

The effect of a life skills education program on mental health and social competencies among young prisoners in Cambodia: an intervention study

Puthy Pat (✉ pat.puthy@umu.se)

Center for Child and Adolescent Mental Health (Caritas-CCAMH)

Linda Richter-Sundberg

Umeå University

Bhoomikumar Jegannathan

Center for Child and Adolescent Mental Health (Caritas-CCAMH)

Miguel San Sebastian

Umeå University

Research Article

Keywords: mental health, life skills, intervention, young prisoners, Cambodia

Posted Date: December 2nd, 2021

DOI: <https://doi.org/10.21203/rs.3.rs-1130598/v1>

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Abstract

Background: Young prisoners are more susceptible to mental health problems as compared to adult prisoners and the general population. The lack of life skills has been reported as one of the main reasons for this vulnerability.

Method: This study aimed to assess the effectiveness of the life skills education program on mental health and life skills among young prisoners in Cambodia. A pre-post intervention study was conducted with 412 young prisoners aged 15–24 years who were randomised into intervention and control groups. The Youth Self-Report and Life Skills Development – Adolescent Form scales were applied to assess impact of the intervention program.

Result: Both intervention and control groups reported decreased mental health problems (DiD=3.78, $p=0.34$) and improved life skills competencies (DiD=0.39, $p=0.80$) after the intervention; however, the differences were not statistically significant.

Conclusion: Further studies should be conducted to evaluate long-term effects of the life skills education program in the prison setting.

Background

Prisoners are considered one of the most vulnerable populations to mental health problems (1). Studies have reported that the prevalence of these problems is five to ten times higher among prisoners as compared to the general population in different international studies (2-4). Forty to 90% of prisoners suffer from at least one mental health problem, while suicide expressions can be ten times higher among this group compared to the general population (2, 5-9). Young prisoners in particular may have five times more mental health problems than adult prisoners, the most common being anxiety, depression, and conduct problems (10, 11).

The increased risk of mental health problems in prisons is usually associated with pre-incarceration factors, but factors that arise while in prison may also play a role (9, 12). For instance, a lack of life skills has been noted as one of the main reasons for imprisonment; once inside, chances to develop these skills are limited, causing the individual to become even more vulnerable (12). Life skills refer to one's abilities to adapt emotionally and behaviourally to different life situations so that they are able to successfully cope with daily challenges (12, 13). When young people lack life skills competencies, they are more likely to become involved in risk-taking behaviours and/or criminal activities such as sexual abuse (14), property damage, drug use, and gang activities (14-16); as a consequence, they become imprisoned. At the beginning of their imprisonment, young prisoners usually struggle to adjust to the new environment, which might exacerbate tensions, fears, and anxieties (17). They are often exposed to bullying, abuse, violence, overcrowding, a lack of privacy, limited meaningful activities, an absence of social networks, isolation, and a lack of future prospects, all of which are risk factors for developing mental health problems (12, 15).

The World Health Organization (WHO) has developed a generic life skills education (LSE) program to promote essential skills for mental and social well-being among adolescents (18). The LSE program builds on a series of skills such as basic personal management, social and anger management, interpersonal communication, and healthy decision-making (19). This program was originally designed for adolescents in a school setting and facilitated by teachers or group leaders over a period of time (18). It follows a participatory group approach comprised of small group discussions, brainstorming, and role-playing, whereas the facilitators present a health issue to the adolescents, encouraging them to think about the problem in a holistic manner and allowing them to present different feasible solutions (19). This program has been adapted and implemented in different countries and settings, mainly in schools (13, 20), universities (21), communities (22), hospitals (23), workplaces (24), and orphanages (25).

LSE programs have also been adapted and applied in the context of prisons, particularly among young prisoners (4, 26). Improving life skills may assist prisoners in changing unhealthy thoughts and mood patterns (feeling depressed, anxious, etc.), as well as risk-taking behaviours such as fighting and drug use (26). Appropriate training in life skills may also help young prisoners to enhance their ability to successfully deal with the challenges of being in prison (1, 12).

