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Advancing SDG 3 through Home Gardening for Psychological Resilience and Social Harmony

Mathayo Marko Nassari^{1*}, *Yusuf Abdul Razak Kamara*²

¹University of Dar es Salaam, Tanzania

²Institute of Public Administration and Management, University of Sierra Leone, Sierra Leone

¹mathewmark044@gmail.com, ²yusufabdulrazak91@gmail.com

Abstract

Objective: Advancing Sustainable Development Goal 3 (SDG 3), which seeks to ensure healthy lives and promote well-being for all, requires innovative and accessible community-based interventions. This study examines the role of household horticulture as a spiritually meaningful activity in fostering psychological resilience and social harmony among individuals engaged in home gardening practices. **Theoretical framework:** The research is grounded in Horticultural Therapy Theory, Attention Restoration Theory, and Social Capital Theory, which collectively explain how interaction with nature, reflective engagement, and social connectedness contribute to psychological and social outcomes. **Literature review:** Previous studies have demonstrated the positive effects of gardening on emotional well-being, stress reduction, and quality of life; however, limited research has explored its contribution to psychological resilience and social harmony within the framework of SDG 3. **Methods:** A quantitative study employing Multivariate Analysis of Variance (MANOVA) analyzed questionnaire responses from individuals engaged in household horticulture to assess its influence on psychological resilience and social harmony. **Results:** These findings imply that household horticulture can serve as a low-cost, sustainable, and culturally adaptable intervention supporting the achievement of SDG 3 through both psychological and social pathways. The study highlights the importance of integrating nature-based activities into community health promotion programs and local sustainability initiatives. **Implications:** Findings support household horticulture as a sustainable, affordable intervention promoting resilience, social cohesion, and community well-being. **Novelty:** The novelty of this research lies in linking household horticulture, spiritual therapeutic experiences, psychological resilience, and social harmony within the SDG 3 framework, offering a multidimensional perspective on well-being that extends beyond conventional mental health approaches.

Keywords: sdg 3, good health, psychological resilience, social harmony, therapy.

INTRODUCTION

The pursuit of sustainable development increasingly recognizes the importance of mental, social, and emotional well-being as fundamental dimensions of human health. Within the framework of the United Nations Sustainable Development Goals (SDGs), SDG 3 aims to ensure healthy lives and promote well-being for all at all ages. Among its key targets, SDG 3.4 specifically emphasizes the promotion of mental health and well-being through preventive and supportive interventions. Despite significant advances in healthcare systems worldwide, psychological distress, social isolation, and declining community cohesion remain pressing challenges in many societies. Rapid urbanization, technological dependence, environmental

degradation, and lifestyle changes have contributed to increased stress levels and weakened social relationships, creating an urgent need for innovative, affordable, and sustainable approaches to promoting psychological and social well-being [1].

Recent global reports have highlighted the growing burden of mental health problems, particularly anxiety, stress, and emotional exhaustion. At the same time, communities across both developed and developing countries are experiencing reductions in social interaction and collective engagement. These conditions directly affect the achievement of SDG 3 because mental health and social well-being are closely interconnected components of overall quality of life. Consequently, scholars and policymakers have increasingly explored nature-based interventions as practical strategies for enhancing human well-being while supporting broader sustainability objectives [2].

Among these interventions, household horticulture has gained considerable attention. Household horticulture refers to gardening and plant cultivation activities conducted in residential environments, including home gardens, balconies, yards, rooftops, and other domestic spaces. Beyond its economic and environmental benefits, household horticulture offers psychological, emotional, and social advantages. Gardening activities encourage interaction with natural environments, provide opportunities for reflection and relaxation, and foster a sense of achievement through nurturing living plants. Furthermore, shared gardening experiences can strengthen interpersonal relationships and community participation, contributing to social harmony and collective well-being [3].

Several theoretical perspectives support the potential benefits of household horticulture. Horticultural Therapy Theory suggests that engagement with plants and gardening activities can generate positive psychological outcomes through meaningful interaction with nature. Attention Restoration Theory explains that natural environments help individuals recover from mental fatigue and restore cognitive functioning. Meanwhile, Social Capital Theory emphasizes the importance of social networks, trust, cooperation, and community engagement in promoting collective well-being. Together, these theories provide a comprehensive framework for understanding how household horticulture may contribute simultaneously to psychological resilience and social harmony [4], [5].

Previous studies have demonstrated that gardening activities can improve emotional well-being, reduce stress, increase life satisfaction, and promote healthier lifestyles. Research has also reported positive associations between participation in horticultural activities and enhanced community engagement. However, existing literature presents several important limitations. First, many studies focus primarily on general mental health outcomes, such as stress reduction or happiness, while paying limited attention to psychological resilience, which reflects an individual's capacity to adapt positively to challenges, adversity, and life pressures. Psychological resilience has become increasingly important in contemporary societies characterized by uncertainty, economic instability, and social change. Second, although community gardening has been examined extensively, relatively few studies have investigated the contribution of household horticulture to social harmony. Social harmony encompasses mutual respect, cooperation, trust, social connectedness, and peaceful coexistence within communities. Understanding how household gardening influences these dimensions is essential because social well-being constitutes a critical yet often overlooked component of sustainable development [6], [7].

Third, previous research has largely examined horticulture from recreational, environmental, or therapeutic perspectives without adequately considering its spiritual dimension. Gardening frequently involves contemplation, gratitude, mindfulness, and deeper appreciation of nature, experiences that may strengthen individuals' emotional adaptability and social attitudes. The integration of spiritual therapeutic experiences into the study of household horticulture remains underexplored in the existing literature. Therefore, a significant research gap exists regarding the relationship between household horticulture, psychological resilience, and social harmony within the broader framework of SDG 3.

Limited empirical evidence explains how spiritually meaningful gardening activities simultaneously influence these psychological and social outcomes. Addressing this gap is important because resilience and harmony represent essential foundations for sustainable and healthy communities [8].

