

Original Research

The Effect of Internal Locus of Control and Social-Emotional Learning on Life and Relationship Satisfaction

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ABSTRACT

Objective

The current study examined the impact of a non-governmental organization's academic tutoring and mentoring program on the social-emotional learning (SEL) and subjective well-being of 240 marginalized young women.

Participants

One-hundred-fifty-nine currently enrolled 7-12th grade students with a mean age of 16.39, SD=1.55; 40 students who were enrolled in college with a mean age of 20.25, SD=1.57, and 25 who had graduated from college with a mean age of 22.48, SD=2.16 and their leaders participated.

Methods

All participants completed in a survey that assessed the degree of participants' locus of control, expectations of success (self-efficacy), current goals and career-related aspirations and their satisfaction with their relationships and life in general. Twenty-one of the participants and all leaders also were interviewed.

Results

Regression analyses revealed that both the participants' self-management and the leader's locus of control were significant predictors of the participants' internal locus of control. Congruent with interview findings, latent structural equation analysis revealed that three manifest variables of social-emotional learning, "self-management", "social awareness", and "self-efficacy" had direct positive effects on participants' subjective well-being (i.e., their satisfaction with life and relationships).

Conclusion

Culturally sensitive approaches to mentoring and training are needed and helpful. Future research should be carried out to mitigate design limitations and further the current study's addition to the body of research on social-emotional learning and well-being.

Keywords

Self-management; Self-efficacy; Social awareness; Social-emotional learning (SEL); Internal locus of control; Life satisfaction; Relationship satisfaction; Subjective well-being (SWB).

INTRODUCTION

The social justice mandate of scientific and professional psychology calls research and practitioners to help families and individuals thrive in the face of hardship such as the coronavirus disease 2019 (COVID-19) pandemic,¹ especially those are tradi-

tionally underrepresented or marginalized in society.^{2,3}

One influence on how challenges and opportunities are being perceived is one's so called locus of control. Locus of control is defined as the degree to which one perceives events as under his or her control (internal locus) vs. the control of powerful others

(external locus).⁴⁻⁶ Participants with high internal locus of control were more likely to learn and use newly acquired skills,⁷ master their environment with help-seeking and positive thinking, and reported lower levels of work stress and greater well-being.⁷⁻¹⁰

Additionally, research continually demonstrates the value of students' so called social-emotional skills in determining their future success, including academic achievement, workforce performance, and well-being.¹¹⁻¹⁴ Using social-emotional skills promoted participants' subsequent success in school and life.¹⁵⁻¹⁷ Social-emotional skills were more influential than students' cognitive skills for educational attainment.^{18,19} Social-emotional learning takes place *via* self-management,^{20,21} a person's growth mindset,²² self-efficacy²³⁻²⁵ and social awareness.²⁶

The influence of internal locus of control and social-emotional learning on participants' well-being^{27,28} has not yet been studied in a marginalized population. Also, no studies have been conducted that measure life satisfaction and job satisfaction -two indicators of the construct "well-being".²⁹⁻³¹ in a marginalized population of the emerging workforce.

According to the Demographic and Health Survey conducted by the Central Statistical Agency of Ethiopia in 2016, 52.3% of girls in the northern region of Ethiopia received no formal education, 36.9% receive some primary school, 6.4% achieve some secondary school, and only 12% of the 6.4% graduate from high school. Only 0.3% completed a college or university degree.³² One study investigated the influence of an after-school program on young women's math and literacy scores as well as health practices³³ in the Ethiopian capital. Due to the after-school program's interventions, enrollment in non-formal schooling increased from 6 to 49% and participants had significant gains in their scores for math and literacy. The focus of the program was on academic success and increase of health related practices. In contrast, a "school for life" approach³⁴ re-sets the goal of schooling to making a positive impact on the economic and social well-being of students and their communities. Culturally sensitive mentoring and training of marginalized populations to gain academic, an inner sense of control, and social-emotional skills have been proposed but have not been studied in marginalized populations.

The current study sought to understand the factors that contributed to a group of marginalized young women's high rates of academic and interpersonal success their participation in an after school program called PinK Girl (abbreviated for "Power in Knowledge") in northern Ethiopia.

The PinK Girl organization's aim is to teach marginalized girls enrolled in 7th through 12th grade public school to have strong academic skills, social-emotional and life skills as well as a moral compass to succeed in school and with entry into the workforce. At the time of the study, 159 7-12th graders had participated in the program. An additional 40 were currently enrolled in college, and 25 had already graduated with a bachelor's degree.³⁵

Hypothesis 1

There is a relationship of Pink Girl participants' classes and par-

ticipants' internal locus of control, self-efficacy, social-emotional learning (SEL), and subjective well-being (measured as life satisfaction, and satisfaction with the program).

Hypothesis 2

Leaders' internal locus of control will correlate to participants' locus of control.

Hypothesis 3

Participants' self-efficacy, self-management, growth mindset, and social awareness will be positively related to their subjective well-being as measured by their satisfaction with life and relationships.

MATERIALS AND METHODS

Participants

Two-hundred-twenty-four participants age of 12 and above who participated in life skills classes and academic review classes were part of the study. Not all participants completed all survey questions. Missing values were excluded from the analyses.

Recruitment: Pink Girl leaders were trained to administer the questionnaires on location by one of the researchers. They went to the homes and discussed the questionnaires with the parents and got their signatures. Participation was voluntary with face-to-face permission from the parents and students who were then administered the surveys.

