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EFFECT OF YOGA ON WELLBEING ON CHILDREN IN SHELTER HOMES

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Abstract:

Childhood plays a crucial role in shaping up physical, mental, emotional, and social aspects of an individual's life. The parent's unavoidable situation or demise of a parent leaves the child in residential care. Residential care children go through challenges impacting their wellness at various levels, impacting their future. (Nar, 2020).

Objective:

To assess the impact of yoga on the wellness of children living in residential care, covering issues such as depression, anxiety, physical health, stress, and social wellness. Four-week-long yoga training session for children in the age group of 10 to 15 years, including boys and girls.

Materials and Methods:

Thirty-five children aged 10 to 15 years living in the residential care participated in the yoga wellness study. Participants of the study were selected using the convenient sampling method.

All the children underwent yoga intervention for four weeks. This study used a mixed design study design to quantitatively assess the level of anxiety using Generalized Anxiety Disorder Assessment 7 (GAD7). The study evaluated anxiety and depression scores using the Patient health questionnaire 9 (PHQ 9). The research study

also conducted Interviews to study the perceived effects of yoga on the wellness of children.

Results:

Paired sample T-test proved that depression ($p < 0.01$) and anxiety ($p < 0.01$) reported significant change after four weeks of yoga intervention. Also, the study showed a remarkable improvement in physical health, stress management, and social well-being.

Conclusions:

This study suggests that yoga practice for children in particular conditions of life for a four-week duration can overcome depression and anxiety. Concerned stakeholders suggest yoga practice can help the children living in residential care can significantly improve their overall wellness.

Keywords: Children, Wellness, Yoga, Residential care

Introduction

According to the UNICEF Dept of Economic and Social Affairs report, Population Division, 2019, about 1,366,418 adolescents live in India. Adolescents are divided based on their age groups, 10 to 14 years and 15 to 19 Years.

According to the UNRC (United Nations Rights of the Child), every child has a suitable standard of living conducive to physical, mental, spiritual, moral, and social development. Parents and alternate care providers have the principal duty to secure the living conditions necessary to develop their abilities and financial capabilities. When the children do not get the necessary care, they get into the residential care either by them.

Due to varied reasons, there may be situations where parents might find themselves incapable of satisfying their commitments to their children. Parents may decide that they cannot provide essentials such as food, clothing, shelter, health care, protection, and education during hard times. Such crises can result from many stressful times such as poverty, health problems, domestic or neighborhood violence, crises, substance abuse, and many more. Likewise, due to parental death, children get separated from their families. Powering today's children to face life and

live life is the need of the hour. It is essential to empower children in residential care to build a promising future for the child and society.

The term orphans define children who have lost one or both of their parents. Further categorized as maternal or paternal orphans depending on the mother or father they have lost respectively or sometimes both. Also, when their parents abandon the child, they become social orphans. The child faces financial problems, natural disasters, and many other things. There are 153 million children orphaned worldwide (UNICEF 2011) and 20 million in India (Rajan & James, 2008). UNICEF defines an orphan as children (under 18 yrs) living without either parents or parents alive. According to UNICEF, there are 140 million orphan children living globally as of 2015, and in Asia alone, we have 61 million orphans. Ninety-five percent of orphans are over the age of five. As per the mentions of Unicef.org,

According to the evidence gathered by UNICEF, many children without parents live with either surviving grandparents, relatives, or alternate care. Ninety-five percent of children without parental care are over the age of five. As per the mentions of Unicef.org, in many countries, children losing both parents are considered orphans. Therefore "single orphan" terminology was derived to define the loss of one parent and the double orphan term defines the loss of "both parents."

Residential Care:

Groups of caring adults operate residential care facilities determined to provide the children who need parental care with a family-like environment and unconditional acceptance and support.

Children living in residential care face a hard time maintaining the fundamental living standard and exposing the children to challenges. Children living in such fragile conditions fall prey to various anti-social activities in exchange for food, clothing, shelter, and the need to feel belong. In a most residential care facility, there is the problem of providing proper food (Ahmad et al., 2005). The experience of childhood traumas leads to mental issues like depression (Elbert et al., 2009).

One South Asia found behavioral problems in around 33% of residential care children (Grover et al., 2018). A comparative study conducted between 52 resident adolescents in residential care and 55 adolescents living with parents showed significantly higher anxiety, depression, negative self-concept, and hostility reported among the children from residential care (Kanbur et al., 2011).

