Original Article

J Nepal Health Res Counc 2024 Oct.-Dec.;22 (65): 684-690

Empowerment of School Adolescents for Prevention of Gender Discrimination and Sexual Harassment: Application of an Integrated Experiential Learning Package

Rita Thapa,[1] Raj Kumar Subedi,[1] Bindu Pun,[1] Sunita Kumari Chand,[1] Dip Narayan Thakur,[1] Radhika Thapaliya,[2] Sarita Karki,[1] Gorakh Regmi,[1] Vikrant Pandey[3]

[1]Bhaskar-Tejshree Memorial Foundation, Kathmandu, Nepal, [2]Ministry of Health and Population, Nepal, [3]Fightback Nepal, Lalitpur, Nepal.

ABSTRACT

Background: The prevalence of gender discrimination and sexual harassment/ violence among children is alarmingly high in Nepal. This study aimed to measure aggregate changes in knowledge, attitude, and skills among school adolescents on gender discrimination; sexual harassment, mindfulness of breathing; and self-defense skills, with application of an integrative experiential learning modules.

Methods: A quasi-experimental study was carried out among 3661 students from 8-9 grades (1880 intervention and 1781 control) in 52 community schools across the seven provinces. Pre- and post-intervention self-reported surveys were conducted among the intervention and control groups before and after intervention of 24 learning hours. We used a mixed two-way effects model to measure the changes in composite indices between pretest and posttest among both the groups.

Results: We found statistically significant increment ($P<0.0001$) in knowledge, attitude and skills on gender norms, gender discrimination, sexual harassment, self-defense, reporting sexual harassment, legal measures and mindfulness of breathing technique among the intervention group compared to that in the control group.

Conclusions: These findings, though measured immediately after the intervention, offer initial evidence that school adolescents could be empowered to prevent the risks of gender discrimination and sexual harassment.

Keywords: Empowerment; gender discrimination; school-based intervention; sexual harassment; self-defense.

INTRODUCTION

Gender based violence and sexual harassment among school going children is common both globally and in Nepal. In Nepal, 66% of school-going children faced physical violence and 22% psychological violence from teachers, while 28% experienced physical, 15% psychological, and 12% sexual violence from peers.[1] Of 472 sexual violence cases registered in a high court in five years, 74% involved child sexual abuse with 31% victims below ten years of age, and 89% knowing their perpetrators. [2] Gender inequality to resources and opportunities is associated with a culture of violence against women.[3] Early age victims suffer long-term depressive symptoms. [4,5] Among school adolescents aged 13-17 years 13.9% were seriously contemplating suicide.[6] The existing school interventions against these challenges often lack the practical approaches. We aimed to measure changes in knowledge, attitude, and skills (KAS) on prevention of gender discrimination, and sexual harassment among school adolescents using experiential learning modules.

METHODS

The study was carried out using quantitative methods with a quasi-experimental design among 3661 adolescent students of grades eight and nine from 52 community

Correspondence: Dr Rita Thapa, Bhaskar-Tejshree Memorial Foundation, Email: bheribas@gmail.com, Phone: +9779801038881

schools, selected purposively. Of the total 3661 students, 1880 students from 26 community schools were in the intervention group, while 1781 students from other 26 community schools were in the control groups. It was ensured that schools were selected from the all the seven provinces. The criteria for selection of schools included- schools with students of grades eight and nine; suggested by district education office/ local government; absence of ongoing training on sexual harassment prevention by other agencies; and commitment of school authorities to assign two teachers per school for Training of Trainers (ToT). All the students of grade eight and nine of the selected school were recruited in the study. The intervention and control schools were at far-off distance (>10 km between them). All the students of grades eight and nine from the selected schools were included in the study. The study started in June 2021 after Nepal lifted the COVID-19 bans.

