

Adolescent Girls in Guatemala: Can an Empowerment Program Change Perceptions of Gender Equity, Aspirations, and Communication?

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Abstract

While Guatemala has made great strides towards gender equality, it remains a country with vast disparities. Gender sensitization and empowerment programs during adolescence when gender attitudes are formed have the potential to diminish gender inequities. The Girl Rising Pilot Program (GR) is a 24-week curriculum designed for adolescent girls living in the Sololá region where 95% of the total population is indigenous and Mayan. The present pilot study evaluated outcomes of the GR Guatemala pilot program. Specifically, the evaluation examined whether there were differences between baseline and follow-up on perceptions of gender equity, aspirations, and communication for adolescent girls who participated in the GR program. A quasi-experimental study design with a one group pre- and post-test was implemented. The pilot evaluation study included all 265 participants at baseline who participated in the GR program. After controlling for significant variables, it was found

that the gender equitable attitudes score and communications scale still significantly increased between baseline and follow-up. The results of this evaluation prove that gender sensitization programs play a key role in forming and changing gender attitudes during adolescence, and have the potential to alter their short and long-term attitudes and beliefs.

Introduction

Guatemala ranks 113th out of 153 countries in the Global Gender Gap Index, ranking last out of all Latin American and Caribbean countries [1]. In the region, Guatemala has the highest infant and under-five mortality rates with 22 deaths per 1,000 live births and 26.2 deaths per 1,000 live births, respectively [2-3]; it is the most malnourished country [3]; and spends the least amount on healthcare and public health efforts than most of its surrounding countries [4]. The lack of resources designated to healthcare disproportionately impacts Guatemalan women and girls, specifically as it relates to maternal mortality, fertility rates and child marriage. According to a 2018 study, seven percent of girls are married by the age of 15, and this increases to 30% by the age of 18 [5]. In addition, gender-based violence remains prevalent as presented by the USAID Guatemala Gender Analysis report, reporting that 19.2% of women of child-bearing age report 'ever having experienced physical violence,' and 8.4% report sexual violence, metrics widely regarded as an underestimate of violence against women in Guatemala [5].

There are large educational disparities in Guatemala. More recently, primary education enrollment dropped from 84% in 2014 to 77% in 2017. Secondary education enrollment has remained the same at about 45% of adolescents attending school, however, there are significant gender differences with girls less likely than boys to continue on to secondary school [6]. Further, these educational disparities have transpired into the workforce. For women who are able to receive an education, obtaining a career remains difficult. This is especially seen in rural parts of

Guatemala where only 28.1% of women are employed, compared to 89.1% of men [5]. This may be associated with growing poverty in the country; as of 2017, 59% of the general population was impoverished, along with 79% of the indigenous population [7].

The educational disparities seen amongst adolescent boys and girls is even more prevalent between indigenous and nonindigenous populations in Guatemala. Only 39% of Mayan adolescent girls and women are literate, and Mayan girls are less likely to be enrolled in school at every education level due to barriers related to poverty, culture, and domestic work [8]. In many indigenous Guatemalan communities, cultural norms dictate that girls are not as intelligent as boys and are supposed to remain in the home to do housework [9]. In Sololá, a community primarily made up of indigenous populations, girls attend school for an average 2.6 years and the literacy rate is lower than the national average, at 65.2% among boys and girls 15 years or older. In girls, this rate is even lower at 56.8%. Additionally, 50% of the girls who attended 6th grade did not enroll in their 7th grade class [10].

Adolescence (ages 10-19 years) is a time of rapid physical, social, and cognitive growth. It is also a time where young boys and girls begin to develop and form ideas on gender norms and attitudes, most often yielding to greater disparities for girls and women throughout their lifespan [11]. The gender inequalities seen in the Guatemalan education system has been shown to have a negative impact on the health, well-being and long-term success of girls and young women. Therefore, gender sensitization and empowerment programs aimed at adolescents, precisely at the time when they are forming their gender attitudes, have the potential to diminish gender inequity in the short and long-term [11]. Interventions aimed at addressing girls' education in Guatemala have also been shown to increase gender equitable attitudes. A study by Schuler et al. found that by participating in interactive workshops focused on gender norms and

family planning in rural communities, both men's and women's gender attitude scores increased [12].

