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The Impact of GLOW Club Intervention After Year 3 of Programming in Nigeria

A Case Study of GLOW Clubs administered with trusted leaders and mentors in Nigeria

An Global Girls Glow Evaluation Report prepared
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Key Findings

The findings are based on 260 girls who completed both the pre- and post-outcome evaluation surveys for Year 3 of GLOW Club programming.

The results showed a small but statistically significant positive improvement in the overall outcome score before Year 3 of GLOW Club programming (M= 4.00; SD= .33) to after Year 3 of GLOW Club programming (M= 4.11; SD= .25); $t(259)= -4.27$, $p = 0.005$. Specifically, there were significant and positive changes across most outcomes relating to social emotional learning and capabilities relating to leadership, advocacy, and positive future outlook.

Who We Are

Global G.L.O.W. and Global Girls Glow work hand-in-hand to mentor girls around the world to become powerful advocates and confident leaders. Since inception, our 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 outcome 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.

GLOW Club is designed to equip girls with the skills, resources and opportunities they need to pursue any future they can dream. Working alongside grassroots organizations, key global stakeholders, NGOs, and educational institutions, we activate girl-driven chang.

GLOW Club provides structure and opportunities for girls to use their voice and practice good decision-making, which are the keys for pursuing goals. 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.

GLOW Club was developed using principles of Social and Emotional Learning (SEL). SEL is a proven 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. GLOW Club operates in communities which usually do not have access to SEL or other types of confidence building, goal setting programs.

What We Learned

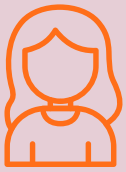
We conducted a quasi-experimental outcome evaluation with a pre-post design to evaluate the third year of GLOW Club programming. Girl participants were surveyed before and after completing the third year of GLOW Club curriculum. These results are from one of our GLOW Clubs in Nigeria. Evaluation data was collected at two time periods: before the start of Year 3 curriculum in March 2023 and after completing Year 3 curriculum in January 2024.

The evaluation aligned with ethical standards and used non-random sampling strategies to select participants. A sample size of 260 program participants was used for the evaluation, which was larger than the minimum required sample size of 156 for a 90% confidence interval and a 5% margin of error. This sampling criteria was used to ensure that the sample is representative of the population being evaluated, allowing for reliable and credible results. 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. 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 survey outcome changes from before to after Year 3 of GLOW Club programming.

Girl Participant Demographics

Prior to Year 3 of programming, 366 girls were surveyed, of which 260 (71.0%) were the same girls after programming. The findings presented below are based on 260 girl participants who completed both the same girl survey before and after year 3 of programming.

Table 1 presents girls' demographic characteristics. At the start of year 3 programming, participants' age ranged from 8 to 17 years (mean = 13.7 years; SD = 2.20). Further, the majority of participants were in secondary grade 3 (18.5%), secondary grade 2 (14.2%), and secondary grade 4 (13.8%). Of the 260 participants, 217 (83.5%) progressed to the next year of school. Further, virtually almost all girls reported to be unmarried (99.2%), had no children (100%), and were unemployed (98.5%).



At the start of year 3 programming, a typical girl that completed the surveys was in her early teens (mean = 13.7 years), was most likely in secondary grade 3, was unmarried, had no children, and was unemployed.

Table 1: Program Participants' Demographic Characteristics

Demographic Characteristics	Before Year 3 (March 2023)		After Year 3 (January 2024)	
	Frequency	Percentage	Frequency	Percentage
Age Group				
8-10 years	23	8.8%	9	3.5%
11-14 years	123	47.3%	103	39.6%
15-18 years	114	43.8%	148	56.9%
School Grade				
Primary 1	2	0.8%	0	0%
Primary 2	3	1.2%	3	1.2%
Primary 3	8	3.1%	3	1.2%
Primary 4	6	2.3%	6	2.3%
Primary 5	23	8.8%	6	2.3%
Primary 6	16	6.2%	13	5.0%
Secondary 1	20	7.7%	26	10.0%

Secondary 2	37	14.2%	21	8.1%
Secondary 3	48	18.5	36	13.8%
Secondary 4	36	13.8%	48	18.5%
Secondary 5	30	11.5%	37	14.2%
Secondary 6	31	11.9%	61	23.5%
Marital Status				
Married	2	0.8%	1	0.4%
Unmarried	258	99.2%	259	99.6%
Number of Children				
0	260	100%	259	99.6%
Employment Status				
Employed	4	1.5%	0	0%
Unemployed	256	98.5%	260	100%