The study was conducted after receiving approval of Ethical Review Board of Nepal Health Research Council on May 03, 2021 (ERB Protocol Registration No. 221/2021 P). Prior written consents from schools, parents, and assents from the students were obtained, and those students not having both parental consent and their own assent were excuded. The students filled in and signed the assent form before participating in the study. The participation of students during pre-test, intervention and the post-test were fully voluntary. All the RST forms with data were securely kept in a password-protected electronic data storage system, accessible only to the research team.

An anonymous Rapid Screening Tool (RST) consisting of

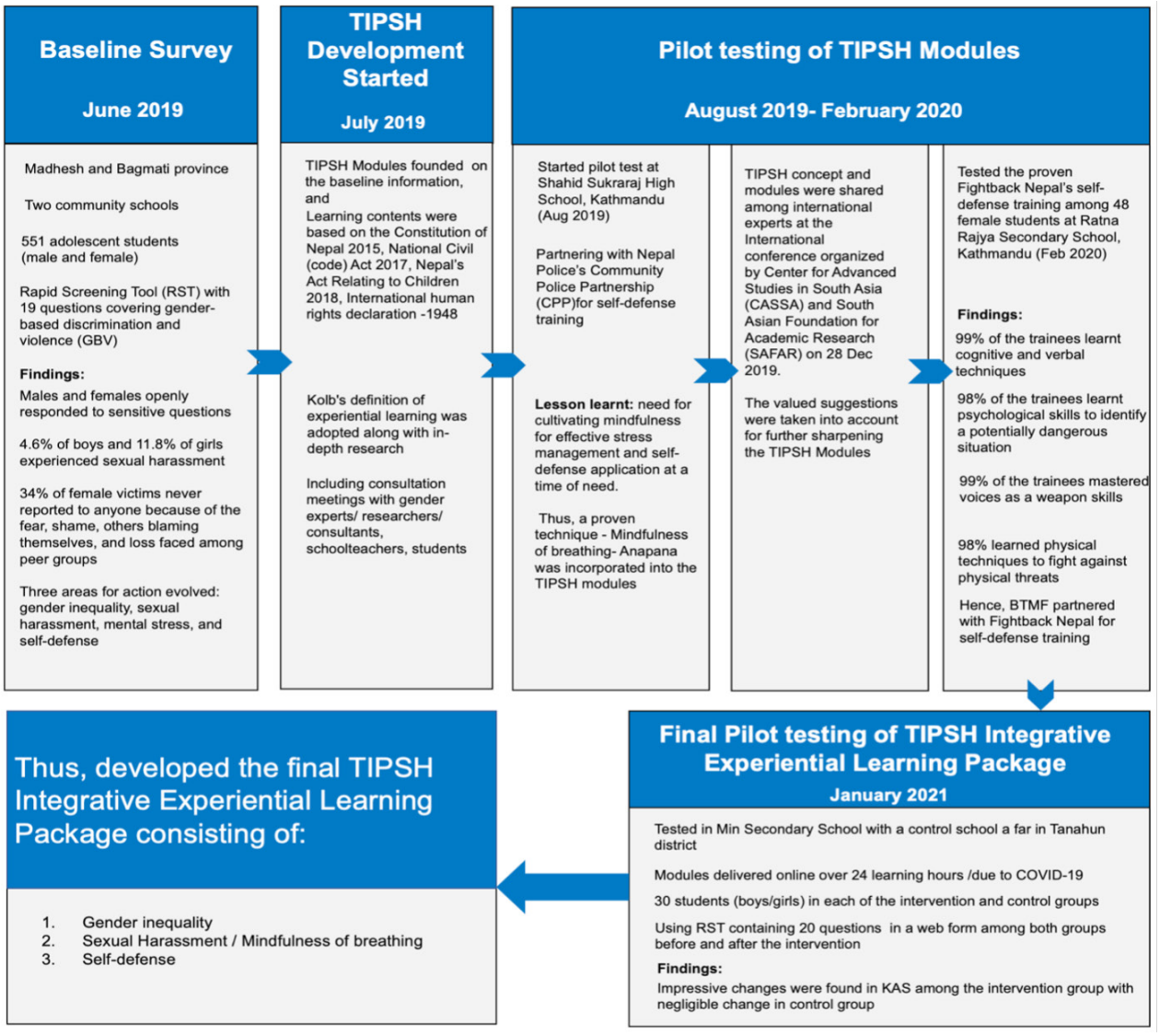

Figure 1. Development of TIPSH Integrative Experiential Learning Intervention Package.

