

5.0 STUDY I: MINDFULNESS AND ITS RELATION TO DEPRESSION AMONG ADOLESCENT ORPHANS

5.1 INTRODUCTION

Recent study reported a high prevalence of depression, anxiety, and stress as well as low self-esteem among adolescents in orphanages (Mohammadzadeh et al., 2018). Further, a study compared positive and negative emotions in both orphanage and non-orphanage children. Finding highlights orphanage children show more negative emotions and less positive emotions in comparison with non-orphanage children. Furthermore, orphans had scored significantly higher level of depression than non-orphans (Atwine et al., 2005). Recent years the mindfulness-based activities with children and youth are becoming increasingly popular. Mindfulness is conceptualized as a state of focus to present moments and experiences that are unmediated by wandering or discriminating cognition (Rajesh, Ilavarasu, & Srinivasan, 2013). Research suggests that mindfulness a positive dispositional trait inherent to all of us can deliver lasting improvements in self-awareness and emotional stability (Thompson & Gauntlett-Gilbert, 2008). Mindfulness has shown positively interrelated with the quality of life, academic competence, and social skills. Further, negatively correlated with somatic complaints, internalizing symptoms, and externalizing behavior problems (Greco & Hayes, 2008). Further mindfulness was interrelated to higher dispositional self-control and help to abstain from maladaptive impulsive behavior (Bowlin & Baer, 2012). Furthermore, relatively short mindfulness based intervention shown enhancement of self-regulation and prosocial behavior in young children (Flook et al., 2015).

Few studies explore the psychological protective factors that can mitigate the effect of orphanhood and enhance psychological well-being. Further, the majority of studies on mindfulness emphasis mostly healthy participants recruited from schools (Zoogman et al., 2015). 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 to which 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.

5.2 SUBJECTS AND METHODS

5.2.1 Participants

One hundred and forty orphan children living in three orphan homes (Karunai Illam, Good Life Centre and Reaching The Unreached), Tamil Nadu, India were included in this descriptive correlation study. A priori sample size computation was carried out based on an earlier study that reported significant correlation $r=.26$ between mindfulness and positive affect. From this, estimated sample size was one hundred and twelve participants, with $\alpha=0.05$ and $(1-\beta)=0.80$ (Bluth & Blanton, 2014). Data collection was done from February 2016 to March 2016. The inclusion criteria of the current study were adolescents aged between 11 and 15, 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.

5.2.2 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 sign inform assent was obtained from the children after explaining in detail about the nature of the study. The interviewers were trained in psychological assessments. Participants 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

5.2.3 Measures

Child and Adolescent Mindfulness Measure (CAMM, Greco et al., 2011)

The 10-item CAMM measure was administered to evaluate the mindfulness. The CAMM evaluates the degree to which adolescents observe internal experiences, act with awareness, and accept internal 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 interval 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, James et al, 2011)

The CFS includes six items assesses perceptions of child attention/concentration and memory 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 Behavior Rating Inventory of Executive Function, a widely validated measure of executive functioning. The CFS has demonstrated strong psychometric properties across pediatric populations.

Short Mood and Feelings Questionnaire(SMFQ, Turner et al , 2014)

Children's depression measured by 13 items 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 nondepressed 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 considered as high levels of depressive symptoms.

Positive and Negative Affect Schedule for Children (PANAS-C, Huebner & Dew, 1995)

The PANAS-C is a 10-item yield 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 measure's total scores range from 5 to 25 for each positive and negative affective state. The PANAS-C differentiate youths with associated clinical disorders apart from youths with non-targeted emotional and behavioral problems. The PANAS-C subscales have shown good internal consistency and modest convergent and discriminant validity

5.3 RESULTS

All statistical analysis was performed using the computing environment R (version 3.4.0). Descriptive statistics for all variable and the zero-order correlation between variables summarized in Table 1. Pearson correlations were used to examine the association between mindfulness, depression, cognitive function, positive affect and negative affect. Mindfulness was significantly and negatively correlated with depression ($r = -.53, p < 0.01$) and negative affect ($r = -.38, p < 0.01$). Further, the significant and positive association observed with cognitive ($r = .30, p < 0.01$) and positive affect ($r = .53, p < 0.01$). Correlations between cognitive function with depression and negative affect were significant and in the expected directions. Cognitive function and depression ($r = -.27, p = 0.003$) was significantly associated. Furthermore, positive affect was significantly and negatively correlated with depression ($r = -.44, p < 0.01$) and negative affect ($r = -.43, p < 0.01$).