Girl Rising Guatemala Pilot Program

Girl Rising (GR) is a global campaign that inspires social action through powerful storytelling and partnerships with local organizations. GR utilizes communication and media tools to change long held social norms and beliefs regarding girls and women, and its media tools and stories captivate an audience's attention, move and inspire people to contemplate and adopt new ideas and practices, and ultimately change behaviors.

In Guatemala, the Girl Rising Pilot Program (GR) is a 24-week curriculum designed for adolescent girls living in the Sololá region where 95% of the total population is indigenous and Mayan. The GR pilot program for Guatemala was built around the critically acclaimed *Girl Rising* feature film and additional multimedia tools, with the objective of supporting adolescent girls in identifying, articulating, and sharing their gender-related experiences through activities and stories. The GR curriculum was translated into Spanish and adapted for local use. Girl Rising partnered with nine communities in the Sololá region through two implementing partners, REDMI Aq'ab'al and the MAIA Impact School. The Girl Rising team provided facilitator trainings for seven community adult mentors, who then led the program in either schools or other community spaces. Through this pilot program, the GR program reached 265 Mayan adolescent girls over a 7-month period in 2019.

There are six curriculum modules in the GR program that are based on six of the nine stories from the *Girl Rising* film. The curriculum was structured to allow students to work on activities in small groups, and provide them with enough time, space, and support to think and listen to one another. In addition, students were given take-home activities to motivate them to discuss curriculum topics with their family and other adults and adolescents in the community.

The present pilot study evaluated outcomes of

the GR Guatemala pilot program. Specifically, the evaluation examined whether there were differences between baseline and follow-up on perceptions of gender equity, aspirations, and communication for adolescent girls who participated in the GR program.

Methods

Study Design

A quasi-experimental study design with a one group pre- and post-test was implemented. The pilot evaluation study included all 265 participants at baseline who participated in the GR program. However, some participants were not at the session when follow-up surveys were conducted and therefore the sample sizes vary between the two time points.

Study Sample and Data Collection

The intervention took place from the end of January 2019 through the beginning of August 2019. Program participants completed a survey before the program started (baseline) and completed another survey after completing the 24-week course (follow-up). The final evaluation sample included nine communities from the Sololá region, yielding a total sample size of 265 girls at baseline and 229 girls at follow-up.

Mentors disseminated paper surveys for participants to complete, and mentors were trained on how to respond to questions from the participants and the conduct of ethical administration of the surveys. Paper survey data was subsequently entered into a database for analysis.

Instrument and Measures

Baseline and follow-up surveys were developed and included 25-items. The instruments were developed and implemented in Spanish and translated to English for analysis. Sociodemographic questions included community/location, age, sex, school attendance, and number of brothers and sisters. The remaining survey items were Likert statements and measured gender equitable attitudes, communication with adults, and aspirations.

Gender attitudes were captured as a gender

equitable attitude score using four statements as follows: girls and boys should do the same amount of housework; girls don't do well in science and math classes; only men should work outside the house; and a woman should always listen to her husband. Participants responded to each statement using a Likert scale. The response options were strongly agree, agree, neutral, disagree, or strongly disagree. Each response was given a number value corresponding to the level of agreement (e.g., strongly agree received a 5, while strongly disagree received a 1). The final three statements were reversed to match the direction of the first statement. The corresponding number value of each answer to these four statements were added together to create the gender equitable attitude score, with the lowest possible score being four and the highest possible score being 20. The higher a participant's score, the more gender equitable attitudes they held.

Open communication was measured using the following three statements: I have talked to my mother, father, or other adult about my education; I have talked to my mother, father, or other adult about my goals; I have talked to my mother, father, or other adult about what girls and young people face in the community. Participants were supposed to record how many times they had talked to either their mother, father, or another adult about each of the topics. The possible answers were never, once, twice, three times, or four or more times. The responses to each statement were added up and divided by three to create an open communication scale (Cronbach's alpha, .728). The lowest possible score was 0, while the highest was 4. Those who had spoken to an adult more often about their education, goals, or what young people face in their community scored higher on the open communication scale than those who did not.

In the survey, participants were asked if they strongly agreed, agreed, were neutral, disagreed, or strongly disagreed with the following statement: I think I can be anything I want or dream to be. This statement was used to understand participants' aspirations regarding their future, specifically relating to career

choice.