A study comparing the development of children in residential care with that of children from foster care revealed that children from foster care had better cognitive development than children in alternate care. Results suggest that institutionalization at an early age leads to potential sensitivity to cognitive development (Nelson et al., 2007). According to Volunteering in Orphanages by UNICEF South Asia, Children are an integral part

of families. Living in an institution far away from their families/caregivers does not make an institution. Children need a pattern or discipline drawn on them with the folklore in a family.

Volunteers and residential care staff taking on the role without stringent verification of the background could harm the children in residential care who tend to grow on the immediate care providers from the residential care. Children in residential care also go through sexual exploitation and abuse. All these incidents hamper the orphan child's brain development. Sometimes these children are overpowered to do activities to please the donors as part of their survival.

Genetic epistemology is a developmental theory of knowledge or Piagetian theory unveiled by Jean Piaget. It bases a child's cognitive development on their levels of interaction with the environment they live in.

Piagetian theory resonates well with the result that abandoned children's cognitive function improved significantly on moving their living place to foster homes or alternate care. More importantly, children in alternate homes have a tremendous impact on their health, helping the children to normalize their life at large. (Hugar et al., 2017)

Residential care children are usually not taken into consideration. They do not get to find a solution for their problem actively. The lack of communication between the orphan children, volunteers, and caregiver organization leads to ineffective service rendered to the orphan children (Earnshaw, Njongwe, English, & Worku, 2009).

Children in alternate care and residential care require interventions such as leisure activities, which could help develop mental health. (Sharma & Jena, 2016). Engaging these fragile children in Therapeutic art interventions and psychosocial support exposed that these children lack skills in exploring the holistic dimensions hidden deep within each child living in alternative care (Mfa & Ivanova, 2011). Many studies from the literature have highlighted problems among orphans at physical, mental, emotional, and social levels. Lack of wellness among orphan children requires holistic, evidence-based practice to address various wellness-related issues at all levels of existence.

Yogic Intervention

Yoga is a widely accepted intervention to benefit children immensely with psychological and physical wellness. Another study with an eight-week yoga program for residential care children recorded improvement with reduced distress symptoms among the participants compared to the control group (Culver, Whetten, Boyd, & O'Donnell, 2015). The lack of adult supervision or care puts the children at greater risk of traumatic events than the other children living under parental care (Ahmad et al., 2005).

According to another study, the practice of Suryanamaskara reported improvement in attention in their academics among orphan children (Devi, Ganpat, Kumar, & Ramarao, 2015). Based on previous literary and experiential review research in yoga, suggested evidence-based yoga programs for effective rehabilitation in OC may include following yoga practices (yogic rehabilitation module for orphan children) (Culver et al., 2015; Devi et al., 2015; Saraswati, 2005):

In another study, yoga proved effective in addressing the problems of children living in residential care. The yoga studies on children living in alternate care also recorded significant improvements in physical fitness (Purohit et al., 2016a), executive functions (Purohit & Pradhan, 2017), loneliness (Purohit et al., 2016b), Psychomotor performance (Purohit et al., 2015), Quality of life (Kumar, 2018) as well as Mental health (Kenari, 2017).

Even though there is sufficient quantitative evidence showing the effectiveness of yoga among children living in residential care, there is a lack of formal qualitative studies exploring the effect of yoga.

In this study, we use a mixed design to explore the effect of yoga on anxiety and depression among residential care children to understand the depth of participants' experiences with the yoga program.

The fast-changing dynamics in the current economic and social conditions create a new definition for the already challenging orphanhood. The time has come to introduce some action to help these fragile children. The challenges faced by these weak kids have the potential to turn into a severe crisis in their adult life, impacting their social and mental health. (Nar, 2020)

Methods

Participants

The study took place in a residential care facility for children in Guntur, Andhra Pradesh, India. Thirty-five healthy children aged 10-15 years, both girls and boys, were selected to be part of the single group pre-post interventional study design.

All participants signed the assent form while their residential facility in charge signed the informed consent form before the intervention. This study used a convenient sampling method to select the participants. Post every yoga session eatable such as biscuits and juices to the participants. Eatable distribution helped the children to attend everyday sessions with enthusiasm and refrained from dropping out of the study. The researcher and another female certified yoga instructor from SVYASA yoga university taught yoga to all 35 participants.

Design

The study adopted the single group pre-post study design in which the selected 35 children from the residential care underwent a four-week yoga intervention. Sample size was calculated based on the previous studies.

