Original Article

Relation between Mindfulness and Depression among Adolescent Orphans

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ABSTRACT

Introduction: Even though children in orphanages experience's multifaceted psychosocial problems, limited research has focused on psychological protective factors that can lessen the effect of orphanhood.

Aim: To examine associations between mindfulness and psychological factors (i.e., depression, cognitive function, positive emotion, and negative emotion) among adolescent orphans.

Materials and Methods: This was a descriptive correlation study and 140 orphan children living in three orphan homes, Tamil Nadu, India were recruited. Study's instruments included Child and Adolescent Mindfulness Measure (CAMM), Cognitive Functioning Scale (CFS), Short Mood and Feelings Questionnaire (SMFQ) and Positive and Negative Affect Schedule for Children (PANAS-C).

Results: There was significant correlation observed between mindfulness and depression among orphan adolescents (r=-0.53, p<0.01). Further, mindfulness had significant relationships to cognitive function (r=0.30, p<0.01), positive affect (r=0.33, p<0.01) and negative emotion (r=-0.38, p<0.01). Regression analysis showed that depression accounted 39% of variance in the model containing mindfulness, positive affect and negative affect.

Conclusion: This study supports the emerging literature on the benefits of mindfulness construct. Present findings will encourage the mindfulness-based interventions targeting well-being of an orphan adolescent.

INTRODUCTION

According to United Nations Children's Fund (UNICEF), a child below 18 years of age, who has lost one or both parents to any reason of death is considered as an orphan [1]. The UNICEF report 2012 has estimated 3,10,00,000 orphans in India [2]. In an orphanage setup, the children suffer from multifaceted and interconnected psychosocial issues [3]. Orphans in institutional homes were found to suffer from behavioural and emotional problems [4] paternal, maternal, and double orphans exhibited more-severe distress than non orphaned, non vulnerable children. Orphanhood remained associated with psychosocial distress after we controlled for differences in more-proximate determinants. A recent study reported a high prevalence of depression, anxiety, and stress as well as low self-esteem among adolescents in orphanages [5].

Mindfulness is hypothesised as a state of attentiveness to present events and experiences that is unmediated by discursive or discriminating cognition [6]. Clinicians working in the area of child and adolescent issues, the mindfulness-based programs provides an innovative solution for enhancing the well-being [7]. Mindfulness is associated positively with outcomes such as quality of life and academic competence [8]. Further, it is negatively related with the somatic complaints, internalising symptoms, maladaptive processes of thought suppression and psychological inflexibility [8]. Hence, the current study was designed to achieve the following specific aims among adolescents in orphanages: (1) to examine associations between mindfulness and depression; (2) to examine associations of mindfulness and psychological factors (i.e., cognitive function, positive emotion, and negative emotion); and (3) to examine the extent towhich mindfulness account for significant variance in psychological well-being. To our information, this may be the first survey that examined the relationship between mindfulness and depression among orphans.

MATERIALS AND METHODS

Participants

One hundred and forty orphan children living in three orphan homes (Karunai Illam Charitable Trust, Good Life Centre and Reaching The Unreached), Tamil Nadu, India were included in this descriptive correlation study. A priority sample size computation was carried out based on an earlier study that reported significant correlation (r=0.26) between mindfulness and positive affect. From this, estimated sample size was 112 participants, with α=0.05 and (1-β)=0.80 [9]. Data collection was done from February 2016 to March 2016. The inclusion criteria of the current study were adolescents aged between 11 and 15 years [10], with the ability to read, write and comprehend information. The exclusion criteria were adolescents diagnosed with severe psychiatric ailments (ongoing violence, evidence of self-harming or suicidal ideations), developmental disability or intellectual disability, and physical impairment. The exclusion of severe psychiatric condition was based on participants personal files. Participants received no financial return for their participation.

Procedure

All recruitment and study procedures were approved by the Institutional Ethical Committee of SVYASA Yoga University (RES/IEC-SVYASA/47/2015). A prior informed consent was obtained from the orphanage head and a signed inform assent was obtained from the children after explaining in detail about the nature of the study. The interviewers were trained in psychological assessments. Participant's demographic details and psychological questionnaires were assessed individually. The average completion time for assessments was 20 minutes. Once participants had completed the questionnaire, they were fully debriefed to the nature of the study.