Data Analysis

Quantitative analysis was conducted using IBM SPSS Statistics Version 25. Descriptive tests were performed to define the study sample, along with chi square and t-tests to determine if the differences between the pre- and post-test data were statistically significant. Additional t-tests were run to compare the mean and standard deviation of the scale and score variables between baseline and follow-up. For the bivariate analysis, demographic variables were run against dependent variables using Pearson correlations, T-tests, and ANOVA tests. Lastly, for the multivariate models, three linear regression models were run to adjust for significant variables and changes between baseline and follow-up.

Results

The total study sample (Table 1) consisted of 265 female participants at baseline, and 229 female participants at follow-up. The majority of participants were attending school at the time of the program, 92.5% at baseline and 91.3% at follow-up. The community distribution changed significantly between pre- and post-test due to loss to follow-up of participants from specific locations (<0.01). The mean age was 11.62 years at baseline and 11.71 years at follow-up; the mean number of brothers per participant was 2.19 at baseline and 2.38 at follow-up; and the mean number of sisters per participant was 1.85 at baseline and 1.88 at follow-up, although none of these were statistically significant.

The means of all three primary outcome variables changed significantly between baseline and follow-up (See Table 2). The communication scale increased from 1.95 at baseline to 2.39 at follow-up (<0.01). The gender equitable attitude score increased from 13.27 at baseline to 15.00 at follow-up (<0.01). The aspirations variable increased from 4.15 at baseline to 4.48 at follow-up (<0.01).

There was a significant positive correlation

Table 1. Study sample characteristics, evaluation of GR Guatemala Pilot Program, N=494

	Baseline % (n) or Mean (sd) (N=265)	Follow-up % (n) or Mean (sd) (N=229)
Age	11.62 (\pm 2.754)	11.71 (\pm 2.965)
Community**		
Chuisajcab	9.8% (26)	8.7% (20)
Paculam	10.9% (29)	12.7% (29)
Pasin	8.3% (22)	3.5% (8)
Patzite	6.0% (16)	7.0% (16)
Sololá	17.0% (45)	19.7% (45)
Tzucubal	14.7% (39)	7.9% (18)
Xeabaj	8.7% (23)	12.7% (29)
Xejuyup	18.1% (48)	26.2% (60)
Xexac	6.4% (17)	1.7% (4)
School Attendance		
Yes	92.5% (245)	91.3% (209)
No	7.5% (20)	8.7% (20)
Number of Brothers	2.19 (\pm 1.651)	2.38 (\pm 1.855)
Number of Sisters	1.85 (\pm 1.388)	1.88 (1.357)
Aspirations**	4.15 (\pm 1.12)	4.48 (\pm .72)
Communication Scale**	1.95 (\pm 1.14)	2.39 (\pm .97)
Gender Equitable Attitudes Score**	13.27 (\pm 3.31)	15.00 (\pm 3.12)

 **Significant, $p < 0.01$ a

Table 2. Variable correlation, evaluation of GR Guatemala Pilot Program

	Aspirations	Communication Scale	Gender Equitable Attitudes Score
Aspirations	$r^a=1$	$r^a=.194^{**}$	$r^a=.269^{**}$
Communication Scale	$r^a=.194^{**}$	$r^a=1$	$r^a=.227^{**}$
Gender Equitable Attitudes Score	$r^a=.269^{**}$	$r^a=.227^{**}$	$r^a=1$

**Significant, $p < 0.01$

a. Correlation coefficient

Table 3. Multivariate linear regression model, evaluation of GR Guatemala Pilot Program