Intervention

The 35 participants of the study practiced yoga as per the study design. The current study had 90 min of yoga intervention taught to the participants six days a week for four weeks.

The current study utilized the yoga module of Dr. Nagarathana and H R Nagendra of S-VYASA yoga university(Nagarath a & Nagendra, 2006). The yoga module of the current study includes loosening exercises, breathing practices, yoga asanas, relaxation techniques, and some yogic games to enhance the overall development of body, mind, and social skills. Children enthusiastically and willingly participated in the study. Children received eatables post-yoga sessions to keep their motivation level high. The module includes the following components of yoga interventions are

> Prayer

> Loosening exercise

> Breathing practices: Pranayama

> Yoga Asana:-

- Balancing postures: Vriksasana, Garudasana and Virabhadrasana,
- Flexibility postures: Padahastasana, Paschimottanasana, Bhujangasana, Ustrasana, Vakrasana and Ardhamatsyandrasana
- Muscle-strengthening postures: Vrikshasana, Trikonasana, Garudasana, Padahastasana, Parvatasana, Ardha Chakrasana
- Inverted postures: Halasana and Sarvangasana
- Cardiorespiratory fitness of Suryanamaskar

> Relaxation

Assessment:

The researcher collected the data during the single group pre and post-study weeks of intervention. The researcher and yoga certified yoga trainer was available to all 35 participants for all questions.

The current study used the Generalized Anxiety disorder (GAD7) scale and Patient Health Questionnaire (PHQ9) Scale to assess the impact of an ety and depression. The assessment of anxiety and depression were assessed at baseline and after the intervention.

At the end of the four-week yoga intervention program, participants underwent semi-structured interviews to gather and study the impact of yoga on stress management, self-esteem, depression, anxiety, and social relations during the four-week intervention period.

Demographic data

The researcher collected demographic data such as age, gender, education, parental status, and duration of staying in residential care from the official record book.

Data Analysis

The study used JASP software to perform the statistical analysis. One of the widely used reliability measures, Cronbach's alpha, was adapted for this study to check the reliability value.

The researcher used the Test of Normality (Shapiro-Wilk) test for normality check. A paired sample t-test conducted by the researcher revealed that the current study had data normally distributed.

The researcher audiotaped all the 35 participants and caregivers. Due to technical error, data from the two interviews were lost. Hence 33 interviews were available for final data ext action and analysis. All the transcribed interviews are thoroughly read. Several themes emerged depending on the uniformity of the response from the participants, and then those themes were entered into MS Excel a d analyzed manually. Many different interpretations emerged from the interviews. Among those three themes, such as improvement in physical health, Stress management, and social well-being emerged as significant themes depending on the response from the participants.

Results

The following table depicts the results obtained.

VARIABLE	MEAN±SD		p-value	t-test
	PRE	POST		
Depression	16.82±3.46	12.71±3.691	<0.01	13.948
Anxiety	12.94±3.81	10.37±3.2	<0.01	11.398

Table 1: Analysis of Depression and Anxiety scale variation

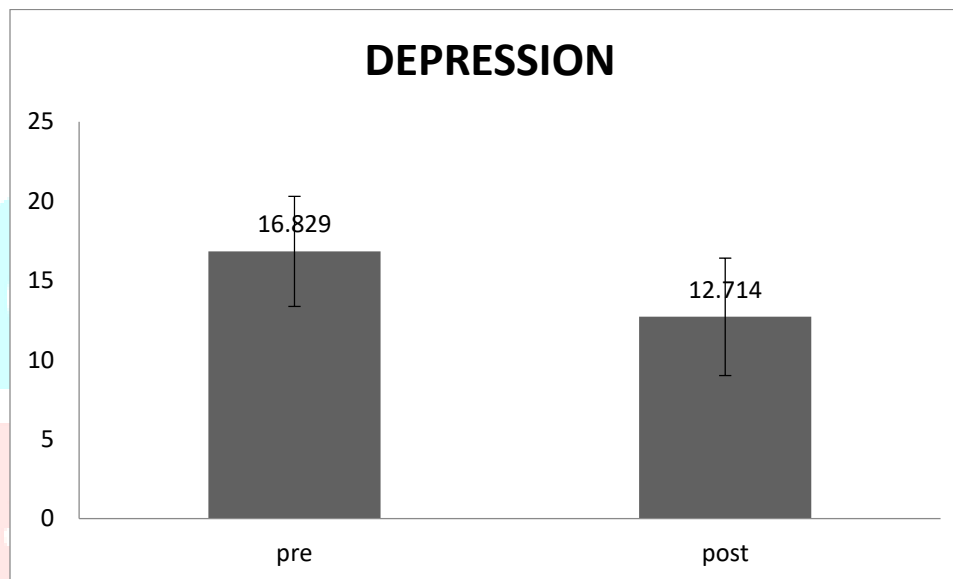


Table 2: Analysis of Depression scale variation before and after the intervention

