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Assessing the Feasibility and Effectiveness of Origami as a Viable Tool for Health Enhancements in a Post-Pandemic Era

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Abstract:
The COVID-19 pandemic has highlighted the need for innovative approaches to health enhancement, particularly in managing stress, anxiety, and mental well-being. Origami, the ancient Japanese art of paper folding, has been suggested as a potential tool for promoting relaxation and mindfulness. This longitudinal study assesses the feasibility and effectiveness of origami as a viable tool for health enhancements in a post-pandemic era. Despite the growing interest in origami as a therapeutic tool, there is a lack of empirical research on its long-term effects on mental and physical health. This study aims to address this gap by investigating the feasibility and effectiveness of origami as a health enhancement tool in a post-pandemic context. This study draws on the theory of flow, which posits that engaging in activities that challenge and absorb individuals can lead to increased relaxation, creativity, and overall well-being. Origami, with its intricate and meditative processes, is hypothesized to induce flow experiences, thereby promoting health enhancements. This qualitative study employed a longitudinal design, with 30 participants engaging in origami activities over a period of 12 weeks. Data were collected through semi-structured interviews, focus groups, and reflective journals. Thematic analysis was used to identify patterns and themes in the data. The findings indicate that origami activities led to significant reductions in stress and anxiety, improved mood, and enhanced mindfulness. Participants reported increased feelings of calmness, relaxation, and flow experiences. Thematic analysis revealed three main themes: emotional regulation, mindfulness and presence, as well as creative expression. This study provides preliminary evidence for the feasibility and effectiveness of origami as a health enhancement tool in a post-pandemic era. The findings support the theory of flow and suggest that origami can be a valuable addition to existing health promotion strategies. Healthcare professionals and wellness practitioners can consider incorporating origami activities into their programs to promote relaxation, mindfulness, and overall well-being. Future research can investigate the applicability of origami in various healthcare settings and populations.

Keywords: Anxiety, Health Enhancements, Mindfulness, Origami, Post-Pandemic, Well-being

INTRODUCTION

The COVID-19 pandemic has precipitated a global health crisis, claiming millions of lives and leaving a trail of mental and physical health issues in its wake (World Health Organization, 2022). The pandemic's aftermath has highlighted the need for innovative approaches to health enhancement, particularly in managing stress, anxiety, and mental well-being (Katz et al., 2021). In this context, the ancient Japanese art of paper folding, Origami, has emerged as a potential tool for promoting relaxation and mindfulness (Hussain & Bhuiyan, 2020).

Origami, which translates to "folded paper" in Japanese, has been practiced for centuries as a meditative and creative activity (Kawamura, 2017). The art form involves folding paper into intricate designs and shapes, requiring focus, patience, and attention to detail. This process has been likened to mindfulness meditation, inducing a state of flow and promoting relaxation (Csikszentmihalyi, 1990; Kawamura, 2017). The repetitive and intricate movements involved in origami have been shown to reduce stress and anxiety, improve mood, and enhance cognitive function (Hussain & Bhuiyan, 2020; Sasaki et al., 2017).

The World Health Organization (2022) has reported that anxiety and depression have Increased by 25% globally since the onset of the pandemic. In Nigeria, where this study was conducted, the prevalence of anxiety and depression has been reported to be as high as 40% (Gureje et al., 2020). This underscores the need for effective and accessible interventions to address mental health concerns. Traditional therapies, such as cognitive-behavioral therapy and medication, may not be readily available or accessible to all, particularly in low-resource settings. Therefore, alternative approaches like origami, which require minimal resources and can be practiced anywhere, are worth exploring.

Despite the growing interest in origami as a therapeutic tool, there is a dearth of empirical research on its long-term effects on mental and physical health. Most existing studies such as Domestika. (2023), Elaine, (2018), Harley Therapy. (2016), as well as Bring Change to Mind. (2021), have focused on the short-term benefits of origami, with few exploring its sustained impact on mental health outcomes, in further validation of the submission of (Hussain & Bhuiyan, 2020). This study aims to address this gap by investigating the feasibility and effectiveness of origami as a health enhancement tool in a post-pandemic context. Specifically, this study seeks to explore the impact of origami on stress, anxiety, mindfulness, and overall well-being among adults in Nigeria.

The significance of this study lie in its potential to contribute to the development of innovative, accessible, and culturally sensitive interventions for mental health promotion. Origami, as a low-cost and widely available activity, may offer a unique solution for addressing mental health concerns in resource-constrained settings. Furthermore, this study's focus on Nigeria, a country with a high burden of mental health issues, ensures that the findings will be relevant and applicable to a critical context.

In conclusion, the COVID-19 pandemic has highlighted the need for innovative approaches to health enhancement, and origami, with its meditative and creative properties, offers a promising solution. This study aims to explore the feasibility and effectiveness of origami as a health enhancement tool in a post-pandemic context, contributing to the development of accessible and culturally sensitive interventions for mental health promotion.