Consent: The participants' involvement in this study was voluntary, and all participants were free to discontinue their involvement with this study at any time and for any reason. Participants younger than 18-years of age needed the written consent of their legal representative in order to participate in the study.

Materials

Surveys: Each participant's life skill class teacher completed one survey about the growth and development of the respective participant. Each leader also rated her own locus of control. All surveys were filled out by hand. Response options were written in Amharic and English. The surveys were shipped back to the United States. Survey responses to multiple choice type questions were entered into Excel, Statistical Package for the Social Sciences (SPSS) version 21, and Mplus version 8 statistical software packages and then analyzed.

Measures

Participants' demographic information: Demographic information (e.g., native language, ethnicity, years of schooling, and time at PinK Girl) was gathered. Two questions asked: to which extent the care of (1) siblings and (2) other family members depended on the PinK Girl participant *vs.* other members of the household (with

answer choices ranging from “not at all” measured as “1” to “very much” measured as “7” for each of the two questions).

School or career related goals, participant locus of control, leader locus of control, life satisfaction, satisfaction with relationships: Participants named a school or career related goal that was most important to them at the time of the survey. Participants rated their expectations of success, the importance of their goal based on two questions derived from existing research in self-leadership and motivation through incentive values. To measure participants’ locus of control, participants rated the extent to which the fulfilment of their goals depend on circumstances outside of their control.

One question assessed how satisfied participants were with their life in general, another one how satisfied participants were with their most important relationships.

The social-emotional-learning survey³⁶ measured (1) self-management (Cronbach’s $\alpha=0.72$), (2) growth mindset (Cronbach’s $\alpha=0.50$). (3) self-efficacy (Cronbach’s $\alpha=0.72$), and (4) social awareness (Cronbach’s $\alpha=0.79$). Due to the low reliability of the growth mindset scale, it was excluded from subsequent analyses.

Appendix A contains a list of the surveys used.

Qualitative Phenomenological Study

A phenomenological qualitative study³⁷ was developed to explore the impact of the PinK Girl program according to the lived experience of the participants. The initial investigation included multiple informal interviews across the full range of PinK Girl Leadership and three weeks of on-site observation of PinK Girl operations. This included visits to the program sites, observations of the life skills and academic tutoring classes and several special events. From this basis, a semi-structured interview guide³⁸ designed to investigate a more in-depth understanding of 21 randomly selected participants’ experiences of the PinK Girl program. This included the use of open-ended questions in order to allow for the participant’s unique responses as they explained their histories with PinK Girl and expressed how they made meaning of their experiences in the program. The initial questions asked the participants to describe their initial motivation for joining PinK Girl and their initial experiences with the program. Additional questions were included with regards to specific programs and elements of PinK Girl including the most significant change experienced. The latter was used as a triangulation for the qualitative interviews. Appendix B contains the institutional review board (IRB) approval. Appendix C contains the list of questions used during the semi-structured interviews.

The interviews and focus group results were translated by a native speaker in Ethiopia. Translated transcripts were provided to one of the researcher for thematic analysis and coding using NVivo software. In stage 1, descriptive themes emerged from the data using NVivo qualitative software. In step 2, they were defined and coded according to their repetition and emphasis. In step 3,

the nuances of several themes were coded into subthemes. All analyses focused on themes and subthemes instead of exact words. Narrative from PinK Girl participants were explored.

Data Analyses

First, the use of similar questionnaires formats (i.e. 5-point rating scales) may contribute to bias results due to common method variance. To control for methodological artifacts and exclude common method bias it is suggested to subject all items to exploratory factor analysis and screen the variance being explained by the first factor. If the first factor accounts for less than 50% of common variance, the results may be interpreted as unbiased by common method variance (Harman test).³⁹ The amount of common variance due questionnaires being used was 21.78%, revealing a neglectable methodological threat to evidence provided by the appointed measurement approach.

Second, a multivariate analysis of variance (MANOVA) was used to investigate mean differences between age and program completion (current middle and high school students *vs.* college students *vs.* college graduates) as to internal locus of control, self-efficacy, self-management, growth mindset, social awareness, and satisfaction with life and relationships. The group variable for age were created by calculating the median (age: med=17.00) and subsequently creating a categorical group variable for each, splitting low *vs.* high scores at the median. The group variable for program completion had been derived from one of the demographic questions with regards to the participants’ degree of program completion (current middle and high school students *vs.* college students *vs.* college graduates). The results of the 2 (age: young *vs.* older) by 2 (program completion: current middle and high school students *vs.* college students *vs.* college graduates) MANOVA with participants’ internal locus of control as a covariate revealed no significant multivariate and univariate differences between these groups as to their self-efficacy, self-management, and social awareness (all $p_s > 0.05$). Therefore, the combined sample of participants was used for all subsequent analyses.

Third, means, standard deviations, and zero-order correlations of total number of PinK Girl classes, participants’ and leaders’ internal locus of control, and participants’ self-efficacy, self-management, growth mindset, social awareness, and satisfaction with life and relationships were computed.

Fourth, linear regression analysis with manifest variables—a special case of more complex Structural Equation Models (SEMs)⁴⁰ predicted participants’ internal locus of control based on their self-management and leaders’ internal locus of control scores.