A multiple regression was run to predict depression from mindfulness, positive affect, and negative affect. The multiple regression model statistically significantly predicted depression, $F(3, 136) = 31.23, p < .001, \text{adj. } R^2 = .39$. All three variables added statistically significantly to the prediction, $p < .05$. Regression coefficients can be found in Table 2

Table 1 - Means, standard deviations and correlations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Mindfulness	20.70	7.35				
2. Depression	9.54	4.22	-.53**			
3. Cognitive	301.43	111.19	.30**	-.27**		
4. Positive Affect	17.90	3.64	.33**	-.44**	.35**	
5. Negative Affect	14.70	3.95	-.38**	.49**	-.44**	-.43**

Note. ** indicates $p < .01$. *M* and *SD* are used to represent mean and standard deviation, respectively.

Table 2 -Regression results using Depression as the criterion

Predictor	<i>b</i>		<i>beta</i>		<i>sr</i> ²		<i>r</i>	Fit
	<i>b</i>	95% CI [LL, UL]	<i>beta</i>	95% CI [LL, UL]	<i>sr</i> ²	95% CI [LL, UL]		
(Intercept)	14.02**	[9.18, 18.86]						
Mindfulness	-0.21**	[-0.29, -0.12]	-0.36	[-0.50, -0.22]	.11	[.03, .19]	-.53**	
Positive Affect	-0.24**	[-0.41, -0.07]	-0.21	[-0.35, -0.06]	.03	[-.01, .08]	-.44**	
Negative Affect	0.28**	[0.12, 0.44]	0.26	[0.11, 0.41]	.05	[-.01, .11]	.49**	
								<i>R</i> ² = .408**
								95% CI [.27, .50]

Note. * indicates $p < .05$; ** 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; *sr*² 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.

5.4 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 (Brown & Ryan, 2003; Thompson & Gauntlett-Gilbert, 2008). 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 (Bränström, Duncan, & Moskowitz, 2011).

Further, adolescence is the most rapid phases of human development and highly vulnerable to mental disorders, which in turn cause a significant long-term disability (Patel et al., 2007). Depression is a significant contributor to the global burden of mental health in adolescent's (WHO, 2012). Previous finding highlights, orphanage children show more negative emotions and less positive emotions in comparison with non-orphanage children (Kaur et al., 2018; Mohammadzadeh, et al., 2018). 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 (Atwine et al., 2005). Based on regression analysis the model contains mindfulness, positive affect, and negative affect accounted for 39% of the variance in depression.

Research suggests that mindfulness a positive dispositional trait inherent to all of us can deliver lasting improvements in self-awareness and emotional stability (Thompson & Gauntlett-Gilbert, 2008). Further, higher level of mindfulness was associated with better dispositional self-control and way to abstain from maladaptive impulsive behavior (Bowlin & Baer, 2012; Rajesh et al., 2013). Furthermore, relatively short mindfulness-based intervention shown enhancement of self-regulation and prosocial behavior in young children (Flook et al., 2015). Further, the majority of studies on mindfulness emphasis mostly healthy participants recruited from schools (Zoogman et al., 2015). Few studies explore the psychological protective factors that can mitigate the effect of orphan hood and enhance psychological well-being. Current study highlights the scope of mindfulness-based intervention for the wellbeing of Orphan children.

5.4.1 Potential mechanisms

Potential mechanisms by which dispositional mindfulness enhance well-being may due to present moment awareness and non-reactivity which in turn enhance the self-regulated behavior and positive emotional states. Further, previous studies, dispositional mindfulness is positively correlated with psychological well-being and emotional regulation (Hill & Updegraff, 2012). Furthermore, current results are in line with the previous research shown significant association of mindfulness to better emotional intelligence, enhanced positive affect, lesser levels of negative affect, and greater life satisfaction (Schutte & Malouff, 2011). Empirical evidence from mindfulness-based programs has shown noteworthy enrichment of children's psychological, physiological, and social development (Semple et al., 2010; Schonert-Reichl et al., 2015).

5.4.2 Limitations

There are some limitations to this study that need to be considered. The convenience sampling method and limited sample size may limit the generalization. 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 orphan hood, 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 behavioral and physiological measures.

5.4.3 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 orphan hood. Our study suggests that enhancement of mindfulness in orphan populations and understanding possible linking mindfulness and wellbeing may be a fruitful avenue for future research. Current findings will aid the development of interventions targeting well-being in an orphan adolescent.