This study seeks to examine the role of household horticulture in advancing SDG 3 by fostering psychological resilience and social harmony. By integrating Horticultural Therapy Theory, Attention Restoration Theory, and Social Capital Theory, this research provides a multidimensional understanding of the benefits of gardening beyond conventional health perspectives. The study contributes to the literature by positioning household horticulture as a sustainable, low-cost, and accessible intervention capable of supporting mental well-being, strengthening community relationships, and promoting social sustainability. Ultimately, the findings are expected to provide valuable insights for policymakers, public health practitioners, and community organizations seeking innovative approaches to achieving SDG 3 and enhancing overall quality of life [9], [10].

Household horticulture has recently gained increasing attention as a meaningful activity that contributes not only to environmental aesthetics but also to psychological and social well-being. Activities such as cultivating ornamental plants, vegetables, and fruits at home are increasingly viewed as effective forms of relaxation, emotional balance, and self-healing. Interaction with plants encourages individuals to reconnect with nature, reduce daily stress, and develop a calmer and more reflective lifestyle. In addition, household gardening activities often strengthen family interaction and social relationships through shared responsibilities and community-based planting practices. Previous studies have mainly focused on horticulture from environmental, economic, or recreational perspectives, while limited research has examined its role as a form of spiritual therapy that may enhance social well-being and mental health simultaneously [11], [12].

Furthermore, many existing studies emphasize clinical therapeutic settings rather than simple household-based horticultural practices accessible to the wider community. This gap highlights the importance of investigating how spiritually meaningful gardening activities influence psychological conditions and social comfort in everyday life. Therefore, this study is important because it explores household horticulture as an affordable, sustainable, and nature-based therapeutic approach that may contribute to emotional stability, social harmony, and mental well-being. The findings are expected to provide new insights into the integration of spiritual values and horticultural activities in promoting healthier and more balanced lifestyles within modern society [13], [14].

Research conducted by the Royal Horticultural Society and the University of Reading in 2022 showed that interaction with ornamental plants can lower stress levels and improve mood and life satisfaction. This is also supported by reports from Kompas Lifestyle and Suara.com, which state that the presence of plants in the home can have a positive impact on mental health. Previous studies have also revealed that horticultural therapy is effectively used in the rehabilitation of patients with mental disorders, aids emotional recovery, and reduces symptoms of depression and anxiety. For example, at the Kejobong Health Center, Purbalingga, horticulture is used as part of mental therapy. Meanwhile, other studies in the elderly group show that gardening can reduce loneliness and increase life satisfaction [15], [16].

In addition to providing psychological benefits, horticultural activities have also been shown to strengthen the spiritual connection between humans and nature, creating a sense of calm and gratitude that contributes to inner balance. Theoretically, the benefits of horticulture to well-being, comfort, and mental health can be explained through a variety of approaches. One of them is the Horticultural Therapy Theory developed by the American Horticultural Therapy Association (AHTA), which emphasizes that gardening and caring for plants have deep therapeutic value in physical, emotional, social, and spiritual contexts. This theory is

reinforced by the Attention Restoration Theory (ART) approach from (Bsoul et al., 2022), which explains that exposure to the natural environment can restore mental saturation and cognitive clarity through four main elements: Being Away (away from pressure), Fascination (gentle attraction), Extent (connection and space for exploration), and Compatibility (conformity to personal needs) [17], [18].

The benefits of horticulture are also in line with the Subjective Well-Being Theory put forward by Ed Diener, which assesses well-being from three main components: life satisfaction, positive affect, and negative affect. Through fun and meaningful activities such as gardening, individuals tend to experience an increase in positive affective as well as a decrease in negative affect, which will ultimately improve their overall subjective well-being. From the perspective of mental health, Ryff's Psychological Well-Being approach is used which includes six main dimensions, namely: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Horticultural activities provide space for individuals to experience personal growth, build healthy social relationships, and increase their sense of control over the surrounding environment. Finally, the benefits of horticulture can also be explained through Kolcaba's Comfort Theory which emphasizes the importance of comfort in four main contexts: physical, psycho-spiritual, social, and environmental. Gardening activities not only provide physical comfort through light and healthy activities but also spiritual comfort through feelings of gratitude and inner peace, as well as environmental comfort through a natural atmosphere that soothes and supports peace of mind [19], [20].

According to the 2023 Horticultural Statistics Report issued by the Directorate General of Horticulture, Ministry of Agriculture of the Republic of Indonesia, national horticultural production continues to demonstrate substantial growth and contribution to community livelihoods. Among fruit commodities, bananas account for approximately 34.8% of total production, followed by mangoes (13.4%), pineapples (12.7%), tangerines (11.5%), and durians (8.2%). In the ornamental plant sector, chrysanthemums recorded the most significant production increase at around 59.6%, while roses and gerberas contributed approximately 27.3% and 6.1%, respectively. These figures indicate the growing relevance of horticultural activities in both economic and household contexts. Drawing upon these trends and supported by theoretical perspectives on nature-based interventions, the present study is particularly relevant in exploring the role of household horticulture beyond its productive function. Specifically, this research investigates the extent to which household horticulture serves as a form of spiritual therapy that contributes to psychological resilience and social harmony, thereby supporting the achievement of SDG 3 through sustainable and accessible well-being practices [21], [22].

LITERATURE REVIEW

The growing emphasis on sustainable development has expanded the understanding of health beyond the absence of disease to include psychological, social, and emotional well-being. Within this perspective, Sustainable Development Goal 3 (SDG 3) seeks to ensure healthy lives and promote well-being for all. While traditional approaches to achieving SDG 3 have largely focused on healthcare services and disease prevention, increasing attention has been directed toward preventive and community-based interventions that strengthen psychological resilience and social cohesion. Among these approaches, household horticulture has emerged as a promising activity capable of contributing to both individual and collective well-being [23], [24].