Girl Participant Outcomes

We conducted a paired samples t-test to determine if the mean differences before and after Year 3 of programming were statistically significant, meaning the results are unlikely to occur by chance. **For all outcomes surveyed, except for advancing gender equality beliefs, the mean scores improved from before to after Year 3, suggesting that GLOW Club programming improves girls' capabilities relating to social emotional learning, self-advocacy, positive future outlook, and leadership skills (see Figure 1).**

Table 2 below shows the results of the paired samples t-test for all outcomes and the overall score. The mean difference indicates an increase from 4.00 before programming to 4.11 after programming. The small but statistically significant increase suggests that Year 3 of programming improves girls' capabilities relating to social emotional learning ($p < 0.000$). Statistically significant increases were observed in almost all outcome scores, including self-awareness ($p < 0.000$), self-management ($p < 0.23$), social awareness ($p < 0.000$), decision-making ($p < 0.001$), relationship skills ($p < 0.001$), leadership skills ($p < 0.001$), advocacy skills ($p < 0.010$), and positive future outlook ($p < 0.017$). However, gender equality decreased and was not statistically significant ($p = 0.297$), indicating that more targeted activities or deeper discussions may need to be included in the curriculum to promote gender equality.

Figure 1: Girl survey outcomes at baseline and year 1

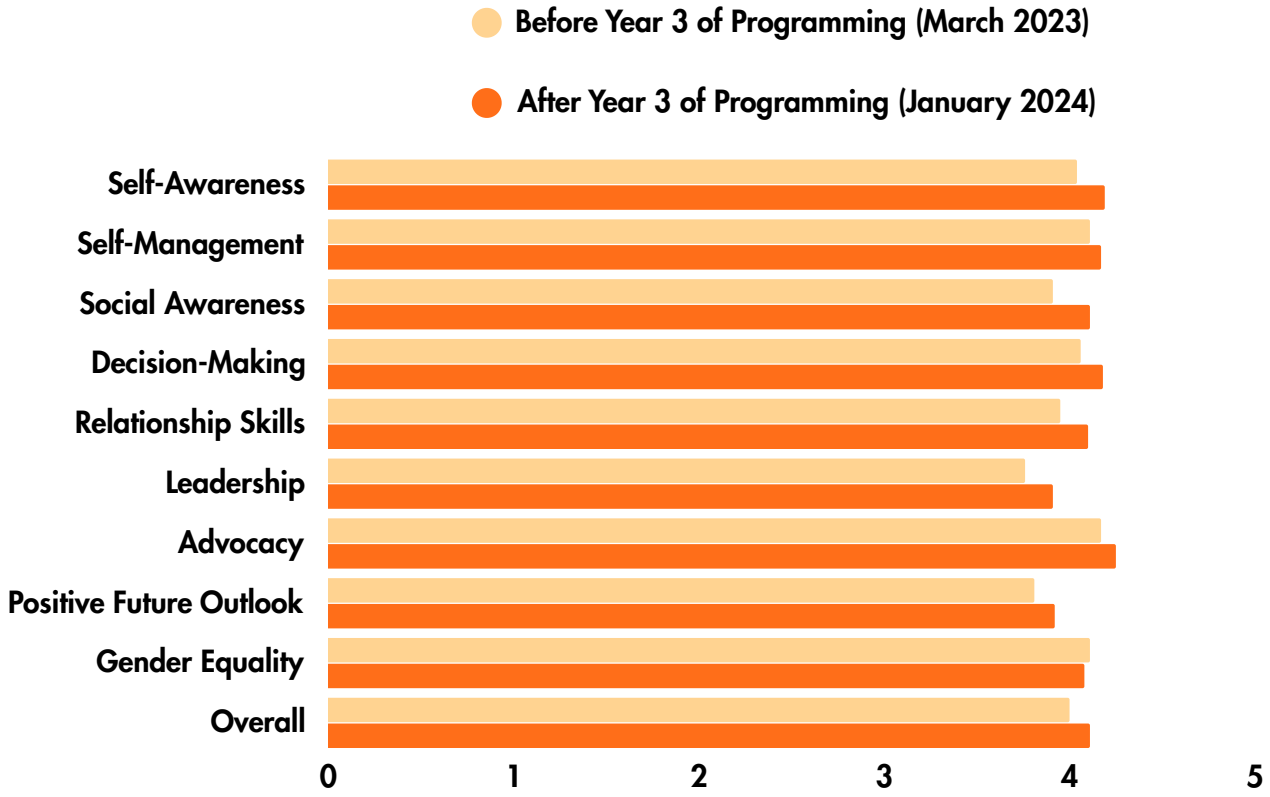


Table 2: Paired Sample t-test Statistics

Outcome	Mean Difference	Std. Deviation	t	Sig. (2-tailed)
Self-Awareness	-.15	.66	-3.77	.000
Self-Management	-0.6	.45	-2.29	.023
Social Awareness	-.21	.57	-5.82	.000
Decision-Making	-.12	.58	-3.40	.001
Relationship Skills	-.15	.68	-3.43	.001
Leadership	-.14	.67	-3.39	.001
Advocacy	-.08	.49	-2.41	.017
Positive Future Outlook	-.11	.71	-2.41	.017
Gender Equality	.034	.54	1.05	.297
Overall	**-.12**	**.39**	**-4.27**	**.000**

Table 3 below shows the mean values for each club before and after Year 3 of programming. Negative mean differences indicate positive changes, as after programming scores were higher than before programming scores.

Out of 18 clubs, 11 (61.1%) showed improvement in mean scores after Year 3 of programming, indicating positive changes in outcomes, while 7 clubs (38.9%) either maintained or had lower scores after programming. The largest positive improvements were observed for Loving GLOW Club (-0.46) and Awesome GLOW Girls (-0.40). Contrary, the largest declines in scores were observed for Invicta Girls GLOW Club (0.28), Amazing Girls Club (0.27) and Shining Stars GLOW Club (0.23).

Table 3: Descriptive statistics by Glow Club

GLOW Club Name	Before Year 3 (March 2023)		After Year 3 (January 2024)		Mean Difference between pre and post year 3