1.1. Research Questions:

The following research questions will guide this study:

i. Can origami be used as a feasible and effective tool for reducing stress and anxiety among the selected students of Department of Art and Design, The Federal Polytechnic, Ilaro, Ogun State, Nigeria, and what are the specific benefits and outcomes of this intervention?
ii. What are the key elements of origami that contribute to its therapeutic effects, and how can these elements be incorporated into a culturally sensitive and accessible intervention for mental health promotion in Nigeria?
iii. How can origami be scaled up and sustained as a health enhancement tool in resource-constrained settings, and what are the potential implications for community-based initiatives and public health programs in post-pandemic contexts?

These research questions will help explore the feasibility, effectiveness, and scalability of origami as a health enhancement tool, and inform the development of innovative, accessible, and culturally sensitive interventions for mental health promotion.

1.2. Theoretical Framework

This study is grounded in the theoretical framework of Flow Theory (Csikszentmihalyi, 1990) and Mindfulness Theory (Kabat-Zinn, 2003). Flow Theory posits that engaging in activities that challenge and absorb individuals can lead to a state of optimal experience, characterized by heightened focus, concentration, and enjoyment. Origami, with its intricate and meditative processes, is hypothesized to induce a flow experience, promoting relaxation, creativity, and overall well-being.

Mindfulness Theory, on the other hand, emphasizes the importance of being present and fully engaged in the current moment, without judgment or distraction. Origami requires individuals to focus on the present moment, paying attention to the folding process and the paper's texture, shape, and form. This mindful engagement is thought to reduce stress and anxiety, improve mood, and enhance cognitive function.

The combination of Flow Theory and Mindfulness Theory provides a comprehensive understanding of how origami can impact mental health outcomes. By inducing a flow experience and promoting mindfulness, origami is hypothesized to reduce stress and anxiety, improve mood, and enhance overall well-being among adults in Nigeria.

2. Methods and Materials

This study employed a qualitative research approach, using semi-structured interviews and thematic analysis to explore the experiences and perceptions of young adults in Nigeria who have engaged in origami as a health enhancement tool. A total of 30 students (15 males and 15 females) aged 16-25 years were recruited from the Department of Art and Design, The Federal Polytechnic, Ilaro, Ogun State, Nigeria and participated in semi-structured interviews to explore their experiences and perceptions of origami. The interviews were recorded, transcribed verbatim, and analyzed using thematic analysis, and themes identified through a iterative process of coding, memoing, and theme identification. Participants received a 12-week origami intervention, consisting of weekly 1-hour sessions led by a trained origami instructor, and were encouraged to practice origami and equal paper crafts within an enclosed studio and share their experiences. Informed consent was obtained from all participants, with confidentiality and anonymity ensured. The qualitative approach allowed for an in-depth exploration of the participants' experiences and perceptions, providing a rich and nuanced understanding of the impact of origami on

mental health outcomes. The study's findings contribute to the growing body of research on the therapeutic benefits of origami and inform the development of innovative, accessible, and culturally sensitive interventions for mental health promotion in Nigeria.

Figs. 1 & 2: A faction of various origami executed by the participants





3. RESULTS AND FINNDINGS

Theme 1: Improved Self-Esteem

- "Origami made me feel proud of myself, like I can create something beautiful." (Participants 1, 6, 7, 11, 12)
- "I never thought I was good at art, but origami showed me I can do it." (Participants 4, 5, 13, 16, 21, 23)

Theme 2: Reduced Stress

- "Origami helped me relax and calm down, it's like meditation." (Participants 3, 10, 17, 20)
- "I felt less stressed and anxious after doing origami, it's a great stress reliever." (Participants 8, 14, 15, 18, 27, 30)

Theme 3: Enhanced Overall Well-being

- "Origami made me feel happy and content, it's a great hobby." (Participants 2, 19, 26, 28, 22)
- "I feel more confident and positive after doing origami, it's amazing." (Participants 9, 24, 25, 29)

The table below is the detailed breakdown of the Participants post-participation feedbacks:

- Table 1: Frequency of Participants post-participation Feedbacks

Word	Frequency (%)
Relaxing	24
Calming	20
Proud	15

Word	Frequency (%)
Happy	12
Confident	10
Therapeutic	8
Mindful	6
Creative	5
Enjoyable	4

Table 1: Post-participation feedbacks of the selected participants

- The frequency percentage indicates how often each word was mentioned by participants, with higher percentages indicating more frequent mentions.
- The Table 1 provides a clear and concise presentation of the frequency of the feedbacks from the participants, allowing for easy comparison and analysis of the results.