Fifth, confirmatory factor analysis (CFA) predicted participants’ well-being (i.e., their life and relationship satisfaction) by their degree of social-emotional learning (that is, their self-efficacy, self-management, and social awareness). To account for potential non-normality in the data, the robust maximum likelihood (MLR) estimator was used.⁴¹ The MLR method takes violations of the

assumption of multivariate normality into account by adjusting standard errors and chi-square values accordingly.^{42,43} Model fit of the CFA was evaluated by several fit indices provided by the Mplus program: the chi-square value and its associated *p*-value, the root mean-square error of approximation (RMSEA), the comparative fit index (CFI), and the standardized root mean square residual (SRMR). Good model fit is indicated by a non-significant chi-square-value, $RMSEA \leq 0.05$, $CFI \geq 0.95$, and $SRMR \leq 0.08$.^{44,45}

RESULTS

Results from PinK Girl Participant Questionnaires and Interviews

Table 1 displays the ages of participants along with the number of children at the participants' homes.

Table 1. Participant's Demographics: Mean Score, Number of Participants, Minimum, Maximum, and Standard Deviation for Age, Number of Children Under 18-Years of Age Living in the Household; Number of Children who are 10-Years or Younger Living in the Household

	Mean	N	Minimum	Maximum	Standard Deviation
Age	17.77	223	12	25	2.76
Number of Children (Under 18-Years)	1.34	219	0	8	1.41
Number of Children (10 years or Younger)	0.83	216	0	18	1.55

Table 2 describes the demographics with regards to sibling care and care-taking of other family members that participants were involved in outside of their time at PinK Girl.

Table 2. Descriptive Statistics (Mean Scores and Standard Deviations, Number of Participants) for Sibling Care and Care Taking of Other Family Members by Participant

Measure	Mean	Standard Deviation	
Sibling Care			
By participant	3.02	2.24	216
By another person	4.12	2.51	220
Other Caretaking			
By participant	2.11	1.89	215
By another person	3.26	2.37	218

As seen in Table 2, participants were moderately involved in childcare for their siblings as well as in their care for others. This mirrors the answers given during the interviews. When the researcher asked the participants what about PinK Girl was helpful to them, one participant responded:

"Sometimes I get late [to PinK Girl class] by baby sitting at home or doing other jobs".

Another interviewee stated *"They say girls should work at home and boys should learn, they don't have the attitude of letting girls go outside"*. Another interviewee shared that she learned from her life skills coach how to deal with *"family used to give her too much chores and those have been difficult to pass thorough"*.

To test hypothesis 1, correlations were computed (Table 3).

The correlations of all measures were positive and statistically significant. Their practical significance was in most cases medium to high. Three coefficients exceeded $r=0.30$, indicating a medium effect size. The total number of classes that participants took correlate with participants' self-management scores but not with participant' self-efficacy, social awareness, or their internal locus of control: the more classes participants took, the higher their self-management scores were. The lack of correlation of total number of classes and participants' internal locus of control, self-efficacy, and social awareness led to the rejection of our first hypothesis. In addition, total number of classes was not included as a predictor in the models tested.

Participants with greater self-management also reported greater self-efficacy. This was also reflected in the interviews. One participant noted about her self-management *"I wasn't used to talk peacefully to my friends when we are in conflict, but she helped me to solve issues by discussing them and I talked with them and solved the problem"*. Another participant noted: *"My strong side is if I score low, I will start looking to myself and I will try to find out what was wrong and I will be committed to read that subject and decide to change that score, I think that's my strong side"*.

Participants with greater social awareness scores also reported greater self-efficacy. This finding was in line with the interview responses. One interviewee shared that the Life Skill class on social awareness allowed her *"to build self-confidence and choose good"*

Table 3. Number, Means of Scales, Standard Deviations, and Zero-Order Correlations of Scales Measuring Participants' Self-efficacy, Social Awareness, Self-Management, Internal Locus of Control, Total Number of PinK Girl Classes Attended

Scale	N	M	SD	1	2	3	4	5
Self-efficacy	224	4.12	0.61					
Social Awareness	221	4.02	5.05	0.48**	1.00			
Self-Management	2.15	4.04	0.48	0.39**	0.54**	1.00		
Internal Locus of Control	221	4.87	2.06	0.10*	0.15*	0.28**	1.00	
Number of PinKGirl Classes Attended	221	19.05	14.99	0.08	0.12	0.18**	0.11	1.00

Note. * significant at $p < 0.05$ (two tailed)
** significant at $p < 0.01$ (two-tailed).

friends and interpersonal skills of communication”. Self-awareness was part of the social awareness curriculum. When asked what she learned about herself from the self-awareness class, one interviewee stated “I didn’t like my stature before because I am tall and now I got the advice from her [the life skills coach] that we can’t change ourselves and the like and accept ourselves”. Another interviewee stated that “I know more about myself and I am beautiful, I am Ethiopian and I respect myself and love myself, I used to hate myself before I came to PinK Girl... now, I respect the way I think and the value I give to myself”.

Participants’ social awareness did not seem to be limited to their personal relationships, but seemed to also include their awareness of their community. For example, one respondent stated “Our community is not well-educated and they try to solve problems using force and after PinK Girl I use peaceful conflict resolution to deal with them whether they are teens, adults or older people”.

Interviewees shared about their growing internal locus of control through the Life Skills classes. For example, “I used to feel ashamed of saying no and I used to do things that I wasn’t supposed to do and after learning about empathy in life skills I realized that having that emotion for others doesn’t mean that I have to do things that I don’t like. Now I know that I have to do things that I like and have the confidence to see it through and not to be passive or aggressive but have a balance”.