	Mean (SD)	N	Mean (SD)	N	
Adorable Angels	3.86 (.24)	19	4.06 (.16)	19	-0.20
Adorable Stars	4.32 (.28)	15	4.19 (.19)	15	0.13
Amazing Girls Club	4.31 (.39)	12	4.04 (.22)	12	0.27
Awesome Glow Girls	3.79 (.35)	17	4.19 (.17)	17	-0.40
Bethany Glow Girls	3.87 (17)	8	3.85 (.09)	8	0.02
Grateful Girls Glow Club	4.01 (.16)	13	4.23 (.26)	13	-0.22
Icons Glow Club	3.98 (.53)	18	4.15 (.26)	18	-0.17
Ingenious Girls Glow Club	3.83 (.23)	17	4.13 (.12)	17	-0.30
Invicta Girls Glow Club	4.26 (.21)	16	3.98 (.09)	16	0.28
Kado Club (Glorious Girls Glub)	3.73 (.20)	8	4.10 (.16)	8	-0.37
Peculiar Girls Glow Club	3.92 (.14)	21	4.13 (.12)	21	-0.21
Phenomenal Glow Club	4.22 (.16)	12	4.45 (.19)	12	-0.23
Shining Stars Glow Club	4.16 (.19)	17	3.93 (.54)	17	0.23
Special Girls	4.01 (.19)	12	3.95 (.16)	12	0.06
Special Girls Club 2	3.93 (.07)	9	4.07 (.24)	9	-0.14
Loving Glow Club	3.69 (.50)	14	4.15 (.25)	14	-0.46
The Young Stars Glow Club	4.01 (.33)	14	4.22 (.24)	14	-0.21
Unique Girls Glow Club	4.08 (.21)	18	4.07 (.12)	18	0.01
Total	**4.00 (.33)**	**260**	**4.11 (.25)**	**260**	**-0.11**

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, GLOW Club was purposely selected as a partner to implement GLOW Club programs based on their vision, mission, values, and work with girls in vulnerable communities. As such, program participants from GLOW Club 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 GLOW Club as not every girl in the population had an equal chance of being selected.

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 before the start of Year 3 curriculum and after completing Year 3 curriculum.

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."

Data Analysis and Management

Data from the Pre- and Post-Year 3 girl 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 or pre-surveys and post-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 directly communicating with the 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 Year 3 of GLOW Club programming improves girls' capabilities relating to SEL, leadership skills, self-advocacy, and positive future outlook. 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, the survey relies 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 survey 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. and Global Girls Glow), who compensate collaborating organizations 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. In addition, there is a possibility that some of the girls in Year 3 programming might have been exposed to programming in Year 2 and Year 1, increasing their exposure dosage, which may have influenced the results. However, due to capacity challenges and barriers to girls' long term program retention, the evaluators were unable to identify girls who received programming in the first and second year and therefore cannot stratify the results.