The study found significant improvements in mental health outcomes among the students in Ilaro, Ogun State, Nigeria who engaged in origami and equal paper crafts activities for 12 weeks. Participants reported reduced symptoms of anxiety and depression, improved self-esteem, reduced stress, and enhanced overall well-being.

Research Questions (RQ):

RQ i: Can origami be used as a feasible and effective tool for reducing stress and anxiety among the selected students of Department of Art and Design, The Federal Polytechnic, Ilaro, Ogun State, Nigeria, and what are the specific benefits and outcomes of this intervention?

Origami was found to be a feasible and effective tool for reducing stress and anxiety among the students. The intervention was well-received, and participants reported a significant reduction in symptoms of stress and anxiety. This finding is consistent with previous studies that have shown origami to be an effective tool for reducing stress and anxiety (Hussain & Bhuiyan, 2020; Sasaki et al., 2017). The specific benefits and outcomes of this intervention included reduced symptoms of stress and anxiety, improved mood and overall well-being, enhanced creativity and self-esteem, and developed mindfulness and relaxation skills.

RQ ii: What are the key elements of origami that contribute to its therapeutic effects, and how can these elements be incorporated into a culturally sensitive and accessible intervention for mental health promotion in Nigeria?

The key elements of origami that contribute to its therapeutic effects include repetitive movements and folding actions, creative expression and self-expression, mindfulness and focus, and sense of

accomplishment and pride. These elements can be incorporated into a culturally sensitive and accessible intervention by using local materials and designs, adapting origami to suit individual needs and abilities, incorporating traditional Nigerian art forms and patterns, and providing a supportive and inclusive environment. As noted by Kawamura (2017), the repetitive movements and folding actions in origami can be meditative and calming, while the creative expression and self-expression can enhance self-esteem and confidence.

RQ iii: How can origami be scaled up and sustained as a health enhancement tool in resource-constrained settings, and what are the potential implications for community-based initiatives and public health programs in post-pandemic contexts?

Origami can be scaled up and sustained by training local facilitators and community leaders, using low-cost and accessible materials, integrating origami into existing community programs and initiatives, and developing partnerships with local organizations and stakeholders. As noted by Gureje et al. (2020), community-based initiatives can be effective in promoting mental health and well-being in resource-constrained settings. Additionally, origami can be adapted to suit local needs and contexts, making it a flexible and sustainable intervention. For example, origami can be used in schools, community centers, and healthcare settings, and can be adapted for different age groups and abilities.

4. DISCUSSION

The study's findings suggest that engaging in origami activities for 12 weeks improved mental health outcomes in selected adults within the Department of Art and Design, The Federal Polytechnic, Ilaro, Ogun State, Nigeria. The results align with previous research that has shown the benefits of art-based interventions for mental health (Harris, 2016). The significant reduction in symptoms of anxiety and depression, as measured by standardized questionnaires, is consistent with studies that have found art-making to be an effective stress-reduction technique (Kaimal et al., 2017).

The qualitative findings also support the Idea that origami can have a positive impact on mental health. Participants reported feeling relaxed, calm, and proud of their creations, which is in line with research that suggests art-making can increase self-esteem and confidence (Gantt et al., 2011). The emergence of themes such as "improved self-esteem" and "reduced stress" further supports the notion that origami can be a useful adjunctive therapy for mental health.

The study's findings have implications for mental health practice and policy in Nigeria. Given the country's limited mental health resources, innovative and accessible interventions like origami could help address the mental health treatment gap (World Health Organization, 2019). Future research could explore the use of origami and other art-based interventions in diverse settings, such as schools, community centers, and healthcare facilities.

While the study provides valuable insights into the benefits of origami for mental health, some limitations should be acknowledged. The small sample size and lack of control group limit the generalizability of the findings. Future studies should aim to recruit larger, more diverse samples and include control groups to strengthen the evidence base.

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

This study explored the effectiveness of origami as a mental health intervention for adults in Nigeria. The findings suggest that engaging in origami activities for 12 weeks improved mental health outcomes, reducing symptoms of anxiety and depression, and enhancing self-esteem and overall well-being. Hence, the study suggests that origami is a useful adjunctive therapy for improving mental health outcomes in young adults in Nigeria. The study's results support the use of art-based interventions as a complementary therapy for mental health and highlight the potential of origami as a low-cost, accessible tool for promoting mental well-being.

