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Impact of Structured Physical Activity Program on Emotional Stability and Overall Adjustment of Orphanage Inmates

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Abstract: Orphans may be at higher risk for mental health issues due to the lack of a parental caregiver and the potential for adverse experiences such as abuse or neglect. Orphans need to receive proper care and support to address any mental health concerns they may have. This study aimed to explore the profound impact of a 12-week structured physical activity program (SPAP) on the emotional stability and overall adjustment of orphanage inmates. Eighty orphanage inmates were divided into an experimental group (EG) (n=40) and a control group (CG) (n=40). The EG underwent a SPAP for four days a week for 12 weeks. No training was imparted for CG in this period. To assess the Emotional Stability and Overall Adjustment, the Mental Health Battery was used. The participants completed the Mental Health Battery assessment before and after 12 weeks of training, which included the measures of Emotional Stability and overall adjustment. A paired sample t-test was applied and tested at 0.05 significant levels to compare the mean value of the two groups. In the EG a significant difference was measured in both Emotional Stability ($p < 0.001$) and Overall adjustment ($p < 0.001$). The investigation results show that structured physical activity programs positively affect emotional stability and overall adjustment.

Keywords: Structured physical activity, Emotional stability, Overall adjustment, Orphanage inmates, Mental health

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Introduction

Children residing in orphanages often face unique challenges that can impact their emotional stability and overall adjustment. The importance of addressing these issues is underscored by the potential long-term effects on their well-being and development. Factors such as living in

institutional settings, lack of access to safe outdoor spaces, and limited access to sports equipment can all impact the ability of orphans to engage in regular physical activity (PA). Guillaumon *et al.* (2019) emphasized the significance of PA in promoting mental health and

emotional well-being. The benefits of structured physical activity programs could be particularly profound for orphanage inmates, who may lack stable family environments. Hetherington and Stanley-Hagan (1999) highlighted the need for interventions that focus on emotional stability in children with a history of adversity, suggesting that targeted programs may play a pivotal role in mitigating emotional challenges. Many studies suggested that children who engage in regular physical activities have more improvement in their mental health.

It is important to consider the unique needs of vulnerable populations, such as orphanage inmates, in the design of intervention programs (Asif, 2017). Children who live in institutions are more likely to be sad than orphan children who do not live in institutions. Of course, this could be because kids who live in institutions may have a lot of problems.

Kenari (2014) echoed these sentiments, suggesting that tailoring physical activity programs to address the specific emotional and adjustment challenges faced by orphaned children could yield more effective outcomes. The positive correlation between PA and psychological well-being, emphasizes the role of structured programs in fostering emotional resilience. Rashid *et al.* (2022) further explored the potential impact of physical activity on mental health, emphasizing the need for targeted interventions in diverse populations, including those in institutional settings. While existing research has provided valuable insights into the benefits of PA for emotional well-being, there is a noticeable research gap in understanding the specific impact of structured physical activity programs (SPAP) on orphanage inmates. A need for more research focused on vulnerable populations, such as orphans, to inform evidence-based interventions is unavoidable. Orphanage inmates are the people, who have more needs and they do not ask for help from others.

The absence of comprehensive studies addressing the emotional well-being and overall

adjustment of orphanage inmates through structured physical activity interventions represents a notable void in the existing literature. The identified research gap in the literature emphasizes the need for a targeted investigation into the impact of SPAP on the emotional stability and overall adjustment of orphanage inmates. Understanding the nuances of this relationship is crucial for designing interventions that cater to the unique needs of these vulnerable children. By employing a rigorous research methodology, including pre- and post-intervention assessments and qualitative interviews, the research seeks to contribute empirical evidence to inform the development of evidence-based interventions for improving the well-being of orphaned children. The SPAP has developed with the help of experts in the field of sports and psychology.

The literature review has highlighted the positive impact of physical activity on emotional well-being, emphasizing the need for targeted interventions for vulnerable populations. The research gap identified underscores the necessity of investigating the specific effects of structured physical activity programs on orphanage inmates.

This study aims to address this gap by examining the potential benefits of such interventions, contributing to the broader discourse on enhancing the emotional stability and overall adjustment of orphaned children residing in institutional settings. In light of the identified research gap, this study aims to explore the effects of a carefully designed structured physical activity program on the emotional stability and overall adjustment of orphanage inmates.