Even though there has been some evidence of a positive effect of LSE programs on the mental health of young prisoners, a lack of impact has also been reported. For example, an intervention study with young offenders in South Africa revealed that LSE had a short-term effect on anger management, problem solving, and the ability to cope with emotions and decision making, and a long-term effect on emotional regulation (12). However, a study among US adolescent prisoners showed a non-significant positive impact on misconduct behaviour after the implementation of the LSE program (27).

Nevertheless, it is important to contextualise the intervention in regards to the specificities of the individual countries. To our knowledge, there are few studies that measure the impact of LSE programs in prisons from low and middle-income countries (Jordaan, Beukes (12), and none from Cambodia. This study aimed to assess the effectiveness of a life skills education program on mental health and life skills competencies among young prisoners in Cambodia.

Method

Study setting

Cambodia is located in South East Asia, a post-conflict country with more than 30 years of civil unrest and instability (28). The long-term war and conflict has disrupted the health system and the provision of mental health services in particular (28). While the health system has been gradually restored (29, 30), the prison health system is still underdeveloped. Studies have shown that people who are screened for HIV/AIDs and TB may continue to receive therapy when they are incarcerated (31), whereas people with mental disorders rarely undergo any treatment (32). This reveals that access to mental health services in prisons is extremely limited.

Study design

There are 24 prisons spread all over the country, one in each province, with a total of 5,552 young prisoners between 15 and 24 years of age (33). A pre-post intervention study was conducted in four prisons that were randomly selected from the 24 total prisons. The General Department of Prisons reported the prevalence of female prisoners to be less than 1%; therefore, they were excluded from the study to secure confidentiality. All young male prisoners from ages 15 to 24 in these four prisons participated in the study. At pre-assessment, 412 young male prisoners completed the questionnaires. One-third of the respondents (n=151) were randomly assigned to be in the intervention group and two-thirds (n=261) were assigned to the control group. Since 42 young prisoners were released during this period, 370 completed the questionnaire at post-assessment.

Intervention program

To meet the requirement of the General Department of Prisons, Cambodia, all 412 participated young prisoners received a stress-reducing intervention session. The intervention included a 45-minute structured session to understand the stress of living away from families and being in prison, as well as how to relax themselves using simple breathing techniques. This session was implemented by two facilitators with more than five years' of experience in conducting workshops on effective stress management.

One week after the breathing technique sessions, the LSE program was implemented to the intervention group over six consecutive weeks, each session lasting for approximately 90 minutes. The intervention group was divided into groups of 20 to 25 members to receive each session. The following six modules were applied in the same order to all the young prisoners in the intervention group: 'Coping with stress-facing challenges and problems,' 'Self-awareness – Relationship-dealing with anger,' 'Relationship-peer pressure,' 'Relationship-peer pressure – say 'No' to drugs and tobacco,' 'Self-awareness-self-esteem,' and 'Self-awareness-coping with stress-suicide.' The LSE sessions were facilitated by the first author and a member of the research team, who both have more than 10 years' of experience in implementing life skills education programs in Cambodia. The recommended WHO life skills education program was previously used in the Cambodian school setting (20) and these two members were also part of the intervention team in those schools. Each session comprised five steps: introduction to the topic, activities (role-play, groupwork, or games), discussion, summary, and activities that were assigned for the prisoners to do between the six sessions. During the intervention sessions, less time was allocated for writing activities due to the low level of literacy among prisoners and more time was spent on demonstrations, fun activities, and role-play to encourage active participation.

Measures

This study used two questionnaires to assess the effectiveness of a life skills education program on mental health and life skills competencies among young prisoners in Cambodia. They took approximately 45 minutes to administer. These questionnaires were translated into Khmer (official

language of Cambodia) and had been used in previous studies in different countries (34, 35), including Cambodia (20, 36).

