda, 2020, p. 1). Globally, Uganda is ranked 16th among 25 countries with the highest rate of child marriage (UNICEF, 2017 as cited in UNFPA Uganda, 2020, p. 1).However, child marriage is more prevalent in Uganda's rural areas than urban areas, and among the less educated and low income households (Jude, 2019; UNICEF Global Databases, 2020). In terms of child marriage prevelance amongst regions in Uganda, according to UNFPA (2013 as cited in Casey Foundation, 2021), child marriage is lowest in Kampala (21%).
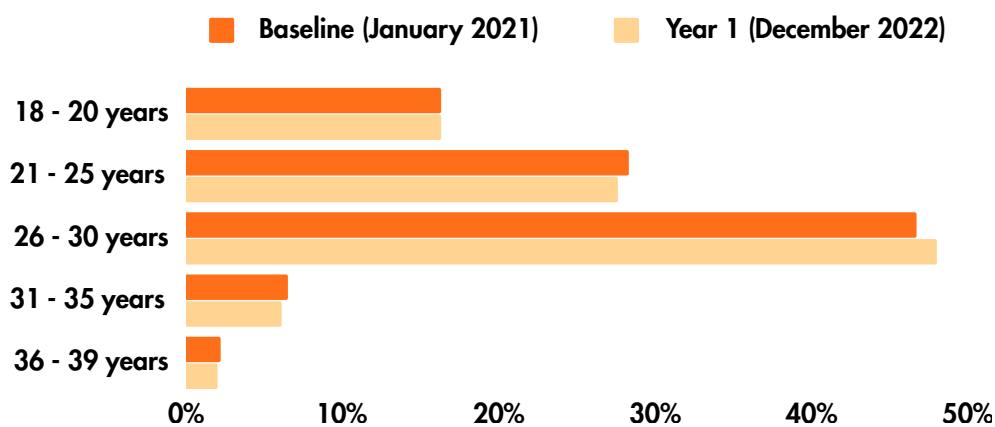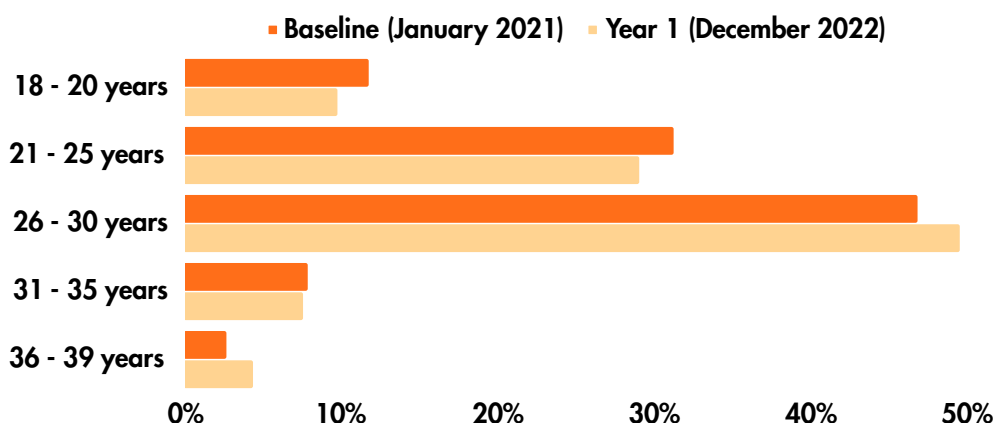
Figure 6: Preferred marital age for daughters

Figure 6: Preferred marital age for sons

Although child marriage is a significant concern in Uganda, particularly in rural areas, findings from the survey suggest that parents and guardians have similar gender beliefs and attitudes about their sons and daughters. This could possibly be attributed to parents and guardians already having progressive attitudes on gender norms considering they are allowing their daughter to participate in GLOW Club, their education, and/or cultural background. Further, the results may be explained by parents' and guardians' desire for their children to have a better future and not having any biases against girls' education and marital status. Overall, this is a positive step towards breaking away from traditional gender roles and expectations, particularly in Uganda, where a predominantly patriarchal society inhibits girls from taking charge of their personal and communal lives, and exercising their rights (Girls Get Equal Q&A, n.d.). **Thus, the findings suggest that parents' and guardians' attitude on the value of a girl extends beyond marriage and family.**

Parents and guardians preferred future outlook for their daughters and sons

Parents and guardians of program participants were asked about their views on their sons' and daughters' future outlook on life. As seen in Figure 8 and Figure 9 below, parents and guardians equally wish that their daughters' and sons' future outlook are better than theirs both at baseline and increased for both after almost two years of GLOW Club programming. For daughters, this increased from 82.7% to 92.9% and 83.0% to 91.8% for sons.