In line with our hypothesis 2, the leaders’ high internal sense of control and PinK Girl participants’ high internal sense of control correlated ($r=0.17$; $p=0.02$). This result is in line with existing (Western) studies of teachers and students where the teacher’s expectations of a student’s success can be used to predict a student’s expectation of success. Correlations of participants’ internal locus of control, participants’ self-management strategies, and leaders’ locus of control are shown in Table 4.

Table 4. Means of Scales, Standard Deviations, and Zero-Order Correlations of Scales Measuring Participants’ Internal Locus of Control, Leaders’ Internal locus of Control, and Participants’ Self-Management Scores (N=175)

	M	SD	1	2	3
Participants’ Internal Locus of Control	4.80	2.03	1.00	0.17*	0.28**
Leaders’ Internal Locus of Control	5.10	1.89		1.00	0.07
Participants’ Self-management	4.04	0.49			1.00

Note. * Correlation is significant at the .05 level.

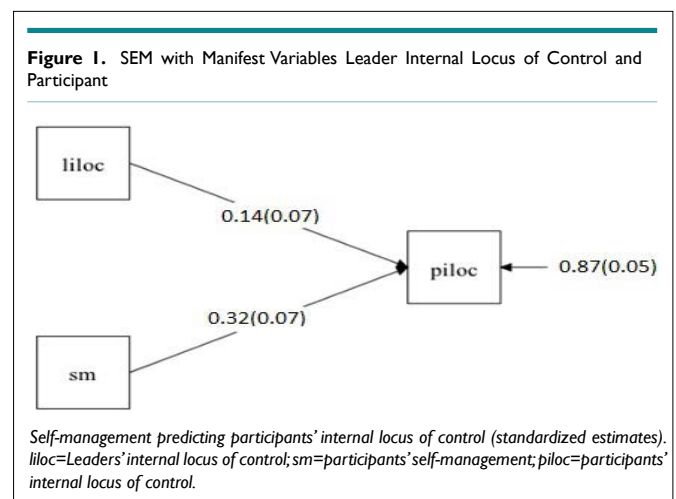
** Correlation is significant at the .01 level.

The Chi-Square (χ) Test of Model Fit for the Baseline Model test for the independence of participants’ internal locus of control, their self-management scores, and the leaders’ internal locus of control was significant ($\chi^2(1df)=5.23$, $p<0.5$). This shows that the correlation between participants’ internal locus of control, self-management scores, and leaders’ internal locus of control are significantly different from zero and that the estimation of a regression model is meaningful. The regression equation to predict participants’ internal sense of control after standardization was:

$$\hat{Y} = -0.57 + 0.32 * \text{participants' self-management} + 0.14 * \text{leaders' internal locus of control}$$

z scores revealed that both the participants’ self-management and the leader’s locus of control were significant predictors of the participants’ internal locus of control (both $p_s < 0.001$). Based on the numerical size of the predictor, self-management seemed to have a greater influence on the participants’ internal locus of control scores than the leader’s locus of control was. This finding is in line with previous SEL research that indicates that the mere articulation of beliefs does not contribute to the student’s longitudinal success, but development of actual life skills does. Thus, working with PinK Girl leaders in order to build the leaders’ inner sense of control seems beneficial, not only for their personal development but beneficial to those they mentor. Furthermore, developing the participants’ self-management through the PinK Girl classes seem to have a significant positive influence on the participants’ internal locus of control. R^2 was 0.13. In other words, 12.8% of the variability in participants’ internal locus of control scores could be explained by the participants’ self-management and the leader’s internal locus of control.

Figure 1 depicts the significant standardized scores predicting participants’ locus of control by their self-management scores as well as their leaders’ internal locus of control.



The above findings with regards to participants’ internal locus of control are reflected in what interviewees shared about their growing internal locus of control through the Life Skills classes. For example, one interviewee described her growth as follows, “I used to feel ashamed of saying no and I used to do things that I wasn’t supposed to do and after learning about empathy in life skills I realized that having that emotion for others doesn’t mean that I have to do things that I don’t like. Now I know that I have to do things that I like and have the confidence to see it through and not to be passive or aggressive but have a balance”.

What is the influence of participants’ social-emotional learning on their subjective well-being? To test hypothesis 3, two models using Structural Equation Modeling with latent variables were developed to test if the latent construct of subjective well-being (as measured by participants life satisfaction and satisfaction with relationships) could be predicted by participants’ social-emotional learning (i.e., their self-management, self-efficacy, and social awareness). Based on the strong correlations found for par-

Table 5. Fit Indices of Two Structural Equation Models with Two vs. Three Predictors of Social-Emotional Learning

Model Predictors of Social Emotional Learning	χ^2/df	CFI/TLI	RMSEA (90% CI)	P (RSMEA<=0.05)	CFI/TLI	SRMR	AIC
Model 1	0.83/1	1	0 0-0.17	0.48	1	0.01	1944.81
Model 2	2.59/4	1	0 0-0.09	0.81	1	0.02	2063.72

Note. Model 1 included self-efficacy and social awareness as predictors of social-emotional learning. Model 2 included self-efficacy, social awareness, and self-management as predictors of social-emotional learning.

participants’ self-management and social awareness scores, Model 1 tested the influence of 2 predictors (self-management and social awareness scores) on subjective well-being. Model 2 tested the influence of 3 predictors (self-management, self-efficacy, and social awareness scores) on subjective well-being. Mplus estimated the Goodness of Fit statistics as shown in Table 5.