22 questions in Nepali was developed through intensive literature review and pilot testings were undertaken to ensure validity and reliability of the RST and accordingly revised to finalize the tools. The RST was applied to collect pre-post data from both the intervention and control group. The students filled the RST in absence of school-teachers and surveyors in the classroom setting. Although, case by case was not matched, we ascertained that the pre- and post-test data were collected from the same groups of students by matching their registered names before and after the intervention.

For intervention, an integrative experiential learning package was developed under the aegis of the Tejshree Initiative for Empowerment of School Adolescents for prevention of sexual harassment (TIPSH) that started with a baseline survey in 2019, and completed with a series of pilot tests in three schools (school list uploaded as a separate file) including presentation at an international forum. A detailed description is presented below in figure 1.

The TIPSH Integrative Experiential Learning Intervention Package has three modules of interrelated learning areas- gender inequality, sexual harassment/mindfulness of breathing-a neuroscience proven technique for stress reduction [7,8], and self-defense techniques.[9-11] Each module was designed weaving into the Kolb's five step experiential learning cycle[12,13], and each delivered starting with experiments such as card play[14], and sequentially sharing students' experiences, processing their experiences through evidence based facts, generalizing, and applying thus gained knowledge to prevent gender discrimination and sexual harassment.

The TIPSH integrative learning package was applied among 1880 students from intervention schools for four consecutive days, totaling 24 hours, averaging six hours per day. For sustainability, we included two teachers from each school for ToT, involving them to take class after ToT. The theoretical self-defense concepts were taught in classrooms, followed by practical learning sessions in open space. The control schools didn't receive any intervention.

We entered the data in a pre-validated data-entry spreadsheet software, Microsoft Excel, which was later imported into IBM-SPSS v25 as well as SAS 9.4 for analysis. The composite dependent variables were computed from the existing variables as follows.

Table 1. Composite dependent variables.

SN	Name of scale	Number of questions	Example
1	Knowledge on gender norms	4 (Max Score =6)	Parental role in determining baby's sex in womb Higher life expectancy Chhaupadi: a patriarchal belief of segregating during menstruation. Gender norm: a cause of sexual harassment
2	Knowledge on Sexual harassment	3 (Max Score =3)	Defining sexual harassment, identifying bad touch, sexual harassment/rape as a crime violating human rights
3	Knowledge and skills on self-defense	5 (Max Score =5)	Heard about self-defense technique (SDT), able to identify the most sensitive organ of perpetrator, able to escape from group attack, able to name SDT, able to use daily usable materials as a weapon
4	Awareness on sexual harassment reporting measures and legal punishment	6 (Max Score =11)	Know that SH is preventable, able to state self-measures to protect oneself, emergency helpline to report SH, the legal punishment of child rape below 10 years, able to report SH, know reporting measures
5	Positive attitude towards gender discrimination and sexual harassment	6 (Max Score =6)	Different six negative statements • The social role of daughter and wife should be according to set by father or husband. • If no male child born, a husband can marry another woman for son. • Women are biologically weaker than men. • Living a lifestyle against the social norms/ wearing suggestive dress can invite SH. • It's a sin not to follow Chhaupadi practice-segregation during menstruation. • Family member not reporting the SH incidents is justifiable.
6	Knowledge on stress coping skills (Anapana)	1 (Single question)	Know the ways to reduce stress which can be done anytime, anywhere, and at no cost

We have presented the categorical variables as numbers and percentages. For numeric data such as the age of the students and composite indices, we computed mean and standard deviation (SD). We also made the categorical composite scores (Table 1) to examine the proportional differences in key-indicators between the two groups before and after the intervention (Table 3). We also transformed the composite scores into categories representing satisfactory and not satisfactory in respective domains. Scores with more than 50% of maximum scores in respective domains were considered satisfactory.