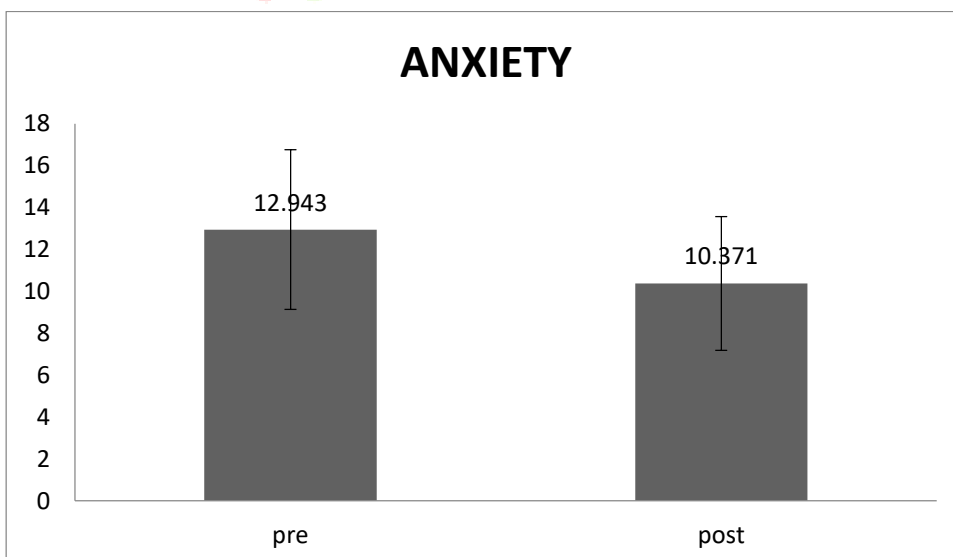


Table 3: Analysis of Anxiety scale variation before and after the intervention

Following three major themes emerged, while analyzing the depression and anxiety scale from the study.

- 1) Improvement in physical health
- 2) Stress management
- 3) Social Wellbeing

Theme 1: Improvement in physical health:

Many participants reported the physical benefits of the yoga program. Three subthemes emerged regarding the change in physical health. They are as follows:

Many participants reported reduced body and stomach pains: Regular Body pains and stomach pain. They also felt that body pains and stomach pain have affected their daily lives, making them unable to focus and enjoy their day-to-day activities. Many participants felt that yoga has helped them have lightness in the body, reduced body pains and stomach pain, reduced fatigue during games, and increased athletic performance.

"I feel fatigued and pain in my legs after climbing steps in my school, but now I can climb the steps fast without any pain and fatigue." (Male, Age 11)

Similar insights from other participants showed that yoga helped relieve their physical problems, allowing them to concentrate and enjoy their daily activities.

"I got relieved from the stomach pain because of yoga, and my attention in the classroom has improved" (Male, Age 13)

Reduced headache, cold, and fever: Headache, cold, and fever were commonly reported by many participants, making them suffer and disturb their routine very frequently. For many of these participants, yoga seems to have improved their immunity, relieved them from physical ailments, and enjoyed a more positive state of health.

For participants, it has even made her stop using spectacles that the doctor suggested reducing headaches.

"I used to suffer from fever regularly now I feel healthy. Doctor suggested me to use spectacles for headache, but after practicing yoga, I stopped using spectacles" (Female, Age 14)

1. Change in appetite:

Appetite was also one of the most common problems reported by the participants. Many of them reported having either low appetite or heavy appetite.

1. Some participants said to have skipped food many times due to lack of appetite, whereas there was intense craving for food for other participants. Yoga has helped them correct their appetite pattern and make their appetite more balanced.

One participant who skipped afternoon and evening food days had reported a significant increase in his appetite, thereby having three meals a day properly.

"Earlier I had food only in the morning, mostly I skip afternoon and evening food because of poor appetite but now my appetite has increased, and I am eating food three times a day" (Male, Age 11).

On another level, another participant who was craving food because of a heavy appetite said that food cravings reduced after yoga practice.