According to the Chi Square (χ), RMSEA, and SRMR values, both models would be acceptable. The akaike information criterion (AIC) value for Model 2 is somewhat higher than the AIC value for Model 1, so that according to this criterion, Model 2 was preferred.

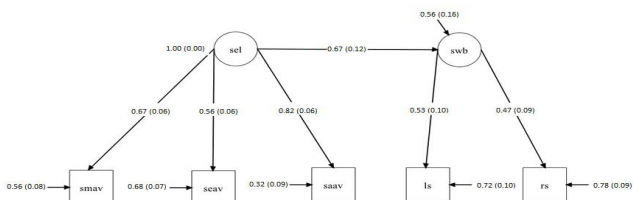
Figure 2 displays the standardized estimates and associated standard errors for the manifest variables self-management, self-efficacy, and social awareness as predictors of the latent construct of social emotional learning, and life satisfaction and relationship satisfaction as predictors of the latent construct subjective well-being.

sisted participants in developing high self-efficacy, a high internal locus of control, self-management, social awareness, and fostered participants’ satisfaction with life and relationships. It seems possible that participants may enter PinK Girl with self-understanding for success and locus of control, but the more they attend, the more they develop the actual skills for it (self-management and higher social awareness) in ways that less participating girls don’t even know they are missing. This study also highlights the importance of self-efficacy, self-management and social awareness as predictors for participants’ well-being. Our research supports that the development of social-emotional competencies should be a primary priority in preventative strategy to foster well-being in marginalized populations.

Previous research highlighted the detrimental impact of marginalization and discrimination and its proposed impact on populations entering the workforce.³ However, a perspective of stigma may fail those who need support but may not have access to developmental opportunities.⁴⁶

Non-profit (and for profit) organizations should implement life skill and academic review classes to strengthen students and emerging adults’ academic and relationship success as well as their satisfaction with school and life in general. To do so effectively, it is necessary that the organizational leadership provide effective advice and training of those who lead others (e.g., peer mentors or leaders of students and emerging adults). To empower organizational leaders, an approach to mentoring focused leadership described as “the coaching manager”⁴⁷ seems fitting: The coaching manager teaches the use of problem-focused advice, non-directive questioning, intrinsically motivating feedback, and constructive dialogue with those being led. During the process of skill acquisition, the questionnaire being used in the current study may serve as a helpful evaluation device for monitoring the effectiveness of training programs of social-emotional skills such as self-management, self-efficacy, and social awareness, and providing feedback for growth. Secondly, organizations should be mindful about their mentor-mentee structure. While this was not measured in the quantitative data, a dominant theme in qualitative data related to the critical importance of the nature of the relationships engendered by the academic teachers (for the tutoring programs) and coaches (for the Life Skills classes) with the PinK Girl students. Participant’s repeatedly emphasized the manner in which the skill, care, and personal connection of individuals were a, if not the, central component of the program’s effectiveness. They should also make it a priority to hire individuals with strong relational abilities that engender a positive, supportive mentoring dynamic. Moreover, organizations should structure their programs to create environments where such interpersonal investment is possible,

Figure 2. Structural Equation Model 2 (Standardized Solution) with Three Manifest Variables



(smav=self-management; seav=self-efficacy; saav=social awareness) predicting social-emotional learning (=sel) and two manifest variables (ls=life satisfaction; rs=relationship satisfaction) predicting subjective well-being (=swb). All path coefficients of the model were significant ($p < 0.01$).

The standardized model results show χ scores for all standardized factor loadings, all predictors, and all intercept parameters as significant. This means that the construct SEL learning can be predicted by the manifest variables self-management, self-efficacy, and social awareness, while the construct Subjective Well-being can be predicted by the manifest variables life satisfaction and relationship satisfaction. This finding is in line with hypothesis 3. The estimated R^2 values reads 0.442. In other words, 44.2% of the variability in participants’ latent subjective well-being score can be explained by this latent regression model.

DISCUSSION

Through this study, we assessed how the PinK Girl program as-

such as controlling for small class or training sizes, using a cohort group model with the focus of building trust between leaders and between peers.

This might be especially needed in societies with marginalization where programs (like the one of the current study) might compensate for the negative effects of cultural constraints and marginalization.³ For program success, combined skill training and organizational development may be necessary to yield the best psychological—and possibly behavioral responses in participants. Lastly, modern economies (including new startups, major corporations, and alliances among global partners) increasingly depend on individuals with skills and experiences that induce creative developments. Schooling across the globe -including in the developing world- should include curriculum and experiences to build relevant marketplace, entrepreneurship, and health care skills.⁴⁸ Program development should foster participants' internal sense of control, self-management, innovation such as entrepreneurial behaviors⁴⁹ and the pursuit of new business opportunities⁵⁰ despite of cultural and/or organizational constraints.^{3,46}

Researchers relied on the participants' feedback and were not able to directly observe how well the participants responded to the life skill and academic review classes. Future studies should also collect feedback from participants' peers to evaluate the participants' acquisition of knowledge and their transfer of learning. Future studies should gather information regarding the participants' actual test scores for high school and college and data from a control group of students. A longitudinal study of social-emotional learning and well-being as well as the influence of gender roles on holistic development is desirable.