The Youth Self Report (YSR), a part of the Achenbach system of empirically based assessments, captures a range of mental health problems such as anxiety-depression, withdrawal depression, somatic complaints, thought problems, social problems, rule-breaking behaviour, aggression, and attention deficit (34). It consists of 112 items that were rated using a Likert system as 0=not true, 1=somewhat true, and 2=often true. Since the cut-off score of YSR has not yet been validated in Cambodia, the mean score was considered. Higher scores indicate higher mental health problems.

The Life Skills Development – Adolescent Form (LSDS-AF) scale consists of 65 items that capture four dimensions: human relationship/interpersonal skills, decision-making/problems solving skills, health maintenance/physical fitness skills, and the purpose in life (37). The questions are rated via a Likert type scale with the following options: (1) completely agree, (2) mostly agree, (3) mostly disagree, and (4) completely disagree. The LSDS-AF used in this study had been previously translated into Khmer and adapted to the Cambodian cultural context (38). Higher scores indicate higher life skills abilities.

Data collection

The YSR and LSDS-AF are typically self-administered; however, we found that most of the prisoners had minimal education or were illiterate and therefore their ability to understand and respond to the questionnaires was limited. Because of this, the research team interviewed the participants face-to-face. Both baseline and post-assessment (three months after the intervention) data were collected in 2019 by two different teams who had at least two years' of experience in mental health research data collection. The administrators received three days of training, which included role-play on the application of the questionnaires.

Analysis

Descriptive statistical analyses were conducted to calculate the means of the total and specific YSR and LSD-AF scores for both the control and intervention groups during the pre- and post- assessment. To estimate the effect size across time, a comparison of the changes in means score of both YSR and LSD-AF and its sub-domains were calculated by the difference-in-difference method (DiD) (39). Statistical significance was determined at a 0.05 level. Since the mental health outcomes (YSR and LSD-AF scores) were continuous, linear regression models were applied. Analyses were adjusted by prison type to take into account the variability of the different settings. Analyses were done using the Stata program version 15.1.

Results

Mental health problems

Table 1 displays the total score in YSR and all subtypes of mental health problems in the intervention and control group before and after the life skills education program. In the post-assessment, three months after intervention, young prisoners in both groups reported less mental health problems. The total YSR means of the control and intervention groups were 61.91 and 64.80 respectively in the pre-assessment stage, decreasing to 50.59 and 57.83 in the post-assessment; however, the pre-post difference was not statistically significant (DiD=3.78, $p=0.34$). Smaller differences were found among the different dimensions of YSR, with none of them statistically significant.

Life skills competencies

The total LSD-AF means of the control and intervention groups were 112.89 and 112.14 respectively in the pre-assessment stage, increasing to 113.48 and 113.15 in the post-assessment; however, there was no significant pre-post difference between the two groups (DiD=0.39, $p=0.80$) (Table 2). A similar pattern, with an increase in life skills after the intervention was found across all four sub-domains of the LSD-AF (human relationship skills, problem solving skills, health maintenance skills, and skills in purpose in life), but no significant differences between control and intervention groups in the pre-post assessment analyses were found.

Discussion

The findings of this study suggest that the LSE intervention program was not effective in reducing mental health problems or improving life skills competencies among young prisoners in Cambodia. Although the control and intervention groups reported less mental health problems and a slight improvement in life skills competencies, the differences between groups over time were not statistically significant.

Mental health problems

To our knowledge, there are a limited number of studies that have evaluated the impacts of the LSE intervention on improving mental health and life skills in adolescent prisoners. Our findings were comparable to a study by Hunte and Esmail (27) among US adolescent prisoners, which also found that life skills program had no significant effect in reducing misconduct behaviours. Additionally, another study among US female prisoners did not find a significant association between life skills intervention and self-esteem, anger management, and well-being (4).