To assess the impact of intervention over time, we used a two-way mixed-effects model with the interaction between time and treatment as fixed effects and random intercepts for schools to account for clustering at the school level. In this model, we accounted for the socio-demographic characteristics that were significantly different between intervention and control group at the baseline (Table 2). All the continuous outcome variables were normalized with mean 0 and SD 1 before including in the model. We present the model equation as follows:

$$Outcome_{ij} = \beta_0 + \beta_1(time_i) + \beta_2(Intervention_i) + \beta_3(time_i x Intervention_i) + \cdots + \gamma_{0j} + \varepsilon_{ij}$$

Where

$Outcome_{ij}$ is the normalized score for observation i in school j, β_0 is the intercept, β_1 is the coefficient of time, β_2 is the coefficient of intervention, β_3 is the coefficient of interaction term of time and intervention, γ_{0j} is the random intercept for school j and ε_{ij} is the error term.

RESULTS

We compared the demographic characteristics of both the intervention and control groups at pre- and post test across age, gender, ethnicity, and province. The majority of the students were under age 15 years in both the intervention (76.22% at pre-test, 75.82% at post-test) and control (75.58% at pre-test, 73.75% at post-test) groups. Majority were females in both the intervention groups at both pre- (57.65%) and post-test (60.13%). Brahmin/ Chhetri was the largest group in both intervention (43.19% at pre, 42.74% at post-) and control (44.97% at pre-, 46.28% at post-test). Janajati, Dalit and Madheshi ethnic groups each represented about 15-30% in both groups at both timepoints. Muslim, other Madhesi groups, and other ethnicities each represented less than 5%.

Table 2 shows ethnicity and province significantly differed (P<0.05) between intervention and contro group, hence we used these variables as covariates in the final model as shown in table 4.

Table 2. Characteristics of the participants at pretest and posttest.

Characteristics	Pre-test			Post-test		
	Intervention group (n=1880)	Control group (n=1781)	p-value	Intervention group (n=1832)	Control group (1787)	p-value
Age groups						
< 15 years	1433 (76.22)	1346 (75.58)	0.65	1389 (75.82)	1318 (73.75)	0.15
≥ 15 years	447 (23.78)	435 (24.42)		443 (24.18)	469 (26.25)	
Sex						
Female	1070 (57.65)	996 (57.14)	0.76	1089 (60.13)	972 (55.10)	0.0023
Male	786 (42.35)	747 (42.86)		722 (39.87)	792 (44.90)	
Ethnicity						
Brahmin/ Chhetri	812 (43.19)	801 (44.97)		783 (42.74)	827 (46.28)	
Dalit	278 (14.79)	321 (18.02)		291 (15.88)	307 (17.18)	
Janajati	627 (33.35)	521 (29.25)	0.0008	601 (32.81)	539 (30.16)	0.0007
Other Madheshi ethnic groups	49 (2.61)	62 (3.48)		43 (2.35)	52 (2.91)	
Muslim	25 (1.33)	11 (0.62)		27 (1.47)	11 (0.62)	
Others	89 (4.73)	65 (3.65)		87 (4.75)	51 (2.85)	
Province						
Koshi	186 (9.89)	150 (8.42)		186 (10.15)	150 (8.39)	
Madhesh	331 (17.61)	284 (15.95)		331 (18.07)	284 (15.89)	
Bagmati	236 (12.55)	212 (11.90)	<0.0001	235 (12.83)	212 (11.86)	<0.0001
Gandaki	209 (11.12)	287 (16.11)		140 (7.64)	285 (15.95)	
Lumbini	270 (14.36)	306 (17.18)		271 (14.79)	306 (17.12)	
Karnali	367 (19.52)	196 (11.01)		334 (18.23)	162 (9.07)	
Sudurpaschim	281 (14.95)	346 (19.43)		335 (18.29)	388 (21.71)	

All the key domains indicate higher differences in difference of proportions (%) changes in the intervention group at endline compared to baseline. Knowledge related to gender norms indicated a 57% changes, knowledge of sexual harassment showed a 44.1% changes, knowledge and skills on self-defense showed 80.8% change, awareness of sexual harassment reporting measures and legal punishment showed a 60.2% change, positive attitude towards gender discrimination and sexual harassment showed a 39.8% changes. Similarly, there was 87.3% change in the knowledge on stress coping skills (Anapana).