CONCLUSION

The present studies contributed to the current bodies of social-emotional learning and well-being research. The study found strong social-emotional learning and high professional and personal well-being in PinK Girl program participants. Interviews with PinK Girl participants and their leaders were also considered and were in line with the study's survey results. Overall, this research contributes to a better understanding of how a program needs to be designed in order to strengthen young women's academic success, expectations of success, inner locus of control, and successful attainment of goals through life skill and academic review classes. Future studies should include a control group, male participants, and a longitudinal design. Our recommendations for culturally sensitive mentoring and training are in line with existing recommendation on how the field of organizational psychology can serve marginalized populations by (1) promoting coaching, mentorship, career development, and job initiatives, and (2) identifying factors that reduce the real or perceived risk in hiring workers from traditionally marginalized groups.

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DISCLOSURE

The authors hereby declare the Institutional Review Board (IRB) at Vanguard University approved the study.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest

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APPENDIXES

APPENDIX A

QUESTIONNAIRE

Ethiopia SEL Study Informed Consent Form

Dear Participant,

Thank you for your interest in this survey. Please answer every question to the best of your ability. There are no right or wrong answers. Your data will be treated confidentially, which means that your answers will be labeled with a number instead of your name so that even those reading your responses will not know who you are. Remember that at all times of this study, your participation is completely voluntary. You have the right to stop answering questions at any time. If you have any questions about the research study, please contact jennifer.jagerson@vanguard.edu or InstitutionalReviewBoard@vanguard.edu. This research has been carefully designed to protect you and was reviewed according to Vanguard University Institutional Review Board procedures for research involving human subjects.

PinkGirl Leader: Please sign here that you consent to participate: _____

Current or former PinkGirl (“the participant”): Please sign here that you consent to participate: _____

If participant is a minor: Legal representative’s consent for the minor to participate: _____

Please go to the next page to start the survey. Thank you very much for your participation!

Sincerely,

Jennifer Jagerson, Ph.D.

jennifer.jagerson@vanguard.edu

Sibylle Georgianna, Ph.D.

sibylle.georgianna@vanguard.edu

Ethiopia Social and Emotional

Learning Study

Quantitative Survey Form

A. Personal Information

Your Study Number: _____

What is your age? _____

What is your gender? _____

What is your marital status? _____

How many children (under 18 years old) are living in your household? _____

How many children that are currently living in your household are 10 years old or younger? _____

Do you live with (check all that apply):

Mother?

Father?

Both father and mother?

Uncle/aunt?

Grandmother

Grandfather(s)

Sibling
 Other: _____

How much does the care of your sibling(s) depend on you?

Not at all	1	2	3	4	5	6	7	Very much
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

How much does the care of your sibling(s) depend on another person?

Not at all	1	2	3	4	5	6	7	Very much
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Check the main person(s) who does/do the majority of care of your sibling(s):

Mother
 Father
 Both father and mother
 Uncle
 Aunt
 Grandmother
 Grandfather(s)
 Other: _____

How much does the care of your other family members (e.g., elderly, disabled) depend on you?

Not at all	1	2	3	4	5	6	7	Very much
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

How much does the care of your other family members depend on another person?

Not at all	1	2	3	4	5	6	7	Very much
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Which of the following job describes your current job the best? You may check off more than one box.

(If you are in school and not working, please skip this question and go to the next question):

<input type="checkbox"/> Accounting, banking or finance	<input type="checkbox"/> Environment and agriculture	<input type="checkbox"/> Psychology
	<input type="checkbox"/> Healthcare	<input type="checkbox"/> Recruitment and Human Resources
<input type="checkbox"/> Business, consulting or management	<input type="checkbox"/> Hospitality	<input type="checkbox"/> Research/Science
	<input type="checkbox"/> Information Technology	
<input type="checkbox"/> NGO work	<input type="checkbox"/> Law	<input type="checkbox"/> Retail
<input type="checkbox"/> Creative arts or design		
<input type="checkbox"/> Customer Service	<input type="checkbox"/> Law enforcement and security	<input type="checkbox"/> Sales
	<input type="checkbox"/> Leisure, sports, and tourism	<input type="checkbox"/> Social Work
<input type="checkbox"/> Energy and utilities	<input type="checkbox"/> Marketing, advertising, and public relations	<input type="checkbox"/> Teaching and Education

Engineering and manufacturing
 Media and publishing
 Other: _____

Which of the following describe best your career goals?

<input type="checkbox"/> Accounting, banking or finance	<input type="checkbox"/> Engineering and manufacturing
<input type="checkbox"/> Business, consulting or management	<input type="checkbox"/> Environment and agriculture
<input type="checkbox"/> Non-profit or volunteer work	<input type="checkbox"/> Healthcare
<input type="checkbox"/> Creative arts or design	<input type="checkbox"/> Hospitality
<input type="checkbox"/> Customer Service	<input type="checkbox"/> Information Technology
<input type="checkbox"/> Energy and utilities	<input type="checkbox"/> Law
<input type="checkbox"/> Law enforcement and security	<input type="checkbox"/> Retail
<input type="checkbox"/> Leisure, sports, and tourism	<input type="checkbox"/> Sales
<input type="checkbox"/> Marketing, advertising, and public relations	<input type="checkbox"/> Social care
<input type="checkbox"/> Media and publishing	<input type="checkbox"/> Teaching and Education
<input type="checkbox"/> Recruitment and Human Resources	<input type="checkbox"/> Transport and logistics
<input type="checkbox"/> Research/Science	<input type="checkbox"/> Other: _____

What is your native language? _____

What is your ethnicity? _____

What is the highest level of education or training that you have successfully completed?

