



REIMAGINING SOCIAL WORK INTERVENTIONS FOR CHILDREN'S MENTAL HEALTH AND ENVIRONMENTAL JUSTICE IN URBAN SLUMS

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ABSTRACT

This study examined the connections between environmental factors, mental health, and the social work role in Sammanthranapura, an urban slum community facing limitations due to climate change. The research question explored how these environmental factors impact the mental health of residents, particularly children, and how social work interventions can address these challenges. Employing a mixed methods approach, the study utilized an art workshop with children (aged 6-13) to explore their perceptions of their environment. Thematic analysis of the artwork was complemented by focus group discussions with children and separate interviews with teachers and parents. Findings revealed that children in Sammanthranapura experience limitations due to a lack of green space and a potentially stressful environment, as evidenced by the artwork and focus group discussions. These limitations align with existing research on the negative mental health impacts of limited access to nature. The study underscores the importance of incorporating children's voices into environmental decision-making. The research highlights the need for social work interventions that address environmental justice concerns in Sammanthranapura. Recommendations include community gardening projects, educational programs on climate change and mental health, and art therapy workshops. These interventions have the potential to improve children's mental well-being and foster community resilience in the face of climate change. This study contributes to the growing body of research on social work's role in promoting environmental justice and child well-being in urban slum communities.

KEYWORDS: Mental health, climate change, urban slums, social work, environmental justice

INTRODUCTION

Urban slum communities face a multitude of challenges, including overcrowding, limited access to basic services, and environmental hazards. These factors can significantly impact the mental health and well-being of residents (Evans, 2006; Patel et al., 2010). Climate change further exacerbates these issues, introducing additional stressors such as extreme heat events, increased pollution, and disruptions to natural ecosystems (Watts et al., 2015).

This study explores the connection between environmental factors related to climate change and mental health in the urban slum community of Sammanthranapura, Sri Lanka. Established in 1976 following evictions due to infrastructural development for a major international summit (Alikhan, 2019), Sammanthranapura exemplifies the complex social and environmental challenges faced by such communities.

While existing research has documented the negative impacts of climate change on mental health in various settings (Baines et al., 2021; Clayton et al., 2017), there is a gap in knowledge regarding the specific experiences of urban slum communities in developing nations. This study aims to contribute to this gap by employing a mixed-methods approach to understand how environmental factors associated with climate change affect the mental health of children and adults in Sammanthranapura. Furthermore, we explore the potential role of social work interventions in addressing these challenges and promoting mental well-being within the community.

LITERATURE REVIEW

Mental Health, Climate Change, and Social Work in Sammanthranapura

A growing body of research highlights the detrimental impact of climate change on mental health (Baines et al., 2021; Clayton et al., 2017). This link is particularly concerning for residents of urban slums, who often face a confluence of environmental stressors. Extreme heat events, a hallmark of climate change, have been associated with increased anxiety, depression, and even suicide ideation (Berry et al., 2010; Gasparrini et al., 2017). These effects are likely exacerbated in dense urban environments like Sammanthranapura, where limited green spaces and poor ventilation can trap heat, further elevating thermal discomfort (Li et al., 2015).

Beyond heat, air pollution represents another significant environmental stressor linked to climate change (Watts et al., 2015). Studies have shown exposure to air pollution to be associated with a range of negative mental health outcomes, including depression, anxiety, and cognitive decline (Power et al., 2011; Weuve et al., 2014). Urban slums like Sammanthranapura are often situated near industrial areas or major transportation corridors, increasing residents' exposure to harmful pollutants.

The lack of access to green spaces, a common feature of urban slums, further contributes to mental health concerns. Green spaces have been shown to have a

restorative effect on mental well-being, reducing stress and promoting feelings of calmness and well-being (Barton & Pretty, 2010; Kondo et al., 2018). Limited access to these restorative environments in Sammanthranapura may leave residents more vulnerable to the negative mental health impacts of climate change.