1

Child and Adolescent Mindfulness Measure (CAMM) [8,11] 413

The 10-item CAMM measure was administered to evaluate the mindfulness. The CAMM estimates the degree to which adolescents perceive the internal experiences, act with awareness, and admits the core experiences without judging them. It has a single factor structure. Participant has to indicate how each item reflected their experience using a 5-point scale from 0 (Never true) to 4 (Always true). All items in this scale described actions contrary to a mindfulness perspective. Therefore, each question was reverse scored and added to create a total score. High scores indicate a high degree of mindfulness. The reliability of the scale demonstrates a good internal consistency of Cronbach's alpha=0.87, while the validity of the research using CAMM suggests that the measure has good concurrent validity.

Cognitive Functioning Scale (CFS) [12]

The Cognitive Functioning Scale (six questions) asks questions regarding memory and attention over the last month. The scale was answered using a five-point Likert scale (0=never a problem; 1=almost never a problem; 2=sometimes a problem; 3=often a problem; 4=almost always a problem). Items are reverse scored and linearly transformed to a 0-100 scale (0=100, 1=75, 2=50, 3=25, 4=0). Higher scores indicate the better level of Cognitive Functioning. Validation report shows a significant association between CFS and Behaviour Rating Inventory of Executive Function, a widely validated measure of executive functioning. The CFS has demonstrated strong psychometric properties across pediatric populations [13].

Short Mood and Feelings Questionnaire (SMFQ) [14,15]

Children's depression measured by 13 items in SMFQ, which focuses on the affective, cognitive and somatic components of depression. SMFQ is a unidimensional scale. The participants rate each statement on 2 (true), 1 (sometimes true), or 0 (not true) scale over the past two weeks. SMFQ correlates highly with the standard measures of depression and discriminates depressed from non depressed children in general population samples. The scores on each item can then be summed to produce a total score ranging from 0 to 26. Score 11 and above are considered as high levels of depressive symptoms. The SMFQ showed high internal reliability, with a Cronbach's alpha of 0.84 [16].

Positive and Negative Affect Schedule for Children (PANAS-C) [17-19]

The PANAS-C consist of 10-item scale desgined to measure positive affect (PA) and negative affect (NA). Children rate on a 5-point Likert scale (1=very slightly or not at all, 5=extremely) the extent to which they have felt PA (joyful, cheerful, happy, lively, proud) and NA (miserable, mad, afraid, scared, sad). Participants rated the degree to which they have experienced each particular emotion during the previous two weeks. The total score ranged from 5 to 25 for each of the domains, the positive and negative affect. The PANAS-C differentiate youth with associated clinical disorders apart from youth with non-targeted emotional and behavioural problems. The PANAS-C subscales have shown good internal consistency and modest convergent and discriminant validity.

STATISTICAL ANALYSIS

All statistical analysis was performed using the computing environment R (version 3.4.0). Pearson correlations were used to examine the association between mindfulness, depression, cognitive function, positive affect and negative affect. A multiple regression was run to predict depression from mindfulness, positive affect and negative affect.

RESULTS

The sample consisted of 42 boys and 98 girls. Mean age of the subjects was 12.41 years (SD=1.18). Descriptive statistics for all variables and the zero-order correlation between variables is summarised in [Table/Fig-1]. Mindfulness was significantly and negatively correlated with depression (r=-0.53, p<0.01) and negative affect (r=-0.38, p<0.01). Further, the significant and positive association observed with cognitive (r=0.30, p<0.01) and positive affect (r=0.33, p<0.01). Correlations between cognitive function with depression and negative affect were significant and negative. Furthermore, positive affect was significantly and negatively correlated with depression (r=-0.44, p<0.01) and negative affect (r=-0.43, p<0.01).

Variable	M	SD	1	2	3	4
1. Mindfulness	20.70	7.35				
2. Depression	9.54	4.22	-0.53**			
3. Cognitive	301.43	111.19	0.30**	-0.27**		
4. Positive affect	17.90	3.64	0.33**	-0.44**	0.35**	
5. Negative affect	14.70	3.95	-0.38**	0.49**	-0.44**	-0.43**

[Table/Fig-1]: Means, standard deviations, and correlations.
Note.** indicates p<.01. M and SD are used to represent mean and standard deviation, respectively.

The multiple regression model statistically significantly predicted depression, $F_{(3, 136)}=31.23$, $p<0.001$, adj. $R^2=0.39$. All three variables added statistically significantly to the prediction, $p<0.05$. Regression coefficients can be found in [Table/Fig-2].