Passed the 8th grade exam
 Passed the 10th grade exam
 Passed the 12th grade exam
 Two years technical diploma
 Completed diploma for a vocational school
 Bachelor's Degree level
 Master's Degree level
 Doctoral Degree
 None
 Other (please specify): _____

What year are you in school? _____

What year did you start Pink Girl? _____

If you have graduated, have you gone to college? _____

If you are in college, which year are you in college? _____

If you have graduated from college, how long has it been since you graduated? _____

During Your Time in Pink Girl:

How many years in life skill classes did you complete? _____

From the twelve life skills classes per year, about how many in total have you taken?

(Examples: 5, 29, 36) _____

How many years of Saturday tutoring did you complete? _____

How many home visits were done by the leadership team? _____

Which part of PinkGirl has been the most helpful to you? Please rank the following options in order of importance by numbering from 1-6 in the boxes provided (1 is most important).

- | | |
|--|--|
| <input type="checkbox"/> Saturday classes | <input type="checkbox"/> Mentor (Life Skills Coach) relationship |
| <input type="checkbox"/> English summer camp | <input type="checkbox"/> Cohort group |
| <input type="checkbox"/> Life Skills classes | <input type="checkbox"/> Special exam prep classes |
| <input type="checkbox"/> Other _____ | |

From the following list, which of the core living values are the most important to implement your life skills? Please put an "X" in the top five.

- | | | |
|--------------------------------------|---------------------------------------|---|
| <input type="checkbox"/> honesty | <input type="checkbox"/> gratitude | <input type="checkbox"/> responsibility |
| <input type="checkbox"/> love | <input type="checkbox"/> unity | <input type="checkbox"/> encouragement |
| <input type="checkbox"/> peace | <input type="checkbox"/> freedom | <input type="checkbox"/> integrity |
| <input type="checkbox"/> cooperation | <input type="checkbox"/> perseverance | <input type="checkbox"/> respect |
| <input type="checkbox"/> humility | <input type="checkbox"/> tolerance | <input type="checkbox"/> joy |

During Your Time in Pink Girl:

Instruction: Please identify and then describe a relationship outside of your family that is most important to you. If there are several relationships that are on your mind, choose the most important one.

Your most important relationship outside of your family (write here): _____

1. How satisfied are you with the relationship?

- | | | | | | | | | |
|------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------|
| Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very much |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

Instruction: Please identify and then describe a school or career related goal that is most important to you right now. If there are several school or career related goals that are on your mind, choose the most important one.

Your most important school/career goal (write here): _____

1. How likely do you think it is that you will accomplish your goal?

- | | | | | | | | | |
|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|
| Not at all likely | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very likely |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

2. How important is it for you to accomplish your goal?

- | | | | | | | | | |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------|
| Not at all important | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very important |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

3. How much does the fulfilment of your goal depend on circumstances outside of your control?

- | | | | | | | | | |
|------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------|
| Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very much |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

List three people who support you most in accomplishing your goal?

Examples: Mother, Father, mentor, teacher, Life Skills coach, grandfather, friend, etc.

How satisfied are you with your life in general?

Not at all	1	2	3	4	5	6	7	Very much
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

B. Your Skills of Knowing Yourself,

Living with Yourself, and Living with Others

Living with Yourself, and Living with Others

Social-Emotional: Self Management/Decision-making Skills

First, we'd like to learn more about your behavior, experiences, and attitudes.

Please answer how often you did the following during the past 30 days. During the past 30 days...

1. I came to class prepared.

Almost never	Once in a while	Sometimes	Often	Almost all of the time
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. I remembered and followed directions.

Almost never	Once in a while	Sometimes	Often	Almost all of the time
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. I got my work done right away instead of waiting until the last minute.

Almost never	Once in a while	Sometimes	Often	Almost all of the time
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. I paid attention, even when there were distractions.

Almost never	Once in a while	Sometimes	Often	Almost all of the time
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. I worked independently with focus.

Almost never	Once in a while	Sometimes	Often	Almost all of the time
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. I stayed calm even when others bothered or criticized me.

Almost never	Once in a while	Sometimes	Often	Almost all of the time
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. I allowed others to speak without interruption.

Almost never	Once in a while	Sometimes	Often	Almost all of the time
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. I was polite to adults and peers.

Almost never Once in a while Sometimes Often Almost all of the time

9. I kept my temper in check.

Almost never Once in a while Sometimes Often Almost all of the time

Social-Emotional: Growth Mindset/Coping with Stress/Self understanding
 In this section, please think about your learning in general.

Please indicate how true each of the following statements is for you:

Not at all True A Little True Somewhat True Mostly True Completely True

10. My intelligence is something that I can't change very much.

Not at all True A Little True Somewhat True Mostly True Completely True

11. Challenging myself won't make me any smarter.

Not at all True A Little True Somewhat True Mostly True Completely True

12. There are some things I am not capable of learning.

Not at all True A Little True Somewhat True Mostly True Completely True

13. If I am not naturally smart in a subject, I will never do well in it.

Not at all True A Little True Somewhat True Mostly True Completely True

Social-Emotional: Self-Efficacy (Global)/Self Esteem/Assertiveness
 How confident are you about the following at school?