	Model 1		Model 2		Model 3	
	<i>SE</i>	<i>Adjusted Beta</i>	<i>SE</i>	<i>Adjusted Beta</i>	<i>SE</i>	<i>Adjusted Beta</i>
	Aspirations, .150 ^a		Communication, .272 ^a		Gender Equity, .357 ^a	
Study Period						
Baseline (Ref)						
Follow-up	.088	.047	.089	.197 ^{**}	.256	.193 ^{**}
Age	.019	.031	.022	.022	.058	.077
Number of Brothers	.025	.031	--	--	.074	-.018
School Attendance						
No (Ref)						
Yes	--	--	.200	.093	--	--
Community						
Sololá (Ref)						
Chuisajcab	.198	-.098	.210	-.145 [*]	.573	-.301 ^{**}
Paculam	.199	.113	.210	-.293 ^{**}	.565	-.419 ^{**}
Pasin	.227	-.067	.236	-.250 ^{**}	.655	-.298 ^{**}
Patzite	.214	.130 [*]	.226	-.334 ^{**}	.626	-.260 ^{**}
Tzucubal	.190	-.088	.200	-.165 ^{**}	.533	-.429 ^{**}
Xeabaj	.181	.031	.207	-.278 ^{**}	.508	-.386 ^{**}
Xejuyup	.173	.142	.176	-.507 ^{**}	.506	-.328 ^{**}
Xexac	.247	.031	.257	-.139 ^{**}	.703	-.310 ^{**}
Aspirations	--	--	.047	.167 ^{**}	.135	.136 ^{**}
Communication	.043	.195 ^{**}	--	--	.132	-.009
Gender Equity	.015	.180 ^{**}	.016	-.011	--	--

*Significant, $p < 0.05$

**Significant, $p < 0.01$

^aAdjusted R²

between age and all three outcome variables ($p < 0.01$). Number of brothers was positively correlated with aspirations ($p < 0.05$) and gender equitable attitudes ($p < 0.01$). Those who attended school at the time of the pilot program were significantly different than those who did not only on the communication scale, and there was a significant difference between the communities for all three outcome variables ($p < 0.01$). There was no correlation between number of sisters and any of the dependent variables (Table 3).

Pearson correlations were conducted to explore the associations between the outcome variables (See Table 2). The aspirations variable was positively correlated with communication and gender equity ($p < 0.01$); communication was positively correlated with gender equity and aspirations ($p < 0.01$); and gender equity was positively correlated with aspirations and communication ($p < 0.01$).

Multivariable models were run to control for variables that were significantly different between baseline and follow-up (time period), and to further assess the changes in outcome variables.

Model 1

As shown in Table 3, age, number of brothers, community, communication, and gender equitable attitudes were all found to be statistically correlated with aspirations, so they were included in the linear regression model. It was found that about 15% of the variation in aspirations could be explained by time period, a participant's age, number of brothers, what community they were in, communication with their parents or another adult, and their gender equitable attitudes (Adjusted $r^2 = 0.150$).

Further, while the relationship between time period and aspirations was initially significant in the bivariate analysis, when controlling for age, number of brothers, community, communication, and gender equitable attitudes, aspirations did not significantly change between baseline and follow-up. However, communication and gender equitable attitudes were

found to still be significantly associated with aspirations. For every one unit increase in gender equitable attitudes, there was an associated 0.180 increase in aspirations ($p < 0.01$), and for every one unit increase in communication, there was an associated 0.195 increase in aspirations ($p < 0.01$).

Model 2

A second multivariate model was examined between time period and the communications scale. Age, school attendance, community, aspirations, and gender equitable attitudes were all found to be statistically correlated with communication, so they were included in the linear regression. It was found that 27.2% of the variation in communication could be explained by time period, age, school attendance, community, aspirations, and gender equitable attitudes (Adjusted $r^2 = 0.272$). After controlling for these variables, for every one unit increase in aspirations, there was an associated 0.167 increase in communication ($p < 0.01$). Additionally, for every one unit increase in gender equitable attitudes, there was an associated 0.011 increase in communication, however not statistically significant. Compared to baseline, those in the follow-up had a 0.197 increase in the mean score of communication.

Communication was not significantly associated with age, number of brothers, or school attendance. There were significant differences between the reference community, Sololá, and the other communities that were involved in the GR intervention (Chuisajcab, $p < 0.05$; remaining communities, $p < 0.01$).

Model 3

The final model looked at the relationship between time period and gender equitable attitude scores. Age, number of brothers, community, communication, and aspirations were all found to be statistically correlated with gender equitable attitudes and were therefore included in the regression model. It was found that 35.7% of the variation in gender equitable attitudes could be explained by time period, age, number of brothers, community, aspirations, and communication

(Adjusted $r^2=.357$). After controlling for these variables, for every one unit increase in aspirations, there was an associated 0.136 increase in gender equitable attitudes. There was no significant association between the gender equitable attitudes score and the communication scale.

In summary, after controlling for significant variables, it was found that the gender equitable attitudes score and communications scale still significantly increased between baseline and follow-up. However, the increase in aspirations was no longer significant. Changes in the communication scale were not significantly related to changes in the gender equitable attitudes score.