DISCUSSION

This study sets out to examine the connection between mindfulness and depression among adolescents living in the orphanages. Participants in this study had no formal training in mindfulness techniques. The significant association between dispositional mindfulness and depression confirmed our primary hypothesis. Further, mindfulness had significant relationships to positive and negative emotion. This study supports the emerging literature on the benefits of mindfulness construct [6,7].

Predictor	B	B 95% CI (LL, UL)	Beta	Beta 95% CI (LL, UL)	sr^2	sr^2 95% CI (LL, UL)	r	Fit
(Intercept)	14.02**	(9.18, 18.86)						
Mindfulness	-0.21**	(-0.29, -0.12)	-0.36	(-0.50, -0.22)	0.11	(0.03, 0.19)	-0.53**	
Positive Affect	-0.24**	(-0.41, -0.07)	-0.21	(-0.35, -0.06)	0.03	(-0.01, 0.08)	-0.44**	
Negative Affect	0.28**	(0.12, 0.44)	0.26	(0.11, 0.41)	0.05	(-0.01, 0.11)	0.49**	
								R^2=0.408**
								95% CI (0.27,0.50)

[Table/Fig-2]: Regression results using depression as the criterion.
Note. ** indicates p< .01. A significant b-weight indicates the beta-weight and semi-partial correlation are also significant. b represents unstandardized regression weights; beta indicates the standardized regression weights; sr2 represents the semi-partial correlation squared; r represents the zero-order correlation. LL and UL indicate the lower and upper limits of a confidence interval, respectively. In-text the adjusted R-squared is referred and reported, while in the table R-squared that has been adjusted for the number of predictors in the model.

Furthermore, correlation analysis showed that all the variables in this study (mindfulness, cognitive, depression, positive affect and negative affect) had a significant influence on each other among orphan adolescents. This finding is consistent with a previous research reporting on mindfulness and psychological well-being [20].

Further, adolescence is the most rapid phase of human development and highly vulnerable to mental disorders, which in turn cause a significant long-term disability [21]. Depression is a significant contributor to the global burden of mental health in adolescent's [22]. Previous finding highlights, orphanage children show more negative emotions and less positive emotions in comparison with non-orphanage children [4,5]. Furthermore, orphans had scored significantly higher level of depression than non-orphans due to lack of extended family system, which is an important source of solace and care giving [23].

Research suggests that mindfulness, a positive dispositional trait inherent to all of us can deliver lasting improvements in self-awareness and emotional stability [7]. Further higher level of mindfulness was associated with better dispositional self-control and way to abstrain from maladaptive impulsive behaviour [24,25]. Furthermore, relatively short mindfulness based intervention showed enhancement of self-regulation and prosocial behaviour in young children [26]. Further, the majority of studies on mindfulness, emphasise mostly healthy participants recruited from schools [27]. Few studies explore the psychological protective factors that can mitigate the effect of orphanhood and enhance psychological well-being. Current study highlights the scope of mindfulness-based intervention for the well-being of orphan children.

Potential mechanisms by which dispositional mindfulness enhance well-being may be due to the present movement awareness and non-reactivity which in turn enhance the self-regulated behaviour and positive emotional states. Further, according to the previous studies, dispositional mindfulness is positively correlated with psychological well-being and emotional regulation [28]. Furthermore, current results are in line with the previous research that showed significant association of mindfulness to better emotional intelligence, enhanced positive affect, lesser levels of negative affect, and greater life satisfaction [29]. Empirical evidence from mindfulness-based programs has shown noteworthy enrichment of children's psychological, physiological, and social development [30-32].

LIMITATION

There are some limitations to this study that needs to be considered. The convenience sampling method and limited sample size may limit the generalisation. However, the population is very much hard to approach. Hence, convenience sample may be the only possible way to study this population. Further, lack of information concerning the reasons for orphaning, years of the orphanhood, and the causes of parental demise may be another limitation. Furthermore, the causal direction of this relationship is uncertain in this study due to cross-sectional design. Interventional study on mindfulness training may provide causal relationships between mindfulness and well-being among orphans. Data collection was done using a set of self-rated questionnaires. Response biases may compromise self-report measures. Future work should explore comprehensive behavioural and physiological measures.

CONCLUSION

Despite these limitations, the present study confirmed our primary hypothesis; dispositional mindfulness is negatively correlated with depression. Mindfulness approaches can be taught to orphan adolescents to improve self-regulation and cope with the psychosocial stress of orphanhood. This study suggests that enhancement of mindfulness in orphan populations and understanding possible mechanisms linking mindfulness and well-being may be a fruitful avenue for future research. Current findings will aid the development of interventions targeting well-being in an orphan adolescent.

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