Table 3. Difference in difference (%) observed in knowledge attitude and skills across key domains.

Domains	Intervention			Control			Difference in Difference of proportions (%)
	Pretest	Post test	% Change	Pretest	Post test	% Change	
Knowledge on gender norms	167 (8.9%)	1281 (69.9%)	61.0%	178 (10.0%)	251 (14.0%)	4.0%	57.0%
Knowledge on Sexual harassment	409 (21.8%)	1350 (73.7%)	51.9%	454 (25.5%)	595 (33.3%)	7.8%	44.1%
Knowledge and skills on self-defense	112 (6.0%)	1668 (91.0%)	85.0%	231 (13.0%)	308 (17.2%)	4.2%	80.8%
Awareness on sexual harassment reporting measures and legal punishment	434 (23.1%)	1619 (88.4%)	65.3%	551 (30.9%)	644 (36.0%)	5.1%	60.2%
Positive attitude towards gender discrimination and sexual harassment	782 (41.6%)	1507 (82.3%)	40.7%	868 (48.7%)	886 (49.6%)	0.9%	39.8%
Knowledge on stress coping skills (Anapana)	14 (0.7%)	1614 (88.1%)	87.4%	11 (0.6%)	12 (0.7%)	0.1%	87.3%

Table 4 shows the time*group estimates of key domains to show the effect of intervention over time in the intervention group compared to control group. We found that the intervention group had a significantly greater improvement in knowledge on gender norms (1.43, CI:1.36-1.50). Similarly, the increase in 'knowledge and skills on self-defense' (1.88, CI:1.83, 1.94), 'knowledge on sexual harassment' (1.03, CI: 0.96-1.11), 'awareness on sexual harassment reporting measures and legal punishment' (1.38, CI:1.31, 1.45) and 'positive attitude on gender discrimination and sexual harassment' (0.94, CI: 0.86, 1.02) were also found to be statistically significant.

Table 4. Comparison of key outcomes in intervention and control groups over time*

Outcomes (mean±SD)	Intervention group (n=1832)		Control group (n=1781)		Time*Group Estimates (95% CI)	P-value
	Pretest	Posttest	Pretest	Posttest		
Knowledge on gender norms	1.75±1.21	4.09±1.22	1.96±1.13	2.17±1.20	1.43 (1.36, 1.50)	<0.0001
Knowledge on Sexual harassment	1.66±1.04	3.12±0.95	1.77±1.09	1.98±1.17	1.04 (0.96, 1.11)	<0.0001
Knowledge and skills on self-defense	0.70±0.96	4.20±1.13	1.15±1.15	1.31±1.23	1.88 (1.82, 1.93)	<0.0001
Awareness on sexual harassment reporting measures and legal punishment	4.66±1.47	7.53±1.732	4.87±1.54	5.08±1.54	1.38 (1.31, 1.45)	<0.0001
Positive attitude towards gender discrimination and sexual harassment	3.05±1.64	4.75±1.49	3.24±1.67	3.28±1.74	0.95 (0.87, 1.03)	<0.0001

*Note: Time*group estimates are the standardized normal differences in the average score values in intervention group compared to control group over time. To make it comparable across other literature we transformed our outcome variable to the standard normalized score with mean 0 and standard deviation of 1. The model also accounted for province and ethnicity that differed across intervention and control groups at baseline (as shown in table 2).*