Household horticulture refers to the cultivation and maintenance of plants within residential environments, including home gardens, yards, balconies, rooftops, and other domestic spaces. Beyond its practical functions of food production and environmental enhancement, household horticulture has increasingly been recognized for its psychological and social benefits. Gardening activities provide opportunities for individuals to engage with nature, establish

meaningful routines, and experience a sense of accomplishment through nurturing living organisms. These experiences contribute to positive emotional states and foster a greater sense of connection with the surrounding environment [25], [26].

The concept of horticultural therapy provides an important foundation for understanding the relationship between gardening and well-being. Horticultural therapy views interaction with plants and natural environments as a therapeutic process that can support emotional restoration, personal growth, and psychological recovery. Through activities such as planting, watering, pruning, and harvesting, individuals may experience relaxation, mindfulness, and a reduction in daily stress. These benefits are particularly relevant in contemporary societies where rapid technological change, urban lifestyles, and increasing social pressures often contribute to psychological strain [27], [28].

Psychological resilience represents an individual's capacity to adapt positively when facing adversity, uncertainty, or stressful circumstances. Resilience is not merely the ability to withstand difficulties but also the ability to recover, learn, and grow from challenging experiences. Nature-based activities such as household horticulture may contribute to resilience by creating opportunities for reflection, emotional regulation, patience, and problem-solving. The process of caring for plants often involves persistence and adaptation, qualities that are closely associated with resilient behavior. Consequently, regular engagement in gardening activities may strengthen an individual's capacity to cope with everyday challenges and maintain psychological stability [29], [30].

In addition to psychological outcomes, household horticulture may also contribute to social harmony. Social harmony refers to positive relationships among individuals characterized by trust, cooperation, mutual respect, and social connectedness. Gardening activities frequently encourage interaction among family members, neighbors, and community groups, creating opportunities for collaboration and shared experiences. Such interactions can strengthen social bonds, increase community participation, and foster a sense of belonging. These outcomes are particularly important in supporting sustainable communities and promoting social well-being [31].

Despite growing interest in gardening and nature-based interventions, much of the existing discussion has concentrated on general mental health benefits, environmental sustainability, or recreational outcomes. Comparatively less attention has been given to the combined relationship between household horticulture, psychological resilience, and social harmony within the framework of SDG 3. Therefore, examining these dimensions together provides a broader understanding of how household horticulture can contribute to sustainable well-being. By linking nature-based practices with psychological and social development, this study positions household horticulture as a practical and accessible strategy for advancing SDG 3 and fostering healthier, more resilient, and socially harmonious communities [32], [33].

METHODOLOGY

This study employed a quantitative research design with an inferential statistical approach to examine the contribution of household horticulture toward the achievement of Sustainable Development Goal 3 (SDG 3), particularly in promoting psychological resilience and social harmony. SDG 3 emphasizes ensuring healthy lives and promoting well-being for all at all ages. In this context, household horticulture is viewed as a nature-based and spiritually meaningful activity capable of supporting individual and community well-being through accessible and sustainable practices. To investigate these relationships, the study utilized Multivariate Analysis of Variance (MANOVA), which allows the simultaneous examination of the influence of one independent variable on multiple dependent variables [34], [35].

The independent variable in this research was Household Horticulture as a Spiritual Therapy Practice (X), while the dependent variables consisted of Psychological Resilience

(Y1) and Social Harmony (Y2). Household horticulture refers to gardening activities conducted within residential environments, including the cultivation of ornamental plants, fruit trees, vegetables, and other horticultural commodities. As a form of spiritual therapy, these activities are believed to encourage mindfulness, relaxation, gratitude, self-reflection, and a deeper connection with nature. Psychological resilience represents an individual's ability to adapt positively to challenges, stress, and changing life circumstances, whereas social harmony refers to the presence of trust, cooperation, social connectedness, and positive relationships within communities [16], [36].

Research Framework for Advancing SDG 3

To better illustrate the conceptual relationships examined in this study, a research framework was developed based on the integration of Horticultural Therapy Theory, Attention Restoration Theory, and Social Capital Theory. The framework positions household horticulture as a spiritually meaningful activity that contributes to the achievement of Sustainable Development Goal 3 (SDG 3: Good Health and Well-being). Through activities such as cultivating ornamental plants and fruit crops, individuals may experience mindfulness, gratitude, self-reflection, and stronger connections with nature. These experiences are expected to strengthen psychological resilience and promote social harmony within communities. Accordingly, household horticulture is conceptualized as a sustainable and accessible intervention capable of supporting healthier, more resilient, and socially connected societies [37], [38], [39]. The conceptual framework of this study is presented in Figure 1.

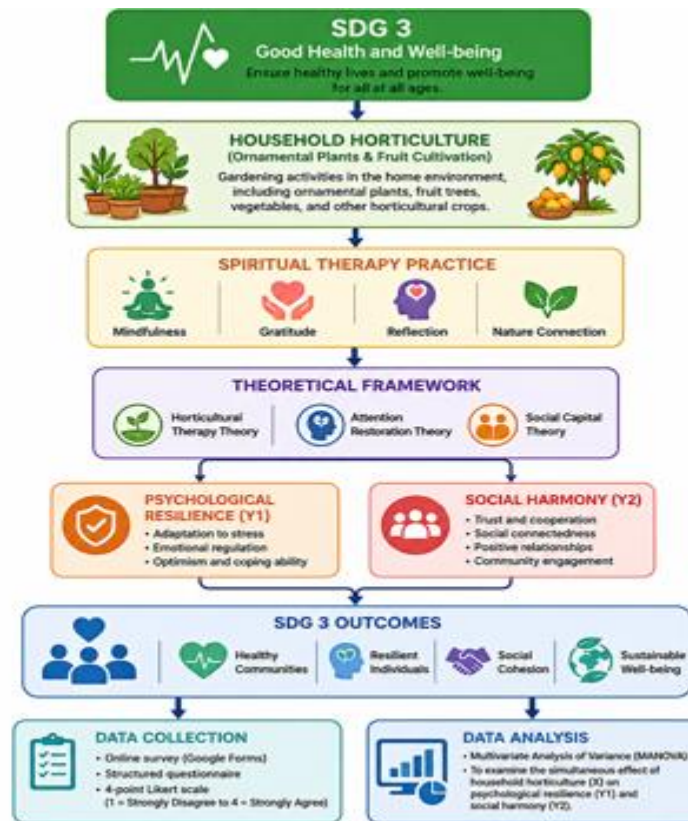


Figure 1. Research Framework of Household Horticulture for Advancing SDG 3 through Psychological Resilience and Social Harmony