The results suggest that parents and guardians of program participants have similar expectations for both their sons' and daughters' future outlook. This shows that parents and guardians already hold progressive views on gender norms, which is a positive step towards promoting equitable gender norms and practices within the communities where girl participants live.

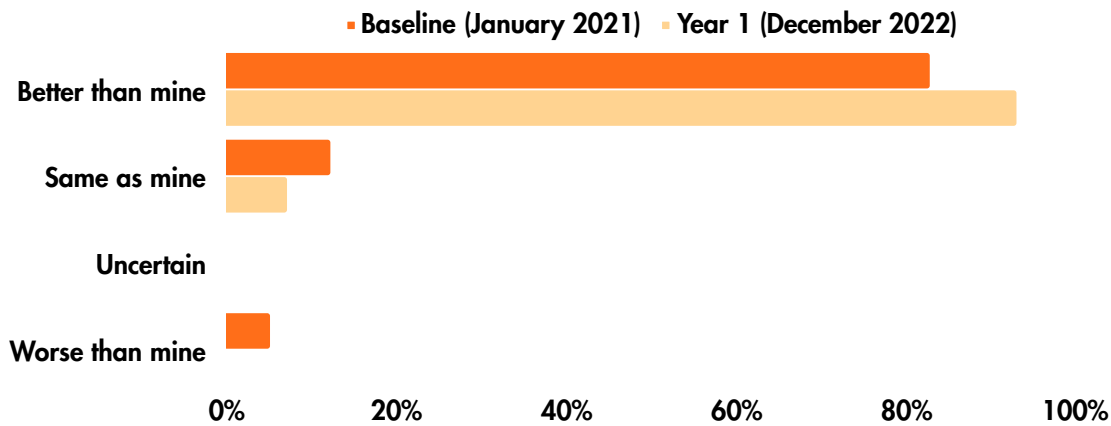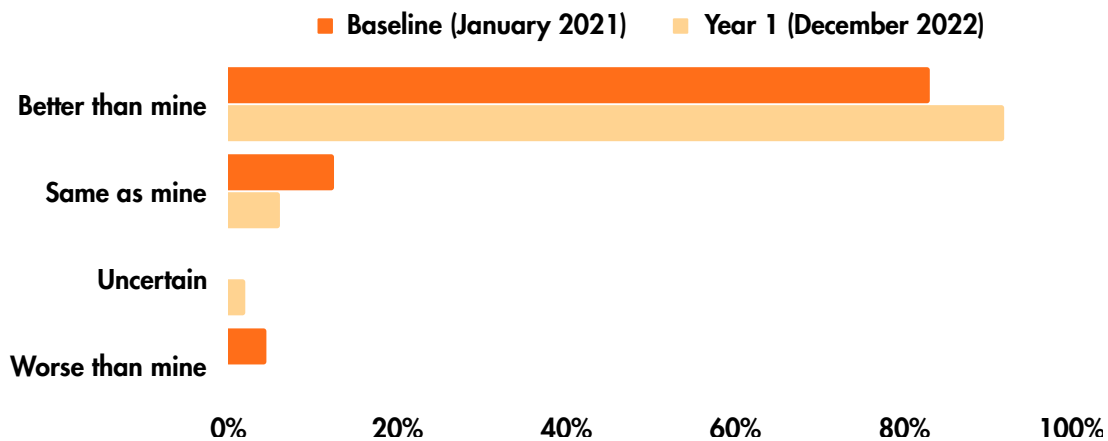*Figure 6: Preferred future outlook for daughers*

Figure 6: Preferred future outlook for sons

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 judgment 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, Art of a Child was purposely selected as a partner to implement GLOW Club programming 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 Art of a Child 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 served by Global G.L.O.W. 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 10-18 years.

- **Indirect beneficiaries/participants** – participants who could potentially benefit from GLOW Club through direct beneficiaries. For example, members of community or family members could benefit from the participation of their daughters in GLOW Club, also known as our 'ripple effect'.