DISCUSSION

Globally, sexual harassment and gender discrimination remain pervasive challenges, particularly in educational settings. Studies [1,3] have pointed out that gender based violence in educational settings remains a critical challenge which requires targeted interventions. As gender discrimination and gender-based violence are deeply entrenched into the complexities of intergenerational patriarchal societal cultural norms, family income, parents' education as well as other community amenities, they do not change easily. However, research suggests school based education helps shape the students' gender role attitudes.[15] Our positive results are in line with previous studies that have shown even short interventions could empower adolescents to question their societal norms and change themselves towards gender equity.[16] By engaging adolescent boys and girls in classroom about gender equality revealed changed attitudes by 0.18 SD that support gender equality and reduced regressive attitudes by 16%.[17] Another study has shown that awareness and self-defense training to adolescent girls improve their ability and confidence to fend-off physical and sexual assault.[18]

Combined effects of several interrelated factors may be attributed for positive changes observed in this research, and which are: empowerment of adolescents themselves to resolve the problems that they suffer frequently; enhanced support and accountability of local government, schoolteachers and principals; and importantly, effective delivery of the TIPSH integrated experiential learning modules using the 5-steps experiential learning cycle that helped directly transferring knowledge from real-life incidents and experiments. Since these positive changes were observed immediately after the interventions, they do not represent long-term effects. However, in view of recent inclusion of subjects of gender discrimination and sexual harassment in government schools' curricula in Nepal,[19] the feasibility of TIPSH experiential learning modules for sustained benefits seems possible.[20] The positive outcomes observed in our research suggest that school could be the hub in preventing the risks of gender discrimination and sexual harassment.

Unlike traditional interventions that typically focus on a narrow aspect, the TIPSH model offers a comprehensive, holistic strategy for adolescent empowerment. The unique application of Kolb's experiential learning cycle, coupled with practical skill-building techniques like self-defense and mindfulness, represents an innovative methodological approach to transforming gender attitudes and building skills to combat sexual harassment.

However, some cautions may be in order in interpreting these results. Since this study focused in assessing the changes of the intervention on empowering school adolescents based on their self-reported responses, there could be information bias and social desirability bias. We did not explore the social determinants such as family income, parents' education as well as other community amenities, which could be potential factors, among others, affecting students' empowerment. As the RST responses were anonymous at both the pretest and post-test, we couldn't measure intra-student KAS change after the intervention. We also did not measure if the sex of the teacher could influence the study outcome. Given the sensitive nature of study topic, and the fact that community schools are under local government's authority, it was not possible to seek consent from all the schools and local authorities for random selection of schools for the study.

CONCLUSIONS

The findings of this research have shown significant increment in school adolescents' self-reported aggregate knowledge, attitude and skills on prevention of gender discrimination, sexual harassment, self-defense, and mental stress. These changes occurred after a only 24 learning hours of TIPSH integrative experiential learning modules. Although these positive changes are short-term, they show a promising path for sustained benefits. In this regard, a further study may be in order to explore sustainability and scaling of the TIPSH learning modules through the recently included gender discrimination and sexual harassment in government school curriculum.

CONFLICT OF INTEREST

The authors declare that they have no competing interests.

REFERENCES

1. Unicef. Zero Tolerance: Gender based violence free schools. Published online 2014. https://2012-2017.usaid.gov/sites/default/files/documents/1861/Nepal_Zero-Tolerance-Fact-Sheet_FINAL.pdf

2. *Sexual Violence as Social Disease: A Medico-Legal Analysis of High Court Cases in Nepal.*; 2018. https://www.youtube.com/watch?v=DRHivn7ggO8

3. Yodanis CL. Gender inequality, violence against women, and fear: a cross-national test of the feminist theory of violence against women.