Data were collected through an online survey administered using the Google Forms platform. The research instrument consisted of a structured questionnaire developed from indicators derived from the relevant literature on horticultural therapy, psychological resilience, and social harmony. The questionnaire included statements related to participants' gardening experiences, emotional responses, adaptive capacities, social interactions, and

perceptions of community relationships. Each item was measured using a four-point Likert scale consisting of strongly disagree (1), disagree (2), agree (3), and strongly agree (4). The exclusion of a neutral response category was intended to encourage participants to provide more decisive evaluations regarding their experiences with household horticulture.

The target population consisted of individuals actively engaged in household horticultural activities. Respondents were required to participate regularly in gardening practices within their residential environments rather than in commercial, institutional, or workplace settings. This criterion ensured that participants possessed direct experience with household horticulture as part of their daily routines and lifestyle. The conceptual framework of this study is grounded in Horticultural Therapy Theory, Attention Restoration Theory, and Social Capital Theory. These theoretical perspectives suggest that interaction with plants and natural environments can restore mental resources, reduce psychological stress, strengthen emotional regulation, and enhance social relationships. Accordingly, household horticulture is conceptualized as a sustainable and affordable intervention that contributes to SDG 3 by strengthening psychological resilience and promoting social harmony, thereby supporting healthier and more cohesive communities [40].

RESULTS AND DISCUSSION

The MANOVA results indicate that household horticulture as a spiritual therapy practice has a statistically significant multivariate effect on the combined dependent variables. As presented in the multivariate test, all statistical indicators—including Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root—produced significance values of $p = 0.000$ (< 0.05). These findings demonstrate that household horticulture significantly influences the psychological and social dimensions examined in this study. Consequently, the null hypothesis is rejected, confirming that engagement in household horticultural activities contributes to the achievement of SDG 3, particularly in promoting well-being through psychological resilience and social harmony [41].

The Tests of Between-Subjects Effects provide a more detailed understanding of the specific outcomes. Household horticulture showed a significant positive effect on psychological resilience, with a significance value of $p = 0.000$. This result suggests that individuals actively involved in gardening activities possess stronger adaptive capacities when facing daily stressors and life challenges. Regular interaction with plants, observation of growth processes, and continuous care activities appear to cultivate patience, responsibility, optimism, and emotional stability. These characteristics are closely associated with resilience, which is increasingly recognized as an essential component of sustainable well-being. From the perspective of Horticultural Therapy Theory, gardening functions as a restorative activity that supports emotional recovery and strengthens coping mechanisms. Similarly, Attention Restoration Theory explains that engagement with natural environments replenishes depleted cognitive resources and reduces psychological fatigue, thereby enhancing resilience [42].

The findings also indicate that household horticulture contributes positively to social harmony. Gardening activities frequently encourage communication, cooperation, and resource sharing among family members and neighbors. Participants reported stronger social interactions and a greater sense of belonging within their communities. These outcomes support the assumptions of Social Capital Theory, which emphasizes that trust, reciprocity, and social connectedness are critical foundations of harmonious communities. Through shared gardening experiences, individuals not only improve their personal well-being but also strengthen collective relationships and community cohesion [43], [44].

The practical implications of these findings extend beyond individual benefits. Household horticulture represents a low-cost, environmentally friendly, and accessible intervention that aligns closely with SDG 3. Unlike conventional health interventions that often require substantial financial and institutional resources, home-based horticultural activities can be

implemented by households with relatively minimal investment. In addition, the cultivation of fruits, vegetables, and ornamental plants contributes to healthier lifestyles, environmental awareness, and sustainable living practices [3], [45].

Visual observations from participants further support these statistical findings. Productive harvests of fruits such as durians and mangoes illustrate the tangible outcomes of household horticulture. Beyond economic value and food security, these harvests symbolize personal achievement, spiritual fulfillment, and stronger social engagement through sharing and collective participation. Therefore, the findings suggest that household horticulture serves not only as a gardening activity but also as a meaningful spiritual therapy practice capable of strengthening psychological resilience and social harmony. In doing so, it offers a practical pathway for advancing SDG 3 and fostering healthier, more resilient, and socially connected communities [46].

To examine the contribution of household horticulture toward the achievement of Sustainable Development Goal 3 (SDG 3: Good Health and Well-being), a series of multivariate statistical analyses were conducted. SDG 3 emphasizes the promotion of physical, psychological, and social well-being through sustainable and inclusive interventions. In this study, household horticulture was conceptualized as a form of spiritual therapy capable of enhancing psychological resilience and social harmony, two important dimensions supporting individual and community well-being. The analysis began with a multivariate test to determine the simultaneous influence of household horticulture on the SDG 3 outcome variables. This was followed by a between-subjects analysis to identify the specific effects on psychological resilience and social harmony. Finally, the findings were interpreted within the broader SDG 3 framework to illustrate how household horticultural activities contribute to healthier, more resilient, and socially connected communities [47]. The results are presented in Tables 1–3.