14. I can earn an A in my classes.

Not at all Confident A Little Confident Somewhat Confident Mostly Confident Completely Confident

15. I can do well on all my tests, even when they're difficult.

Not at all Confident A Little Confident Somewhat Confident Mostly Confident Completely Confident

16. I can master the hardest topics in my classes.

Not at all Confident <input type="checkbox"/>	A Little Confident <input type="checkbox"/>	Somewhat Confident <input type="checkbox"/>	Mostly Confident <input type="checkbox"/>	Completely Confident <input type="checkbox"/>
17. I can meet all the learning goals my teachers set.				
Not at all Confident <input type="checkbox"/>	A Little Confident <input type="checkbox"/>	Somewhat Confident <input type="checkbox"/>	Mostly Confident <input type="checkbox"/>	Completely Confident <input type="checkbox"/>
Social-Emotional: Social Awareness/Relating with Others/Friendship formation and maintenance				
In this section, please help us better understand your thoughts and actions when you are with other people. Please answer how often you did the following during the past 30 days. During the past 30 days...				
18. How carefully did you listen to other people's points of view?				
Not Carefully At All <input type="checkbox"/>	Slightly Carefully <input type="checkbox"/>	Somewhat Carefully <input type="checkbox"/>	Quite Carefully <input type="checkbox"/>	Extremely Carefully <input type="checkbox"/>
19. How much did you care about other people's feelings?				
Did Not Care At All <input type="checkbox"/>	Cared A Little Bit <input type="checkbox"/>	Cared Somewhat <input type="checkbox"/>	Cared Quite A Bit <input type="checkbox"/>	Cared A Tremendous Amount <input type="checkbox"/>
20. How often did you compliment others' accomplishments?				
Almost never <input type="checkbox"/>	Once in a while <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Often <input type="checkbox"/>	Almost all of the time <input type="checkbox"/>
21. How well did you get along with students who are different from you?				
Did Not Get Along At All <input type="checkbox"/>	Got Along A Little Bit <input type="checkbox"/>	Got Along Somewhat <input type="checkbox"/>	Got Along Pretty Well <input type="checkbox"/>	Got Along Extremely Well <input type="checkbox"/>
22. How clearly were you able to describe your feelings?				
Not At All Clearly <input type="checkbox"/>	Slightly Clearly <input type="checkbox"/>	Somewhat Clearly <input type="checkbox"/>	Quite Clearly <input type="checkbox"/>	Extremely Clearly <input type="checkbox"/>
23. When others disagreed with you, how respectful were you of their views?				
Not At All Respectful <input type="checkbox"/>	Slightly Respectful <input type="checkbox"/>	Somewhat Respectful <input type="checkbox"/>	Quite Respectful <input type="checkbox"/>	Extremely Respectful <input type="checkbox"/>
24. To what extent were you able to stand up for yourself without putting others down?				
Not At All <input type="checkbox"/>	A Little Bit <input type="checkbox"/>	Somewhat <input type="checkbox"/>	Quite A Bit <input type="checkbox"/>	A Tremendous Amount <input type="checkbox"/>
25. To what extent were you able to disagree with others without starting an argument?				
Not At All <input type="checkbox"/>	A Little Bit <input type="checkbox"/>	Somewhat <input type="checkbox"/>	Quite A Bit <input type="checkbox"/>	A Tremendous Amount <input type="checkbox"/>

26. To what extent do you feel safe at school?

Not at all	1	2	3	4	5	6	7	Very much
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

27. Is there anything that makes you feel safer? (Examples: going to class with a friend, receiving tutoring) _____

Thank you very much for your participation!

APPENDIX B

Semi-structured Interview Guide

From: Diana Avans, PhD
Chair of Institutional Review Board, Address: 55 Fair Dr. Costa Mesa, CA 92626, USA
Email: davans@vanguard.edu

Date: April 7, 2019

To: Dr. Jennifer Jagerson

RE: "On supporting the marginalized: The efficacy of social and emotional learning and academic support for Ethiopian teenagers by Pink Girl"

Dear Dr. Jagerson,

The above referenced human-subjects research project has been approved by the Vanguard University Institutional Review Board. This approval is limited to the activities described in the approved Protocol Narrative. In accordance with this approval, the specific conditions for the conduct of this research are listed below, and informed consent from subjects must be obtained as indicated. All changes (e.g. a change in procedure, number of subjects, personnel, study locations, new recruitment materials, study instruments, etc.) to the approved protocol or consent form first be reviewed and approved by the IRB before they are implemented. Please email the IRB when you have completed your study.

Add a participant "assent" signature line (for those <18-years) on informed consent; record oral consent on interview.

Sincerely,
Diana Avans

Diana Avans, PhD
Chair, Institutional Review Board

APPENDIX C

Semi-structured Interview Guide

Ethiopia Qualitative Study June 2019

- How did you initially become involved with PinkGirl?
- What was your first experience like when you joined the organization?
- How has being a part of PinkGirl affected your life?
 - o What aspects of PinkGirl have been most helpful? (Examples, tutoring in general, particular tutors, the Life Skills class, having a Life Skills mentor, having a cohort of your peers, other events put on by PinkGirl, etc.)
 - Why do you think that or those aspects were helpful?
 - What has been the impact of these factors on you?
 - o Are there any aspects of PinkGirl that have been unhelpful or detrimental?
 - What was the impact of those aspects of PinkGirl?
- Most Significant Change Question: What do you believe is the most important thing that PinkGirl does to help support your life?