"I used to feel very hungry by noon, after 12 it is difficult for me to resist, but now I feel that craving reduced after yoga practice" (Male, Age 15)

1. Sleep Quality:

Some participants reported having difficulty sleeping early, waking up early in the morning, getting haunting dreams about their parents, disturbed sleep, and feeling sleepy during the day. Yoga has helped them improve their sleep quality and provides deep rest to them. Participants reported being sleeping early in the night, able to wake up early in the morning quickly, feeling active throughout the day, getting sound sleep, and reduced haunting dreams.

One participant has reported that he was free from the traumatic dreams he had been experiencing.

I used to experience a lack of sleep and feel sleepy throughout the day. After yoga sessions, sleep has improved with fewer or no frightening dreams, and I feel more active during the day." (Male, Age 13)

Another participant who was said to be missing his family was getting proper sleep after the yoga program.

"I was not able to sleep properly with my mother in my dreams; now I can sleep peacefully" (Female, Age 14)

Theme 2: Stress Management:

Another major issue reported by the participants in their daily activities is exam stress, classroom stress, and worrying about the future. After yoga intervention, they managed their stress effectively, leading a more confident and calm life.

One participant who was very nervous regarding exams said that

"Exam stress was heavy before, I feel nervous during exam moment, and I sweat a lot during exams, but in the last test, I managed my stress and performed better" (Female, Age 13).

Similar insights from another participant saw who was very stressed regarding exams and tried to skip school during the exam day.

"My exam tension was very high earlier, I used to skip the school on the day of exams, but this time I wrote exam very well without any stress" (Male, Age 13)

Theme 3: Social Interactions and stage fear

The participants mainly reported feelings of inhibition, low self-esteem, and suppressing talents because of stage fear. With the help of yoga, some came out of stage fear and inhibitions, feeling more confident about themselves, thereby improving their self-esteem.

One participant who has good dancing skills but cannot showcase his talent due to stage fear said that now he feels confident and wants to try dancing on the stage.

"I love dancing, and I am a good dancer, but I dance only in front of my close friends; even though I get the opportunity to dance on the stage, I never do because of stage fear. After yoga sessions, the confidence level has improved, and I feel ready to try dancing on the stage" (Male, Age: 13)

Similar insights from another participant regarding public speaking opined that he is willing to go and talk in front of the people on the stage.

"compared to earlier days, now I feel I can speak in front of people, next Saturday I am preparing for a speech on Dr. A.P.J Abdul kalam in my school, and I am feeling confident about it" (Male, Age 11)

Discussions:

Paired sample T-test proved that depression ($p < 0.01$) and anxiety ($p < 0.01$) reported significant change after four weeks of yoga intervention. Also, the study reported improved physical health, managing stress, improved social interactions, and reduced stage fear.

The mixed-method study design helped explore the broad spectrum of how yoga impacted the overall well-being. Especially findings showed changes like reduction in body and stomach pain, fever, cough, and headache, having a balanced appetite, improved sleep quality, improved stress management, improved social interactions, and reduced stage fear. The study results show that the benefits of yoga are holistic and easy to adopt and internalize.

The possible mechanism behind the change may be reducing stress levels by suppressing the sympathetic activity through downregulation of the Hypothalamic Pituitary Axis.

Comparison with earlier findings:

The results from this study were consistent with other studies on orphan children wherein they have explored similar and other dimensions of well-being like anxiety & depression (Ravishankar Tejvani, Kashinath G. Metri, Jyotsna Agrawal, 2017), Quality of life (Kumar, 2018), physical fitness (Purohit et al., 2016a) and loneliness (Purohit et al., 2016b)

Study Strength:

This study on residential care children using a mixed design with single group pre and post-study methods has helped explore the holistic dimensions on which yoga can impact.

Limitation of the study:

The limitation of the study is the lack of a control group and having less sample size. Also, there is no control over the other physical activities of the children during the intervention period. The intervention period is just four weeks. The longitudinal study should give more information on the long-standing impact of yoga on the wellness of children.

Suggestions for future study:

Future studies can be done with an active control group and a larger sample size. Also, it is recommended to do a long-term study with follow-up procedures.

Conclusion

The present study has explored the impact of four weeks of yoga intervention on the overall well-being of children living in residential care. It has demonstrated that yoga has a significant impact and benefits residential care children. This study has allowed the participants to speak their voices regarding the experience and effect of yoga. The program overall has improved their physical, mental and emotional health status.

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