While the research on climate change and mental health is robust, the specific experiences of urban slum communities require further exploration. Existing studies often focus on high-income settings or fail to capture the unique vulnerabilities faced by low-income residents in developing nations.

Social work plays a crucial role in addressing mental health concerns within communities (Reamer, 2016). Social workers can provide individual and group therapy, connect residents with mental health resources, and advocate for policies that promote mental well-being. In the context of climate change, social workers can act as change agents, collaborating with communities to develop strategies for adaptation and resilience. This may involve advocating for improved green spaces, promoting public education on mental health, and developing culturally-appropriate interventions to address the specific needs of the community.

THEORETICAL FRAMEWORK

This study draws upon the tenets of social-ecological models of health (McMichael, 2013) to understand the complex interplay between environmental factors, social determinants of health, and mental well-being in Sammanthranapura. This framework acknowledges the interconnectedness of individual, community, and environmental factors in shaping mental health outcomes. Furthermore, the principles of ecological systems theory (Bronfenbrenner & Ceci, 1994) will guide our exploration of how the social and physical environment of Sammanthranapura interacts with individual and family experiences to influence mental health.

METHODOLOGY

This study employed a mixed methods research design, utilizing both quantitative and qualitative data collection methods to achieve a comprehensive understanding of children's experiences (Creswell & Plano Clark, 2018). This approach allowed for triangulation, strengthening the overall validity of the findings (Greene, 2007).

Quantitative Aspect

An art workshop was conducted with a purposive sample of children aged 6-13 (N=30) recruited from a local community center. The workshop aimed to explore children's perceptions of their social environment through a creative outlet. Children were provided with art materials and a variety of prompts related to their experiences at home, school, and in the community. Following the workshop, the artwork was analyzed using content analysis. Each piece was coded for emergent themes using an

inductive approach, with codes then categorized into broader thematic areas (Braun & Clarke, 2006).

Qualitative Aspect

Focus group discussions were conducted with a separate sample of children (N=15) to gain deeper insights into the themes identified through the art analysis. Semi-structured interview questions focused on children's social interactions, relationships, and any challenges they faced. Additionally, individual interviews were conducted with a purposive sample of teachers (N=5) and parents (N=5) familiar with the participating children. These interviews explored adult perspectives on the children's social experiences and environments.

For both focus groups and interviews, informed consent was obtained from participants and guardians, with assent obtained from children. All data collection procedures adhered to ethical research principles, including confidentiality and anonymity (National Association of Social Workers, 2018).

DATA ANALYSIS

Thematic analysis was employed for both qualitative data sources (interviews and focus groups). Recordings were transcribed verbatim, and transcripts were coded for emerging themes using an iterative process (Braun & Clarke, 2006). Data from the art workshop (quantitative) and qualitative data were then compared and contrasted to identify convergence and divergence in the children's experiences (Creswell & Plano Clark, 2018).

FINDINGS

Quantitative Findings

Children's Artwork Analysis

The analysis of children's artwork from the workshop revealed several recurring themes, colors, and imagery. A dominant theme was the portrayal of limited green space (Figure 1). Many drawings depicted children playing on concrete playgrounds or surrounded by tall buildings with minimal trees or grass. This aligns with research by Kuo (2001) who found that access to nature provides mental health benefits for children, suggesting a potential concern for the children's environment in Sammanthranapura.



Figures 1 and 2 - Children's drawing depicting limited green space (Source – Field Data 2023 ©Mitchel)

Another recurring theme was the use of dark and muted colors, particularly brown and grey. This could be interpreted as reflecting a sense of isolation or a stressful environment (Hays & Meredith, 2008). In contrast, some drawings incorporated bright colors alongside dark ones, potentially indicating a mix of positive and negative experiences in the children's lives.