Figure 10: Direct and indirect participants
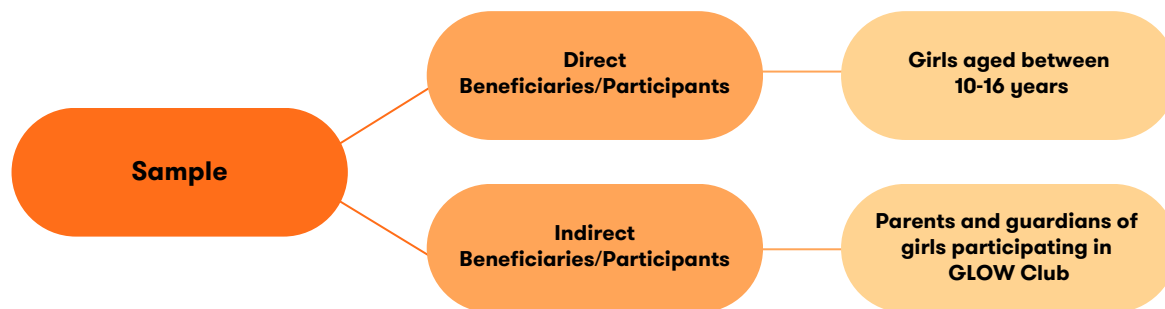
Instrument Development

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 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.

The following are some examples of statement 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 almost two years of GLOW Club. Participants responded to various non-Likert scale questions that assessed their aspirations relating to their daughters' and sons' education level, preferred marital age, and future outlook.

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 (see Appendix 1 for results).

Limitations

Overall, the paired-samples t-test suggests that almost two years 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 and Ebola outbreak affected program implementation by Art of Child as Clubs 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 on life, leadership skills, and beliefs about gender norms. In addition, the results showed that younger girls tend to gain more social emotional skills from programming than older girls. 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 on life were generally positive before and after GLOW Club programming and had some growth during program implementation. This suggests the existence of progressive social and gender norms within girls' families, which in turn will encourage girls to use their voice and agency in their interactions outside of the family, such as in their communities. The results also show that the positive effect of programming also extends to sons, creating a ripple effect beyond the individual girl.

Appendix 1. Assumptions of Parametric Tests

These following assumptions of parametric tests were assessed on the girl survey data: 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 the girl survey (see Figure below). According to (Pallant, 2009, 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-samples t-test* and *Pearson's correlation* were used to determine the impact of GLOW Club and relationship between variables.

Histogram and Q-Q Plot for Girl Data:
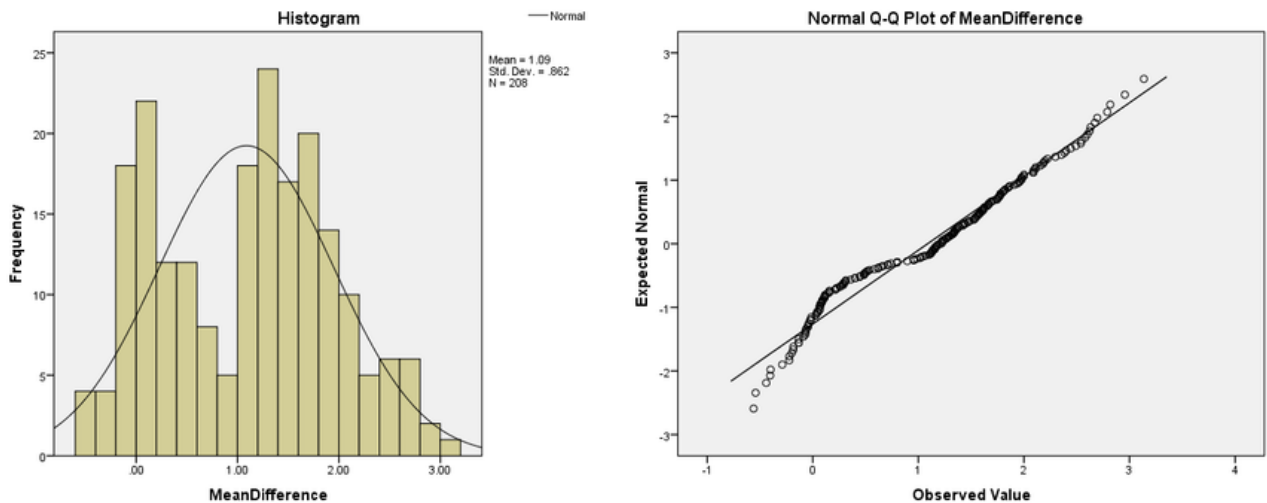
Appendix 2. Girl Participant Dropout from School by Age

Overall, 11.5% of girl participants reported to have dropped out of school after the baseline assessment in 2021. In a community where the dropout rate is over 45% post COVID-19 (Okudi, 2022, p. 1), girls in GLOW programming dropped out of school at a rate of 11.5%. GLOW Club leaders and mentors shared shared potential factors that affect each individual girl's situation and ability to attend school and GLOW Club including early marriage and pregnancy, financial constraints that make it difficult for parents to pay for school fees and materials, child labour, long travelling distances and cultural reasons (Okudi, 2022, p. 1; Mayoma & Nabukenya, 2022, p. 14; Batha & Arinaitwe, 2022). The high dropout rate from school in Uganda makes the role of GLOW Clubs to provide safe spaces for girls even more important. Below is a breakdown of participants who dropped out of school by age and GLOW Club. Of the 11.5% of participants who dropped out of school, most were 17 years old (33%) and 18 years old (21%).