J Interpers Violence. 2004;19(6):655-675. doi:10.1177/0886260504263868

4. Gyawali K. Sexual Harassment and its Effects on the Mental Health of the Adolescents School Girls in Lalitpur and Rupandehi District. *Tribhuvan Univ J*. 2020;35(2):72-88. doi:10.3126/tuj.v35i2.36192

5. Houle JN, Staff J, Mortimer JT, Uggen C, Blackstone A. The Impact of Sexual Harassment on Depressive Symptoms During the Early Occupational Career. *Soc Ment Health*. 2011;1(2):89-105. doi:10.1177/2156869311416827

6. Aryal KK, Bista B, Khadka BB, et al. *Global School Based Student Health Survey,Nepal, 2015*. Nepal Health Research Council; 2017. https://nhrc.gov.np/wp-content/uploads/2017/10/Ghsh-final-with-cover-and-anex.pdf

7. Hanson R, Mendius R. *Buddha's Brain: The Practical Neuroscience of Happiness, Love & Wisdom*. New Harbinger Publications; 2009. https://books.google.com.np/books?id=aOKvmAEACAAJ

8. Thapa R, Subedi RK, Regmi G, Thapaliya R, Vaidya A, Karki BB. Self-Reported Changes in Risk Behaviours of Cardiovascular Diseases among School Adolescents in Nepal: Application of an Integrated Experiential Learning Approach. *Glob Heart*. 2020;15(1):40. doi:10.5334/gh.818

9. Coffey International. *Endline Report: Fightback Girls*. Department for International Development, SPRING Monitoring and Evaluation; 2019. https://fightbacknepal.com/uploads/document/1598874618Independent%20Impact%20Assessment%20of%20Fightback%20Program%20by%20Coffey%20International.pdf

10. SPRING, Fuseproject. *Scaling Social Businesses through Design Thinking*. Accessed January 13, 2023. https://www.springaccelerator.org/wp-content/uploads/2019/04/Spring-Book_031219-webFINAL.pdf

11. Progress Inc. *Safe to Learn Project: Final Evaluation Report*.; 2021. https://fightbacknepal.com/uploads/document/1628008034S2L_Final%20Evaluation%20Report_25032021.pdf

12. Mcleod S. Kolb's Learning Styles and Experiential Learning Cycle. 2010. https://www.simplypsychology.org/learning-kolb.html

13. Smith MH, Enfield RP, A. Michael M, Lynn SM. Experiential Learning Workshop: Level I Understanding the Experiential Learning Cycle. Published online 2005. https://experientiallearning.ucdavis.edu/module1/el1_05-presentation.ppt

14. Lundgren R, Beckman M, Chaurasiya S, Subhedi B, Kerner B. Whose turn to do the dishes? Transforming gender attitudes and behaviours among very young adolescents in Nepal. *Gend Dev*. 2013;21:127-145. doi:10.2307/23408772

15. Du H, Xiao Y, Zhao L. Education and gender role attitudes. *J Popul Econ*. 2021;34(2):475-513.

16. Save the Children,. *Transforming Gender Norms among Very Young Adolescents: An Innovative Intervention and Evaluation in Nepal*.; 2013. https://irh.org/wp-content/uploads/2013/04/CHOICES_8.5x11_web_0.pdf

17. Dhar D, Jain T, Jayachandran S. Reshaping Adolescents' Gender Attitudes: Evidence from a School-Based Experiment in India. *Am Econ Rev*. 2022;112(3):899-927. doi:10.1257/aer.20201112

18. Lalji C, Pakrashi D, Saha S, Sahoo S, Smyth R. She can fight her own battles: Experimental evidence on the effects of increasing awareness about rights and self-defense training on female empowerment in India. Published online 2022. Accessed January 15, 2024. https://www.isid.ac.in/~epu/acegd2022/papers/Soubhagya_Sahoo.pdf

19. Curriculum Development Center, Ministry of Education Science and Technology, Nepal. *Curriculum of Grade 6-10 (New)*.; 2021.

20. Han SS, Weiss B. Sustainability of Teacher Implementation of School-Based Mental Health Programs. *J Abnorm Child Psychol*. 2005;33(6):665-679. doi:10.1007/s10802-005-7646-2