Materials and Methods

Participants

The current study utilized a randomized control group design to assess the impact of a 12-week structured physical activity program (SPAP) on emotional stability and overall adjustment among orphanage inmates from Mukkam Orphanage. A

Table 1: Pre-test and Post-test scores of emotional stability

Groups	Number	Mean	S.D	t-Value
EG (Pre-Test)	40	9.65	1.03	8.88**
EG (Post-Test)		12.35	0.87	
CG (Pre-Test)	40	9.6	1.23	1.14
CG (Post-Test)		10	0.97	
**Significant at 0.01 level 2.7		df=39		

total of 80 orphanage inmates (13-15 years) from Mukkam Orphanage participated in the study. Participants were randomly assigned to either the experimental group or the control group. Inclusion criteria included age eligibility and consent obtained from both the orphanage authorities and participants.

Intervention

The experimental group underwent a 12-week SPAP, while the control group received no specific training during this period. The SPAP was designed to address the emotional and adjustment challenges faced by orphanage inmates and included activities such as aerobic exercises, team sports, and mindfulness exercises. The program was implemented for a period of 12 weeks, with sessions lasting 90 minutes each, conducted four times a week.

Measurement Tools

The Mental Health Battery developed by Singh and Gupta (1983) was employed to assess emotional stability and overall adjustment. Both the experimental and control groups underwent pre-testing before the initiation of the 12-week program using the mental health battery. This pre-test aimed to establish baseline measures for emotional stability and overall adjustment. Following the SPAP, post-testing occurred using the same mental health battery to evaluate changes in emotional stability and overall adjustment over the intervention period.

Statistical Analysis

Paired t-tests were employed to compare pre-and post-test scores within each group separately. This statistical analysis aimed to determine whether significant changes occurred in emotional stability and overall adjustment as a result of the structured physical activity program. The significance level was set at $p < 0.05$.

Ethical Considerations

Ethical approval was obtained from the Institutional Ethics Committee (Human Studies) (Approval No. HEC/PU/2023/29/03/07/2023). Informed consent was secured from the orphanage authorities and participants. Confidentiality and privacy were maintained throughout the study, and participants were assured of their right to withdraw from the study at any point without facing any consequences.

Results and Discussion

A paired sample t-test was performed to compare the mean scores of emotional stabilities of the EG and CG. The results revealed that the average post-test scores of EG ($M= 12.35$, $S.D=0.87$) were significantly higher than the CG ($M=10.00$, $S.D=0.97$) (Table 1).

A paired sample t-test was carried out to compare the mean scores of overall adjustment of the EG and CG. The results revealed that the average post test scores of EG ($M= 29.75$, $S.D=1.99$) was significantly higher than the CG ($M=24.95$, $S.D=1.27$) (Table 2).

The results of this study highlight the

Table 2: Pre-test and Post-test scores of overall adjustments

Groups	Number	Mean	S.D	t-Value
EG (Pre-Test)	40	24.5	1.6	9.16**
EG (POST-Test)		29.75	1.99	
CG (Pre-Test)	40	24.3	1.55	1.44
CG (POST-Test)		24.95	1.27	
**Significant at 0.01 level 2.7		df=39		

beneficial effects of implementing a well-organized PA intervention on the mental stability and overall adjustment of individuals residing in orphanages. Participating in consistent physical activities not only enhances bodily well-being but also exerts a significant impact on one's psychological state of being. Participation in group activities also promotes social integration and provides opportunities for the development of important life skills, such as cooperation, communication, and problem-solving.

The implications of this research are significant for the care and support of orphanage inmates. Implementing structured physical activity programs in orphanages can be a cost-effective and sustainable approach to improving the emotional well-being and overall adjustment of these children. Furthermore, it is important to implement such physical activity programs into the practices of orphanages and children's homes to provide training for caregivers and staff in facilitating and supervising physical activities.

Future research in this area could explore the long-term effects of SPAP on orphanage inmates and investigate the specific types of activities that yield the most significant benefits (Bell *et al.*, 2019). Considering the potential individual differences in response to PA, personalized approaches should be explored to cater to the diverse needs of orphanage inmates.

Conclusion

In conclusion, this study highlights the positive impact of SPAP on the emotional stability and overall adjustment of orphanage inmates. By

promoting emotional well-being, social integration, and life skills development, these programs contribute to improving the quality of life and future prospects of children residing in orphanages. This research underscores the importance of incorporating PA as a fundamental component of care for vulnerable children, ultimately fostering their healthy development and well-being.

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