Age	Number of participants who dropped out of school	Percentage of participants within each age group who dropped out of school
11 years	1	5.3%
12 years	1	4.8%
13 years	1	9.1%
14 years	2	4.7%
15 years	3	12.0%
16 years	3	12.0%
17 years	8	20.5%
18 years	5	22.7%
Overall	24	11.5%

Appendix 3. Descriptive Statistics by GLOW Club

GLOW Club	Baseline (January 2021)		Year 1 (August 2022)	
	Frequency	Percentage	Frequency	Percentage
Backstreet Girls	8	3.8%	8	3.8%
Dream Chasers	1	0.5%	1	0.5%
Dream Followers	12	5.7%	13	6.2%
Dreamers	14	6.7%	14	6.7%
Football Queens	9	4.3%	9	4.3%
Girls of Vision	24	11.5%	24	11.5%
Morning Stars	13	6.2%	14	6.7%
Rwotmamiyo	4	1.9%	4	1.9%
Shining Stars	13	6.2%	13	6.2%
Sparkling Girls GLOW Club	36	17.2%	37	17.7%
Sparkling Minds GLOW Club	15	7.2%	14	6.7%
The Mighty Girls	20	9.6%	19	9.1%
The Pride Girls	8	3.8%	8	3.8%
The Queens	11	5.3%	11	5.3%
Victorious GLOW Club	6	2.9%	5	2.4%
World's Army	4	1.9%	4	1.9%
Yelekeni	11	5.3%	11	5.3%

Appendix 4. Demographic Profile of Parents and Guardians

Demographic Characteristics	Baseline (January 2021)		Year 1 (December 2022)	
	Frequency	Percentage	Frequency	Percentage
Gender				
Male	33	33.0%	33	33.0%
Female	67	67.0%	67	67.0%
Age Group				
20 - 29 years	22	22.9%	20	20.2%
30 - 39 years	35	36.5%	26	36.4%
40 - 49 years	24	25.0%	28	28.3%
40 - 59 years	12	12.5%	12	12.1%
60+ years	3	3.1%	3	3.0%

Appendix 5. Parent and Guardians' Aspirations for their Daughters and Sons

Parents and Guardians Aspirations	Baseline (January 2021)		Year 1 (December 2022)	
	Frequency	Percentage	Frequency	Percentage
Preferred highest level of education for daughters / female children in the household				
Complete primary education	9	9.1%	7	7.1%
Complete secondary education	8	8.1%	2	2.0%
Complete education after secondary education	81	81.8%	87	87.9%
None	1	1.0%	3	3.0%
Preferred highest level of education for sons / male children in the household				
Complete primary education	6	7.0%	3	3.1%
Complete secondary education	10	11.6%	3	3.1%
Complete education after secondary education	70	81.4%	88	91.7%
None	0	0%	0	0%
Preferred marital age for daughters / female children in the household				
18-20 years	15	16.3%	16	16.3%
21-25 years	26	28.3%	27	27.6%
26-30 years	43	46.7%	47	48.0%
31-35 years	6	6.5%	6	6.1%
36-39 years	2	2.2%	2	2.0%

Appendix 5. Parent and Guardians' Aspirations for their Daughters and Sons Cont.

Preferred marital age for sons / male children in the household				
18-20 years	9	11.7%	9	9.7%
21-25 years	24	31.2%	27	29.0%
26-30 years	36	46.8%	46	49.5%
31-35 years	6	7.8%	7	7.5%
36-39 years	2	2.6%	4	4.3%
Future outlook for daughters / female children in the household				
Better than mine	81	82.7%	92	92.9%
Same as mine	12	12.2%	7	7.1%
Uncertain	0	0%	0	0%
Worse than mine	5	5.1%	0	0%
Future outlook for sons / male children in the household				
Better than mine	73	83.0%	90	91.8%
Same as mine	11	12.5%	6	6.1%
Uncertain	0	0%	2	2.0%
Worse than mine	4	4.5%	0	0%

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