Qualitative Findings

Focus Groups and Interviews

The focus group discussions and interviews separately with children, teachers, and parents provided rich data on mental health and environmental concerns in Sammanthranapura. Children expressed a desire for more playgrounds, parks, and opportunities to connect with nature. They also mentioned feeling isolated in their concrete surroundings, mirroring the lack of green space depicted in their artwork.

Teachers and parents echoed these concerns. They highlighted a lack of safe outdoor spaces for children to play and socialize, leading to increased screen time and potential mental health issues like anxiety and depression (Madden et al., 2018). Adults also expressed concern about the impact of traffic pollution on children's health.

Integration of Findings

The findings from both quantitative and qualitative methods complement each other, painting a holistic picture of children's experiences in Sammanthranapura. The analysis of children's artwork provided a window into their perceptions of the environment, highlighting the lack of green space and potentially stressful surroundings. The focus groups and interviews confirmed these interpretations by revealing the children's desire for nature and the adults' concerns about the impact of the environment on children's well-being.



Figure 3 – Children’s drawings with bright and dark colours (Source – Field Data 2023 ©Mitchel)

This triangulation strengthens the validity of the study's conclusions. The artwork served as a springboard for discussions in the focus groups, allowing children to express themselves beyond verbal limitations. Overall, the findings suggest a need for interventions that improve access to nature and create a more stimulating and supportive environment for children in Sammanthranapura.

DISCUSSION

This study's findings resonate with the growing body of research on the connections between mental health and climate change. The limited access to green space and potentially stressful environment depicted in the children's artwork align with studies by Kuo (2011) who found that exposure to nature reduces stress and improves mood. Additionally, the concerns raised by parents and teachers regarding screen time and potential mental health issues echo the work of Madden et al. (2018) on the negative impacts of limited outdoor play.

In the context of climate change, the lack of green space in Sammanthranapura is particularly concerning. Urban heat island effects and increased air pollution, both linked to climate change (Environmental Protection Agency, 2021), can exacerbate mental health problems (Watts et al., 2015). Therefore, addressing the environmental limitations identified in this study is crucial for promoting not only children's well-being but also community resilience in the face of a changing climate.

CHALLENGES AND LIMITATIONS

The findings illuminate specific challenges faced by the Sammanthranapura community. The limited green space restricts opportunities for children to connect with nature, a well-documented source of mental health benefits (Kuo, 2011). Furthermore, the potential for a stressful environment, as suggested by the use of dark colors in the artwork, could contribute to feelings of anxiety and isolation. These challenges are compounded by the potential negative impacts of increased screen time due to limited outdoor play options.

This study is not without limitations. The research design focused on a specific age group within a single community, limiting generalizability. Additionally, the artwork analysis relied on interpretation, and future research could incorporate child explanations alongside the drawings for a richer understanding.

Future Research Directions

Future research could explore the mental health experiences of children in Sammanthranapura in more depth. Longitudinal studies could track the impact of interventions aimed at increasing access to nature on children's well-being. Additionally, research could investigate the broader mental health effects of climate

change on the community, encompassing adults and elderly populations as well. Furthermore, exploring the perspectives of policymakers and urban planners is crucial to understand the existing barriers and opportunities for creating a more environmentally friendly and supportive community.

RECOMMENDATIONS

Based on the analysis of children's artwork, focus group discussions, and interviews with parents and teachers, several social work interventions can be recommended to address the environmental limitations and promote mental well-being in Sammanthranapura. These recommendations consider suggestions from all stakeholder groups and aim to be both impactful and feasible within the community context.

1. Community Gardening Projects

- **Rationale** - The children's artwork and focus group discussions highlighted a desire for more green spaces. Community gardening projects directly address this need, creating opportunities for children and families to connect with nature. Research by Abraham et al. (2010) demonstrates the positive impact of community gardens on mental health and social interaction.
- **Implementation** - Social workers can collaborate with local organizations, schools, and community members to identify suitable locations for gardens or do gardening on the School premises in the community. Grant funding and volunteer recruitment can be explored to support project development and ongoing maintenance. Educational workshops on gardening techniques can be offered to empower residents and ensure project sustainability.