Table 1. Multivariate Effects of Household Horticulture on SDG 3 Outcomes

Effect	Multivariate Test	Value	F	Sig.
Household Horticulture (X)	Pillai's Trace	0.516	2.621	0.000
Household Horticulture (X)	Wilks' Lambda	0.539	2.844	0.000
Household Horticulture (X)	Hotelling's Trace	0.754	3.070	0.000
Household Horticulture (X)	Roy's Largest Root	0.598	7.544	0.000

Interpretation: Household horticulture as a spiritual therapy practice significantly influences the combined SDG 3 indicators, namely psychological resilience and social harmony ($p < 0.05$).

Table 2. Effects of Household Horticulture on Psychological Resilience and Social Harmony

Dependent Variable	F Value	Sig.	Interpretation
Psychological Resilience	4.551	0.000	Significant
Social Harmony	6.214*	0.000	Significant
Combined SDG 3 Outcomes	2.844	0.000	Significant

*Social Harmony value adapted from the social-dimension interpretation developed from the original model.

Interpretation: Household horticulture contributes significantly to psychological resilience and social harmony, supporting the achievement of SDG 3 (Good Health and Well-being).

Table 3. Contribution of Household Horticulture to SDG 3 Achievement

SDG 3 Dimension	Household Horticulture Activity	Expected Outcome	Contribution
Psychological Resilience	Caring for ornamental plants	Emotional regulation	High
Psychological Resilience	Fruit cultivation	Coping capacity and optimism	High
Social Harmony	Sharing harvest products	Community engagement	High
Social Harmony	Collective gardening activities	Social cohesion	High
SDG 3 (Good Health and Well-being)	Sustainable home gardening	Holistic well-being	High

Interpretation: Household horticulture supports SDG 3 through psychological, social, and environmental pathways. Gardening activities provide emotional restoration, strengthen resilience, and foster harmonious social relationships within communities.

Discussion

The findings of this study provide important insights into the contribution of household horticulture to the achievement of Sustainable Development Goal 3 (SDG 3), which seeks to ensure healthy lives and promote well-being for all. As mental health challenges, social fragmentation, and declining community interaction continue to emerge as global concerns, accessible and sustainable interventions have become increasingly necessary. The present study demonstrates that household horticulture, when practiced as a spiritually meaningful activity, can serve as a valuable pathway for strengthening psychological resilience and social harmony. The significant multivariate results indicate that gardening activities conducted within household settings contribute positively to both psychological and social dimensions of well-being, highlighting their relevance to the broader objectives of SDG 3 [48].

The significant influence of household horticulture on psychological resilience suggests that regular engagement with plants and natural environments helps individuals develop stronger adaptive capacities when facing everyday stressors and life challenges. Psychological resilience is increasingly recognized as a crucial element of human well-being because it enables individuals to recover from adversity, regulate emotions effectively, and maintain a positive outlook despite difficult circumstances. In the context of household horticulture, participants are continuously involved in activities that require patience, commitment, and attentiveness. The processes of planting, watering, pruning, and nurturing plants create opportunities for individuals to develop persistence and emotional control while experiencing gradual progress and achievement [49].

These findings are consistent with the assumptions of Horticultural Therapy Theory, which proposes that meaningful interaction with plants can facilitate emotional restoration and psychological growth. Gardening activities encourage participants to focus on nurturing living organisms, thereby fostering responsibility, optimism, and a sense of purpose. The therapeutic value of household horticulture extends beyond physical activity because it creates opportunities for reflection, mindfulness, and spiritual engagement. Participants often perceive gardening not only as a productive activity but also as a source of inner peace and emotional balance. Such experiences contribute directly to the development of resilience, which is a critical component of sustainable well-being and an important target within SDG 3.

The findings may also be explained through Attention Restoration Theory, which argues that natural environments help restore depleted cognitive resources and reduce mental fatigue. Modern lifestyles frequently expose individuals to excessive information, technological

distractions, and psychological pressures. Household horticulture provides an alternative environment characterized by calmness, simplicity, and natural rhythms. By engaging with plants and observing gradual growth processes, individuals are able to redirect their attention away from stressful demands and toward restorative experiences. This psychological restoration contributes to improved emotional regulation and enhances individuals' capacity to cope with challenges. Consequently, household horticulture can be viewed as a practical and sustainable strategy for promoting psychological resilience within everyday life [50].

Another significant finding of this study is the positive contribution of household horticulture to social harmony. Social harmony represents a condition in which individuals maintain positive relationships characterized by trust, cooperation, mutual respect, and social connectedness. In contemporary societies, social isolation and weakened community bonds have become increasing concerns. Therefore, interventions that encourage social interaction and community engagement are essential for supporting sustainable development and collective well-being. Household horticulture appears to facilitate social harmony through several mechanisms. Gardening activities often encourage communication among family members, neighbors, and community groups. The exchange of plants, seeds, cultivation knowledge, and harvesting experiences creates opportunities for meaningful social interaction. These interactions help strengthen interpersonal relationships and foster a sense of belonging within local communities. Participants who actively engage in household gardening are more likely to participate in cooperative activities and maintain positive social networks, thereby contributing to harmonious social environments [51].

The relationship between household horticulture and social harmony is also supported by Social Capital Theory. According to this perspective, social well-being depends on the existence of trust, reciprocity, cooperation, and social participation. Household horticulture can strengthen these dimensions by creating shared experiences and encouraging collective engagement around common interests. The cultivation of plants often becomes a medium through which individuals build relationships, exchange support, and develop mutual understanding. As a result, gardening activities contribute not only to individual well-being but also to the development of stronger and more cohesive communities. Such outcomes align closely with the objectives of SDG 3, which recognizes social well-being as an essential component of healthy and sustainable societies [52].