Discussion

The Girl Rising Pilot Program (GR) was developed to address the myriad of challenges young girls and adolescents face in Guatemala, particularly in rural indigenous communities. GR has developed and tested similar interventions in schools and community-organizations in India and found that a school-based intervention played an important role in changing gender attitudes during adolescence [11]. The GR India program found that key outcomes changed positively post-intervention: gender equality scores increased; gender roles/privileges/restrictions scores increased; and gender attribute scores increased. The GR Guatemala program yielded positive outcomes for the girls who participated after just one iteration of the intervention. After the intervention, girls were more likely to report positive gender equitable attitudes which supports a previous 2015 study in Guatemala which found that that by participating in interactive workshops focused on gender norms and family planning in rural communities, both men's and women's gender attitude scores increased [12]. This study provides further evidence that these changes can occur during adolescence as well.

Participants were also more likely to communicate with their parents or another adult about their education, future goals, and the obstacles that girls

and women face in their community. After the intervention, girls spoke to adults more often about these important issues than they had prior to the GR program. While aspirations did not increase significantly between baseline and follow-up, they did increase as gender equitable attitudes increased and as communication increased. Girls were more likely to believe that they could be anything they wanted to be if they thought that boys and girls were more equal, or if they communicated more with adults about their education and goals. One possible reason for why aspirations did not increase significantly is that the mean score was already high at the onset e.g., participants 'agreed' with the statement "I think I can be anything I want or dream to be" prior to the intervention (mean = 4.15) and moved slightly closer to 'strongly agree' after the intervention (mean = 4.48).

In many parts of the world, including Guatemala, gender disparities exist from the moment a girl is born, and as she becomes an adolescent, it also the time when more pronounced gender discrimination begins to take hold. Unfortunately, this discrimination continues through the life course and into the next generation, and therefore, to break this inter-generational cycle of gender inequity, community organizations and schools have recognized the importance of reducing gender inequality by focusing more attention on adolescents, as this is the developmental time when are forming their own gender attitudes. However, few programs focusing on gender sensitization, equity, and empowerment have been adequately implemented, and even fewer have assessed quantifiable outcomes. Improving gender attitudes, aspirations and communication with adults is critical in increasing voice, agency, empowerment and gender equity in both the short and long term.

Limitations

Although the results of the pilot program are encouraging, there are several limitations which must be considered. Given this was a pilot program and

evaluation, the sample size for this analysis was small and likely not generalizable to the entire Maya Guatemalan population. In the next iteration of the GR Guatemala program, it is suggested that a greater number of young people and adolescents participate and are included in the baseline and follow-up analysis to have more representative data. The questionnaire used to gather participant data was not comprehensive. The survey for this analysis only consisted of 25 questions and the scores and scales were not tested for validity and reliability. Finally, the drop-out rate and subsequent loss to follow-up during the intervention was high; many participants started the program but dropped out before it was completed. This means that many did not complete the entire intervention, and didn't receive a full dose of the program. Therefore, the results from this analysis may be an underestimation of the change that the GR pilot program produced in its participants. Future programs should focus on participant retention and tracking the reasons for drop-out. Overall, the results of this analysis show the need to expand the Girl Rising program and altering several of the methods for the monitoring and evaluation of the intervention.

Conclusions

The GR Guatemala program was uniquely developed with features aimed at influencing attitudes and behaviors in a developmentally salient and culturally appropriate manner. The program included high quality media tools produced with celebrity influencers; engaging storytelling that transports viewers and listeners; showing role models; and utilizing interactive curriculum components that provide an opportunity for adolescents to reflect, discuss, and take action. Much of the curriculum is interactive and provides an opportunity for self-reflection which has the potential to make a positive difference in attitudes.

Evidence-based solutions for adolescents are critical in addressing the multiple challenges girls and women face across their life course. The findings from

this pilot evaluation has the potential to add to the knowledge gap on interventions that can shape gender attitudes in Guatemala. Through a new generation of self-aware, gender-conscious youth, we can imagine a world where girls and women are no longer discriminated against.

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Conflict Of Interest

This manuscript has not been published elsewhere and is not under submission elsewhere.

There is no conflict of interest, or alternatively, disclosing any conflict of interest that may exist.

Affiliations

All authors were at The George Washington University during their primary contribution to this study.

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