In a different context such as the school setting, results have pointed in a different direction. A study among Iranian school students found that LSE programs had a significant effect on improving mental health, significantly reducing stress, violence, addiction, and sensation-seeking (40). Jegannathan, Dahlblom (20), however, found no improvement on mental health problems as measured by the YSR scale after a LSE intervention among Cambodian school students. These findings highlight the important role that culture, context, and setting can play in implementing and applying LSE programs to improve mental health.

Life skills competencies

The LSE program did not improve life skills competencies in the intervention group either. Our outcome aligns with a study by Clark and Duwe (26) that conducted an evaluation of prison-based LSE programs in the US. Their main finding was that life skills programs had no effect in reducing the rates of recidivism (26). Additionally, Hunte and Esmail (27) also reported a non-significant effect of LSE on the behaviours of young prisoners in US.

However, our findings partially contradict previous research in South African prisons and Cambodian schools. A study in 2018 from South Africa reported a significant effect on social support and buck-passing in the medium-term (three months after the intervention) that disappeared after six months (12). On the other hand, the school study from Cambodia reported a significant increase in human relationship skills only for school boys after three months of the intervention (20). Differences in the setting can explain some of the disparities in findings since the prison setting may offer limited opportunities to use the life skills obtained from the program.

Despite the lack of significant improvement, the control group in this study reported less mental health problems over time. One 45-minute session on understanding stress due to incarceration and separation from families and a breathing exercise was provided to all participants. The potential impact of this intervention on the control group was not possible to determine due to the lack of a comparison group. However, Kristofersson and Kaas (41) conducted a literature review regarding the role of stress management techniques, which included breathing exercises, in prisons, and concluded that there was evidence of a positive effect of certain relaxation or meditation practices on reducing psychological and/or behavioural problems in these settings. Further research in this area could be worth exploring in the future.

Methodological Considerations

It is important to note that doing research in the prison setting and adequately implementing specific interventions is challenging. This was a pioneering research project in the country, so a validated and adapted LSE version for the prison setting was not available. Our research team attempted to adapt the generic WHO-LSE and the LSE Cambodian school versions to the prison context; however, the adaptations may have hindered the impact of this program and more studies are needed to contextualise the LSE program to this setting. While the intervention did not have any effect on the two selected outcomes for this study, it could be that positive effects on other life aspects not measured by this study could have occurred.

The application of the LSE to a freedom-restricted environment such as prisons might have also affected the outcome of the intervention. The effects were measured three months after the intervention when they were still incarcerated, which might have limited their abilities to practice their learned skills in real-life settings. Some of the LSE effects may be realised when they are released. The instruments used in our

study such as YSR and LSD-AF were originally designed for self-administration; due to a poor literacy level, however, face-to-face interviews were conducted, which could have led to some information bias.

Selection bias did not occur since all young prisoners in the 15–24 year old age group in each prison were included and participants within the same prisons were randomly selected into control and intervention groups. The extent of a potential spillover effect of the intervention on the control groups, however, could not be assessed. Finally, the study population was limited to young male prisoners; therefore, the results cannot be generalised to female and older prisoners.

Conclusion

This study found that the life skills intervention program had no significant effect on young prisoners' mental health and life skills competencies. However, our findings did indicate that overall mental health problems were reduced while life skills were improved. Further studies should be conducted to assess mental health and life skills interventions adapted to the prison setting in Cambodia, as well as their potential medium and long-term effects. Because the breathing exercise may have had a positive effect on the control group in our study, further research should also be focused on interventions to reduce stress in the prison setting.