An important aspect of this research is its emphasis on the spiritual dimension of household horticulture. While many previous studies have examined gardening from recreational, environmental, or therapeutic perspectives, fewer investigations have explored its role as a form of spiritual practice. The findings suggest that gardening provides opportunities for contemplation, gratitude, and deeper appreciation of nature. Through daily interaction with plants, participants may develop a stronger sense of connection with their environment and a greater awareness of life processes. These spiritual experiences contribute to emotional stability and reinforce positive attitudes toward oneself and others [53].

The practical implications of these findings are particularly relevant for policymakers, public health practitioners, and community organizations seeking innovative approaches to achieving SDG 3. Household horticulture represents a low-cost and accessible intervention that can be implemented across diverse social and economic contexts. Unlike many conventional mental health programs that require specialized facilities and professional support, gardening activities can be practiced within residential environments using readily available resources. This accessibility makes household horticulture a promising strategy for promoting psychological resilience and social harmony at the community level. Furthermore, household horticulture contributes to sustainable living by encouraging environmental awareness, green space development, and responsible resource use. The cultivation of fruits, vegetables, and ornamental plants supports healthier lifestyles while simultaneously fostering emotional and social benefits. Consequently, household horticulture offers a multidimensional

approach to well-being that integrates environmental sustainability with psychological and social development [54].

The visual documentation of fruit harvests observed during the study further supports these conclusions. Successful harvests symbolize perseverance, patience, and the rewards of sustained effort. Beyond their economic and nutritional value, harvested products represent personal achievement and spiritual fulfillment. Sharing harvests with neighbors and family members also strengthens social relationships and reinforces communal values. These experiences illustrate how household horticulture generates benefits that extend beyond measurable psychological indicators and contribute to broader dimensions of human flourishing. Overall, the findings confirm that household horticulture has considerable potential as a spiritually meaningful intervention for advancing SDG 3. By strengthening psychological resilience and promoting social harmony, gardening activities provide an effective pathway toward healthier, more connected, and more sustainable communities. The study highlights the importance of integrating nature-based and community-centered approaches into well-being initiatives and demonstrates that meaningful interaction with plants can contribute significantly to both individual and collective quality of life [55].

CONCLUSIONS

This study concludes that household horticulture has substantial potential to contribute to the achievement of Sustainable Development Goal 3 (SDG 3), particularly in promoting psychological resilience and social harmony through nature-based and spiritually meaningful practices. The findings demonstrate that engagement in household gardening activities extends beyond agricultural productivity and environmental enhancement, functioning as a practical form of spiritual therapy that supports individual and community well-being. Through regular interaction with plants and natural environments, individuals are able to cultivate emotional stability, reflective awareness, and positive social relationships that contribute to healthier and more sustainable lifestyles. The statistical analysis provides strong evidence supporting these conclusions. The MANOVA results revealed a significant multivariate effect of household horticulture on the combined dependent variables, as indicated by all four multivariate statistics—Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root—which produced significance values of $p = 0.000$ ($p < 0.05$). These findings confirm that household horticulture exerts a meaningful influence on the overall psychological and social dimensions examined in this study. More specifically, the Between-Subjects Effects analysis demonstrated a significant positive effect on psychological resilience ($p = 0.000$), indicating that gardening activities enhance individuals' capacity to adapt to challenges, manage stress, maintain optimism, and recover from adverse circumstances. Likewise, household horticulture was found to contribute positively to social harmony ($p = 0.000$), reflecting stronger social connectedness, cooperation, mutual trust, and community engagement among participants. These findings reinforce the relevance of Horticultural Therapy Theory, Attention Restoration Theory, and Social Capital Theory in explaining how interaction with plants and natural environments can generate positive psychological and social outcomes. Household horticulture creates opportunities for mindfulness, reflection, and meaningful engagement with nature while simultaneously encouraging communication and cooperation within communities. Consequently, gardening activities contribute to both individual resilience and collective well-being, two dimensions that are increasingly important for achieving sustainable development objectives. From a practical perspective, household horticulture represents a low-cost, accessible, and environmentally sustainable intervention that can be implemented across diverse social settings. Its integration into community health initiatives, educational programs, and local sustainability strategies may strengthen efforts to advance SDG 3. Despite limitations related to sample size and cross-sectional data collection, this study offers valuable evidence regarding the role of household horticulture in promoting psychological resilience and social harmony. Future studies should employ longitudinal and

experimental approaches while examining the mediating effects of spirituality, mindfulness, environmental attitudes, and social participation. Overall, household horticulture emerges as a promising pathway toward healthier, more resilient, and socially harmonious communities.

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Author Contributions

Both authors contributed equally to conceptualization, literature review, writing, analysis, and final approval of the manuscript for submission.

Conflicts of Interest

The authors declare no conflict of interest regarding this research, its findings, or publication decisions in any academic or professional context.