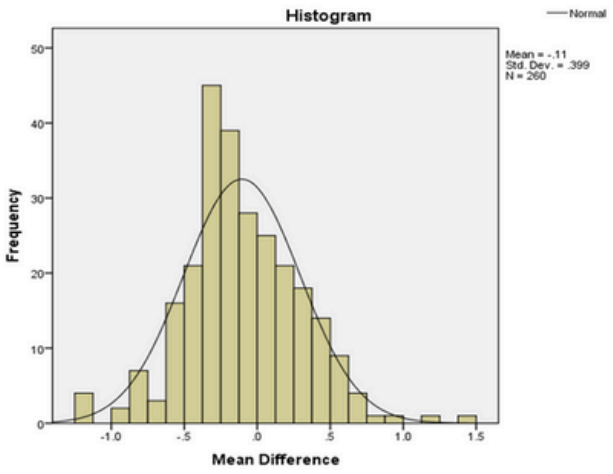
Conclusion

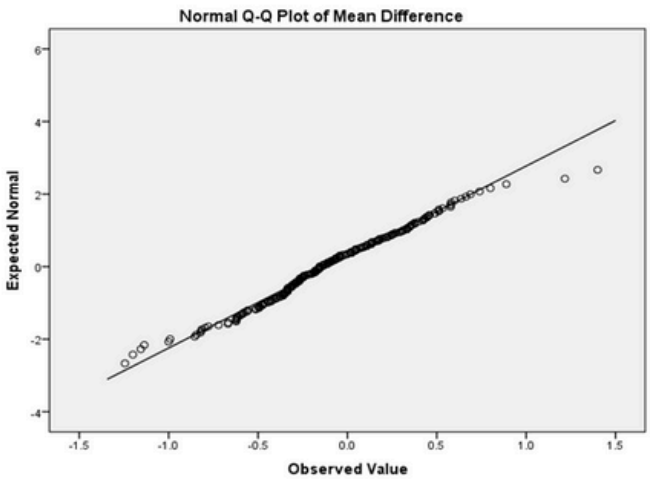
Overall, Year 3 of GLOW Club programming had a small but statistically significant positive impact on girls' capabilities relating to social emotional learning, self-advocacy, positive future outlook, and leadership skills. Program implementation not only created a reliable environment for GLOW Clubs and the girls, it also helped girls develop SEL competencies and skills relating to leadership, advocacy, and positive future outlook. In addition, continuous mentorship played a key role in building trusting relationships between mentors and girls, which created a safe space for girls to express themselves. Year 3 of GLOW Club curriculum focused on advanced topics. This, coupled with the girls' increased age and maturity in Year 3, may have supported the gains in outcomes, demonstrating a positive compounding learning effect in the curriculum.

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 was used to determine the impact of GLOW Club.

Histogram and Q-Q Plot for Girl Data:





Reference List

1. Babbie, E. (2007). The Practice of Social Research. Thomson Learning, Inc.
2. CASEL. (2007). CASEL briefs. Background on Social and Emotional Learning (SEL). https://files.eric.ed.gov/fulltext/ED505362.pdf
3. CASEL. (2023). What is the CASEL Framework? CASEL. https://casel.org/fundamentals-of-sel/what-is-the-casel-framework/#the-casel-5
4. Field, A. (2009). Discovering Statistics using SPSS (3rd ed.). Sage.
5. Grimm, P. (2010). Social Desirability Bias. John Wiley & Sons. https://zhangjianzhang.gitee.io/management_research_methodology/files/readings/sdb_intro.pdf
6. Pallant, J. (2009). SPSS Survival Manual: A step by step guide to data analysis using SPSS (4th ed.). Allen & Unwin.
7. Raj, A., Salazar, M., & Jackson, E.C. (2019). Students and brides: a qualitative analysis of the relationship between girls' education and early marriage in Ethiopia and India. BMC Public Health, 19(19). https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-018-6340-6
8. van de Mortel, T. (2008). Faking it: social desirability response bias in self-report research. Australian Journal of Advanced Nursing, 25(4), 40-48. https://www.researchgate.net/publication/46574012_Faking_it_Social_desirability_response_bias_in_self-report_research

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