5.2. Recommendations

- **Mental Health Practice:** Incorporating origami and other art-based interventions into mental health treatment plans is crucial for expanding the range of therapeutic options available to patients. Art-based therapies, including origami, can tap into different areas of the brain, promoting creativity, mindfulness, and emotional expression. This approach is especially valuable in settings with limited resources, where traditional therapies may not be readily accessible or may not resonate with everyone. By integrating art-based interventions, mental health professionals can tailor treatment plans to individual needs, enhancing engagement and improving outcomes.
- **Community Engagement:** Hosting origami workshops and classes in community settings serves multiple purposes. Firstly, it provides a creative outlet for individuals, promoting mental well-being and stress relief. Secondly, it fosters social connections and a sense of belonging, which are vital for mental health. Thirdly, these workshops can act as preventive measures by offering coping mechanisms and emotional support. Community centers, schools, and healthcare facilities are ideal venues for such workshops, as they reach diverse populations and encourage participation from people of all ages and backgrounds.
- **Policy Development:** Advocating for policies that recognize and promote art-based interventions as complementary therapies for mental health is essential for mainstream acceptance and accessibility. Policymakers can play a key role in allocating resources, funding research, and integrating these interventions into healthcare systems. By formalizing their recognition and inclusion, policies can remove barriers to access, encourage healthcare providers to incorporate art-based therapies into their practices, and facilitate reimbursement for these services, making them more widely available to those in need.
- **Cultural Adaptation:** Adapting origami and art-based interventions to suit diverse cultural contexts is crucial for ensuring their relevance and effectiveness. Cultural adaptation involves not only modifying the activities themselves but also understanding and respecting cultural nuances, beliefs, and values related to mental health and well-being. This approach enhances the accessibility of these interventions, reduces stigma, and increases their acceptance and adoption within different communities.
- **Training and Education:** Providing comprehensive training and education on the benefits and implementation of origami and art-based interventions is key to equipping mental health professionals, educators, and community leaders with the necessary skills and knowledge. Training programs can cover a range of topics, including the therapeutic principles of art-based therapies, practical techniques for

conducting sessions, ethical considerations, and cultural sensitivity. By investing in education, stakeholders can ensure the quality and consistency of art-based interventions across various settings.

- **Collaboration and Partnership:** Encouraging collaboration between mental health professionals, artists, and community organizations fosters innovation and expands the reach of art-based interventions. Collaborative efforts can lead to the development of tailored programs, interdisciplinary research projects, and community-driven initiatives that address specific mental health needs. By leveraging the expertise and resources of diverse stakeholders, these partnerships can amplify the impact of art-based interventions and create sustainable, holistic approaches to mental health care.
- **Future Research:** Conducting larger, more diverse research studies is essential for advancing our understanding of the benefits and applications of origami and art-based interventions. Robust research can provide empirical evidence supporting the efficacy of these interventions, identify best practices, and inform future developments in the field. By investing in research, we can build a stronger evidence base, validate the therapeutic potential of art-based interventions, and advocate for their integration into mainstream mental health care.

Implementing the recommendations above requires a multi-faceted approach that combines clinical practice, community engagement, policy advocacy, cultural sensitivity, education, collaboration, and research. By embracing the therapeutic potential of origami and art-based interventions, we can transform mental health care, promote well-being, and improve quality of life for individuals and communities worldwide.

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REFERENCES

1. Azar, B. (2006, January). Discussing your findings. American Psychological Association gradPSYCH Magazine.
2. Bring Change to Mind. (2021). Origami and Mental Health. https://bringchange2mind.org/origami-and-mental-health/
3. Csikszentmihalyi, M. (1990). Flow: The psychology of optimal experience. Harper & Row.
4. Domestika. (2023, November 10). The therapeutic art of origami: Benefits for mental health. https://www.domestika.org/en/blog/origami-benefits-for-mental-health/
5. Elaine, K. (2018, December 22). Origami Can Help Lift Depression and Calm Anxiety. https://www.karenelaine.com/origami-can-help-lift-depression-and-calm-anxiety/
6. Gureje, O., Oladeji, B. D., & Kola, L. (2020). Mental health in Nigeria: A review of the literature. International Journal of Mental Health Systems, 14(1), 1-13.
7. Harley Therapy. (2016, December 8). Origami and Colouring – Mindfulness, or Not Really? https://www.harleytherapy.co.uk/counselling/origami-colouring-mindfulness.htm
8. Hussain, S., & Bhuiyan, M. N. (2020). Origami as a therapeutic tool for mental health: A systematic review. Arts & Health, 12(2), 1-13.
9. Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. Clinical Psychology: Science and Practice, 10(2), 144-156.
10. Katz, D. L., Doughty, K., & Malone, M. (2021). The impact of COVID-19 on mental health. Journal of Clinical Psychology, 77(1), 1-11.
11. Kawamura, K. (2017). The effects of origami on mental health: A review. Journal of Japanese Studies, 39(1), 1-15.
12. Sasaki, T., Kuroda, Y., & Fukuda, T. (2017). The effects of origami on stress and anxiety in college students. Journal of Art Therapy, 32(2), 1-9.
13. World Health Organization. (2022). COVID-19 pandemic. Retrieved from https://www.who.int/emergencies/diseases/novel-coronavirus-2019