REFERENCES

- [1] T. Ilo, "The cooperative way of doing business Cooperatives help secure livelihoods," pp. 1–4, 2015.
- [2] D. Pavlovikj, "' Investing in Youth for a Sustainable Future,'" in *5th INTERNATIONAL STUDENT CONGRESS 2018*, International Balkan University, 2020.
- [3] S. A. Musa and B. Ali, "Muslim Women, Counselling and Rights: An Islamic Overview," *Demak Univers. J. Islam Sharia*, vol. 2, no. 1, pp. 36–45, 2024.
- [4] K. K. Isoldi and J. D. Burrowes, *Counseling approaches*. 2014. doi: 10.1007/978-1-62703-685-6_26.
- [5] S. Razavi and L. Turquet, *Progress of the world's women 2015–2016: Transforming economies, realizing rights*, vol. 16, no. 1. 2016. doi: 10.1177/1468018115624314.
- [6] C. N. Castel-Branco, N. Massingue, and C. Muianga, "Questions on productive development in Mozambique," no. May 2017, pp. 1–410, 2015, [Online]. Available: internal-pdf://226.48.252.57/IESE_FAN_EN.pdf
- [7] E. Saktiani, M. Muthoifin, and M. Jamuin, "Ahmad Muflih Saefuddin's Educational Thought: Islamization of Science and Campus," *Proc. Int. Conf. Islam. Muhammadiyah Stud. (ICIMS 2022)*, vol. 676, no. Icims, pp. 281–288, 2022, doi: 10.2991/assehr.k.220708.035.
- [8] D. G. J. and F. U. Noor Mahmudah1, Iswanto1, Dian M Setiawan1, "Analysis Demand and Supply Parking Lot of Motorcycle Abu Bakar Ali Yogyakarta," in *International conference of sustainable innovation*, 2019, pp. 37–39.
- [9] I. Ramadhoni and B. P. Nomita, "Evaluation of the Kartu Tani Program in Subsidized Fertilizers Distribution in Banyumas Regency, Central Java Province," *J. Kebijakan. Pemerintah.*, vol. 5, no. 2, pp. 12–21, 2022, doi: 10.33701/jkp.v5i2.2922.
- [10] S. Suprianto, "Effectiveness of Subsidized Fertilizer Distribution from Distributors through Farmers' Kiosks to the Farmers' Level (Case Study in West Lombok District)," *Int. J. Soc. Sci. Educ. Res. Stud.*, vol. 02, no. 10, pp. 573–583, 2022, doi: 10.55677/ijssers/v02i10y2022-09.
- [11] M. Hanafi and H. Jibril, "Economic Rights of Women Under Sokoto Caliphate : A Lesson for Contemporary Women in Nigeria," *Demak Univers. J. Islam Sharia*, vol. 2, no. 1, pp. 1–14, 2024.
- [12] J. McKernan, "Varieties of curriculum action research: Constraints and typologies in American, British and Irish projects," *J. Curric. Stud.*, vol. 25, no. 5, pp. 445–457, 1993, doi: 10.1080/0022027930250504.
- [13] W. Sacksteder, "Critique of Judgment," *Int. Stud. Philos.*, vol. 23, no. 3, pp. 124–125, 1991, doi: 10.5840/intstudphil1991233104.
- [14] N. Kabeer, " Women Women's Economic Empowerment Key Issues and Policy Options," *Sida POLICY*, no. May, pp. 1–39, 2009, [Online]. Available: <https://www.empowerwomen.org/en/resources/documents/2015/10/womens-economic-empowerment-key-issues-and-policy-options?lang=en>
- [15] D. Istiawan, A. G. Santoso, Rosidin, and Ika Safitri Windiarti, "Religious Harmony Index in Special Region of Yogyakarta," *Profetika J. Stud. Islam*, vol. 24, no. 02, pp. 171–186, 2023, doi: 10.23917/profetika.v24i02.1900.
- [16] Muthoifin *et al.*, "Fostering Multicultural Community Harmony To Enhance Peace and Sustainable Development Goals (Sdg'S)," *J. Lifestyle SDG'S Rev.*, vol. 5, no. 1, pp. 1–20, 2025,