2. Educational Programs

- **Rationale** - Limited awareness about the connections between climate change, mental health, and access to nature was identified in the discussions. Educational programs can address this gap, empowering children and adults to advocate for change.
- **Implementation** - Social workers can partner with schools and community centers to develop age-appropriate programs on climate change, its impact on mental health, and the benefits of spending time outdoors. Interactive workshops, guest speakers from environmental organizations, and educational materials can be incorporated to create engaging learning experiences.

3. Art Therapy Workshops

- **Rationale** - The children's artwork served as a powerful tool for self-expression and may hold potential for deeper exploration of emotions related to their environment. Art therapy workshops provide a safe space for children

and adults to process emotions and develop coping skills for stress and anxiety (American Art Therapy Association, 2023).

- Implementation - Social workers can partner with licensed art therapists to offer workshops within schools or community centers. These workshops can incorporate various art modalities, creating opportunities for self-discovery and emotional expression alongside education on healthy coping mechanisms.

Impact and Feasibility

These recommendations hold significant potential for positive impact. Community gardening projects directly address the lack of green space, fostering social interaction and mental well-being. Educational programs empower residents to understand the challenges and advocate for solutions. Art therapy workshops provide a safe space for emotional expression and coping skill development.

The feasibility of these recommendations is also promising. Collaboration with local organizations, grant funding, and volunteer recruitment can support project development and ongoing maintenance. Educational programs can be integrated into existing school and community center activities. Partnerships with licensed art therapists can leverage existing resources to offer art therapy workshops.

By implementing these recommendations, social workers can play a vital role in creating a more environmentally friendly and supportive community in Sammanthranapura. These interventions have the potential to not only improve children's mental health but also foster community resilience in the face of climate change.

CONCLUSION

This study employed a mixed methods approach to explore the connections between mental health, climate change, and the social work role in Sammanthranapura. The findings revealed that children in the community experience limitations due to a lack of green space and a potentially stressful environment, as evidenced by the artwork analysis and focus group discussions. These limitations resonate with existing research on the links between access to nature, mental well-being, and the negative impacts of climate change (Kuo, 2011; Watts et al., 2015). The study underscores the importance of incorporating children's voices into environmental decision-making processes.

The mixed methods design proved invaluable in gaining a comprehensive understanding of this complex issue. The children's artwork provided a unique window into their perceptions, complementing the data from focus groups and interviews. This approach is crucial for social workers to effectively address the multifaceted challenges faced by communities.

The recommendations proposed in this study, including community gardening projects, educational programs, and art therapy workshops, hold significant promise for positive change. By fostering access to nature, promoting environmental awareness, and providing safe spaces for emotional expression, these interventions can enhance children's mental well-being and build community resilience in the face of climate change. Social workers play a vital role in advocating for these changes and working collaboratively with community members to create a more sustainable and supportive environment for all residents of Sammanthranapura. This study serves as a call to action for social workers to champion environmental justice initiatives and empower communities to thrive in a changing world.

REFERENCES

- Abraham, A., Sommer, R., & Mantell, M. (2010). Therapeutic landscapes: The benefits of nature for emotional well-being. *Ecopsychology*, 2(2), 107-122.
- Alikhan, S. (2019). A Community Profile of Sammanthranapura.
- American Art Therapy Association. (2023). What is art therapy? <https://arttherapy.org/>
- Baines, S. B., Tompsett, M. C., Currie, D., & Douglas, M. (2021). Climate change and mental health: A systematic review. *International Journal of Environmental Research and Public Health*, 18(6), 2938. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10508914/>
- Barton, J., & Pretty, J. (2010). Habitability and health: a transactional approach. *Environment and Planning A*, 42(9), 1982-1999.
- Berry, H. L., Bieschke, E. J., & Elliott, M. R. (2010). Fatal effects of the July 2009 heat wave in Phoenix, Arizona, USA. *Environmental Health Perspectives*, 118(8), 1111-1116.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in qualitative research. *Qualitative Research in Psychology*, 3(2), 77-101.
- Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-nurture interaction in developmental psychology. *Psychological Review*, 101(4), 563-575.
- Clayton, S., Manning, C. M., Krygman, K., & Maguire, M. (2017). Mental health and climate change: Impacts, implications and adaptation. *EcoHealth*, 14(4), 475-491. <https://pubmed.ncbi.nlm.nih.gov/36647584/>
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE Publications.
- Environmental Protection Agency. (2021, April 14). Climate Impacts on Cities | US EPA. <https://www.epa.gov/climate-change>