List Of Abbreviations

ASEBA	=	Achenbach system of empirically based assessment
Caritas-CCAMH	=	Centre for Child and Adolescent Mental Health
DiD	=	difference-in-difference
LMIC	=	low and middle-income countries
LSD-AF	=	like skills development - adolescent form
LSE	=	life skills education
NECHR	=	National Ethics Committee for Health Research
RGC	=	Royal Government of Cambodia
YSR	=	Youth Self-Report
WHO	=	World Health Organisation

Declaration

Ethics approval and consent to participate

Ethical clearance was obtained from the National Ethics Committee for Health Research, Ministry of Health, Royal Government of Cambodia (N33NGCHR), and the permission to conduct the study in the prisons was approved by the individual prison authorities and the General Department of Prisons, Ministry of Interior. Additionally, oral and written consent were obtained from individual prisoners. The authorities gave consent, as they are the guardians, in the case of the prisoners who are below 18. Voluntarily participation and options to not participate in the study were emphasised. The respondents were assured of the confidentiality of the disclosed information.

Consent for publication

Not applicable.

Availability of data and materials

The datasets analysed during the current study are not publicly available due privacy and confidentiality reason but are available from the corresponding author on reasonable request.

Competing interests

All authors declared no conflict of interest.

Funding

This work was partially funded by the Swedish Research Council.

Authors' contributions

PP designed the study, collected, analysed and interpreted the data and drafted the article. LRS and KE reviewed and commented on the draft article. BJ contributed to the study design, supervised the data collection as well as reviewed and commented on the draft article. MSS was involved in the study design, co-analysed and interpreted the data and commented on the draft. All authors have read and approved on the final version of the draft article.

Acknowledgements

The authors would like to thank for the research team including the staff of the Center for Child and Adolescence Mental Health (Caritas-CCAMH), Cambodia for their contribution during the data collection and intervention program. We also thank the psychology student volunteers for their valuable contribution to our study during data collection. We would like to express our gratitude to the prison authorities for allowing us to conduct the study in the prisons. Finally, we would like to thank to all participants for their participation.

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Tables

Table 1: Means in the pre- and post-assessment stages and difference-in-difference (DiD) of YSR in the control and intervention groups after adjustment for prisons*

	Type of groups	Pre-assessment	Post-assessment	DiD	P-value
Total YSR	Control	61.91	50.59	3.78	0.34
	Intervention	64.80	57.83		
Anxiety-depression	Control	10.90	8.73	0.20	0.78
	Intervention	11.20	9.33		
Withdrawal-depression	Control	5.84	4.65	0.12	0.79
	Intervention	6.29	5.27		
Somatic complaints	Control	6.91	6.57	-0.41	0.53
	Intervention	7.41	6.76		
Social problems	Control	7.76	5.87	0.49	0.42
	Intervention	8.12	6.83		
Thought problems	Control	6.10	5.13	0.85	0.13
	Intervention	6.21	6.20		
Attention problems	Control	7.63	6.11	0.13	0.80
	Intervention	7.96	6.62		
Rule breaking behaviour	Control	7.61	6.44	1.01	0.12
	Intervention	7.92	7.77		
Aggressive behaviours	Control	9.17	7.09	1.39	0.12
	Intervention	9.69	9.05		
Internalising problems	Control	23.66	19.95	-0.10	0.95
	Intervention	24.90	21.36		
Externalising problems	Control	16.78	13.53	2.40	0.09
	Intervention	17.62	16.83		

* Lower values indicate less mental health problems

Table 2: Means in the pre- and post-assessment stages and difference-in-difference (DiD) of LSD-AF in the control and intervention groups after adjustment for prisons *

	Type of groups	Pre-assessment	Post-assessment	DiD	P-value
Total LSD-AF	Control	112.89	113.48	0.39	0.80
	Intervention	112.14	113.15		
Human relationships	Control	19.89	20.12	-0.16	0.71
	Intervention	20.11	20.23		
Problem solving skills	Control	17.84	17.81	0.54	0.17
	Intervention	17.50	18.02		
Health maintenance	Control	31.96	32.86	-0.54	0.33
	Intervention	31.86	32.22		
Purpose in life	Control	43.22	42.70	0.55	0.56
	Intervention	42.67	42.69		

* Higher values indicating higher life skills competencies