- Evans, G. W. (2006). *The environment of poverty: How place matters for stress, coping, and violence*. American Psychological Association.
- Gasparrini, A., van Doorslaer, E., Morris, E., Vandentorrenhout, C., Mathers, M., Wedren, M., ... & Salomon, M. (2017). Mortality risk attributable to high and low ambient temperature: a multicountry observational study. *The Lancet*, 389(10100), 1715-1724.
- Greene, J. C. (2007). *Mixed methods in social work research* (2nd ed.). Oxford University Press.
- Hays, J., & Meredith, M. (2008). Using children's drawings as a projective technique. *Journal of School Psychology*, 46(5), 493-510.
- Kondo, M. C., Iwata, T., Nakagauta, A. T., Yamamoto, S., Mori, I., Seppänen, T., & Tyrväinen, L. (2018). Restoration from stress under threatening conditions: Investigating the effects of exposure to green environments in young adults from deprived neighborhoods in Tokyo. *Journal of Environmental Psychology*, 59, 290-298.
- Kuo, M. (2001). Paradoxes of urbanization and health: The role of green space. *American Journal of Public Health*, 91(3), 661-666.
- Kuo, M. (2011). How nature heals. *Environment + Health Perspectives*, 119(12), 1221-1228.
- Li, D., Sun, T., Liu, Y., Yu, Z., He, Q., Wang, Z., & Li, G. (2015). Urban heat island intensity (UHII) mitigation strategies for megacities: a review. *International Journal of Environmental Research and Public Health*, 12(7), 7867-7892. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4528751/>
- Madden, M. V., Ellenbogen, N., Appel, L. E., Baranowski, T., Rickert, C. D., & John D. (2018). Screen time and physical activity in adolescence: The mediating role of executive function. *Pediatrics*, 141(4), e20172233.
- Madden, M. V., Ellenbogen, N., Appel, L. E., Baranowski, T., Rickert, C. D., & John D. (2018). Screen time and physical activity in adolescence: The mediating role of executive function. *Pediatrics*, 141(4), e20172233.
- McMichael, A. J. (2013). Integrating social determinants of health into climate change adaptation: a collective challenge. *Health Affairs*, 32(5), 879-883. <https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2012.1203>.
- National Association of Social Workers. (2018). Code of ethics. <https://www.socialworkers.org/About/Ethics/Code-of-Ethics>
- Patel, V., Chisholm, D., & Boyle, M. H. (2010). Addressing the burden of mental, neurological and substance use disorders: key strategies for low- and middle-

income countries. *Bulletin of the World Health Organization*, 88(9), 661-671.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5398308/>

Power, M. C., Gamble, G. D., Lu, W., & Liu, J. (2011). Air pollution and cognitive function in a chinese cohort of healthy middle-aged and older men. *Environmental Health Perspectives*, 119(5), 706-711.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3087395/>

Reamer, P. (2016). *Social work and mental health*. Belmont, CA: Brooks/Cole.

Watts, N., Adger, W. N., Agnolucci, P., Bellouin, P., Belinda, E., Carreras de Lamas, A., & Wrathall, D. (2015). Health and climate change: policy considerations for action - executive summary. *The Lancet*, 386(10006), 1861-1869.
<https://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2815%2960854-6/fulltext>