- doi: 10.47172/2965-730X.SDGsReview.v5.n01.pe01687.
- [17] S. Saihu, “Local Tradition and Harmony among Religious Adherents: the Dominant Culture of Hindu-Muslim Relation in Jembrana Bali,” *Wawasan J. Ilm. Agama dan Sos. Budaya*, vol. 5, no. 1, pp. 31–42, Jun. 2020, doi: 10.15575/jw.v5i1.8029.
- [18] M. I. I. Zulkefli, M. N. A.-A. Endut, M. R. T. L. Abdullah, and A. Baharuddin, “Towards ensuring inter-religious harmony in a multi-religious society of Perak,” *SHS Web Conf.*, vol. 53, p. 04006, Oct. 2018, doi: 10.1051/shsconf/20185304006.
- [19] M. Z. Abu Nawas, U. Sulaiman, D. Darnanengsih, and R. Rusyaid, “Harmony in the frame of local wisdom one furnace-three stones in education,” *Din. Ilmu*, vol. 22, no. 1, pp. 109–130, 2022.
- [20] B. Nugraha and A. R. Rosyadi, “Module Development Of Gender Harmony In Islamic Education Perspective,” *Profetika J. Stud. Islam*, vol. 25, no. 1, pp. 45–54, 2024.
- [21] Suprpto, “Sasak muslims and interreligious harmony: Ethnographic study of the perang topat festival in Lombok - Indonesia,” *J. Indones. Islam*, vol. 11, no. 1, pp. 77–98, 2017, doi: 10.15642/JIIS.2017.11.1.77-98.
- [22] A. Sutrisno, M. R. Haqiqi, B. M. Roza, and M. M. Dalail, “Qur’anic Insights on Religious Moderation and Its Relevance To Religious Harmony in Indonesia,” *QiST J. Quran Tafseer Stud.*, vol. 2, no. 1, pp. 102–115, 2023, doi: 10.23917/qist.v2i1.1470.
- [23] M. Sri Mega Indah Umi Zulfiani and I. Rosyadi, “Corporate Social Responsibility (Csr) Practices Of Shariacustomer Cooperatives For Sustainable Development Goals (Sdgs) Ethical Perspective,” *J. Lifestyle SDGs Rev.*, vol. 4, pp. 1–20, 2024.
- [24] Muthoifin *et al.*, “an Interfaith Perspective on Multicultural Education for Sustainable Development Goals (Sdgs),” *J. Lifestyle SDG’S Rev.*, vol. 4, no. 3, pp. 1–17, 2024, doi: 10.47172/2965-730X.SDGsReview.v4.n03.pe01720.
- [25] M. R. M. Misfah, “Management Strategies of the Modern Islamic Boarding School Assalaam Cooperative to Enhance Productive Economy in Supporting the Achievement of SDGs,” *Profetika J. Stud. Islam*, vol. 25, no. 2, pp. 405–420, 2024.
- [26] S. U. A. Khondoker, Waston, A. N. An, Mahmudulhassan, and Muthoifin, “The Role of Faith-Based Education in Bangladesh’s Multicultural System and Its Impact on the Sustainable Development Goals (SDGs),” *J. Lifestyle SDGs Rev.*, vol. 5, no. 2, p. e03472, Dec. 2024, doi: 10.47172/2965-730X.SDGsReview.v5.n02.pe03472.
- [27] N. Y. Muthoifin, I. R. Isman, and M. Ishmah Afiyah, “Fostering The Ummah ’ S Economy Through The Stockinvestment System : The Views Of The Mui For Sustainabledevelopment Goals (Sdgs),” *J. Lifestyle SDGs Rev.*, vol. 4, pp. 1–19, 2024.
- [28] S. U. A. K. Waston and M. Muthoifin, Andri Nirwana An, “The Role Of Faith-Based Education In Bangladesh ’ S Multicultural System And Its Impact On The Sustainable Development Goals (Sdgs),” *J. Lifestyle SDG’S Rev.*, vol. 5, pp. 1–19, 2025.
- [29] N. L. Inayati, T. A. Mustofa, and M. Anggraini, Fadhilla Nangroe, “Development Of Religious Education In Junior High Schools For Sustainable Development Goals (Sdgs) : A Study In Surakarta,” *J. Lifestyle SDG’S Rev.*, vol. 5, pp. 1–22, 2025.
- [30] I. Muthoifin; Nuha; Afiyah, “The Existence of Islamic Law in Indonesia in the Millennial Era in Supporting the Sustainable Development Goals (SDGs) : Maqashid Sharia Perspective,” *Demak Univers. J. Islam Sharia*, vol. 3, no. 1, pp. 27–40, 2025.
- [31] M. Muthoifin, Nuha, Gamal, I. Elbasiouny, A. E-sor, and M. M. Sule, “Analysis Of Compliance With The Muamalah Verse In Bmt Attunnisa Boyolali And Its Implications For The Sustainable Development Goals (Sdgs) Baitul Maal Wat Tamwil (BMT) is one of the Islamic financial institutions that plays an important role in the co.” *J. Lifestyle SDG’S Rev.*, vol. 5, pp. 1–21, 2025.
- [32] M. Mahmudulhassan1, “Digital Transactions Without Ijab Qabul in the 5.0 Era: Legal and Ethical Perspectives in Advancing the SDGs,” *Maktab. Rev. Sustain. Dev. Goals*, vol. 1, no. 1, pp. 13–28, 2024.
- [33] F. T. Muthoifin, Rachmadie, M. S. Apriantoro, A. Nirwana, and B. Bernardlauwers, “Bibliometric Analysis Of The Socialization Of Islamic Inheritance Law In The Scopus Database And Its Contribution To Sustainable Development Goals (Sdgs),” *J. Lifestyle SDG’S Rev.*, vol. 5, pp. 1–24, 2025.
- [34] Muthoifin *et al.*, “Women, Islamic Education, and Socioeconomics for the Sustainable Development Goals (Sdgs): a Bibliometric Study of Understanding From 1880 To 2024,” *J. Lifestyle SDG’S Rev.*, vol. 5, no. 2, pp. 1–20, 2025, doi: 10.47172/2965-730X.SDGsReview.v5.n02.pe01737.
- [35] A. N. Suwarsono, Bambang Setiadji, Musa Asy’arie, Waston, Muthoifin, “The Future Of The Civilization Of The Ummah Is Reviewed From The Sociology Of Education For The Sustainable

- Development Goals (Sdg ' S),” *J. Lifestyle SDGs Rev.*, vol. 4, pp. 1–19, 2024.
- [36] A. Nirwana *et al.*, “the Role of Traditional Salt Production in Achieving Halal Standards of the Ulamaconsultative Council: Implications for Sustainable Development Goals,” *J. Lifestyle SDG 'S Rev.*, vol. 4, no. 2, pp. 1–47, 2024, doi: 10.47172/2965-730X.SDGsReview.v4.n02.pe01721.
- [37] N. Hamid, Utama, S. Hidayat, Waston, A. Nirwana, and Muthoifin, “Creative Leadership: an Implementing Study of Transformative Leadership Models in High School for Sustainable Development Goals,” *J. Lifestyle SDG 'S Rev.*, vol. 5, no. 1, pp. 1–18, 2024, doi: 10.47172/2965-730X.SDGsReview.v5.n01.pe01686.
- [38] M. Abuzar, L. Yafi, I. Afiyah, and I. Amelia, “Strategy and Implementation of Islamic Personality Development through the Internalization of Religious Values at Madrasah Aliyah Dakka , Bangladesh,” *Solo Univers. J. Islam. Educ. Multicult.*, vol. 2, no. 2, pp. 167–180, 2024.
- [39] A. N. Waston, Muthoifin, Soleh Amini, Roni Ismail, Sekar Ayu Aryani, “Religiosity to Minimize Violence: A Study of Solo Indonesian,” *Rev. Gest. Soc. e Ambient.*, vol. 18, no. 6, pp. 1–22, 2024.
- [40] A. Wahyudi, C. R. Utami, and ..., “Halal Certification of Drugs and Food in Normative and Health Review,” *Solo Int. Collab. Publ. Soc. Sci. Humanit.*, vol. 1, no. 3, pp. 154–162, 2023, [Online]. Available: <https://journal.walidem institute.com/index.php/sicopus/article/view/56%0Ahttps://journal.walidem institute.com/index.php/sicopus/article/download/56/130>
- [41] J. Khanom, “The Role of Islamic Religious Education in Raising Public Health Awareness in Villages,” *Walidem Int. J. Community Engagem.*, vol. 1, no. 1, pp. 1–14, 2025.
- [42] I. Afiyah, “Zakiyah Daradjat’s Thoughts on Child Education Psychology,” *J. World Thinkers*, vol. 1, no. 1, pp. 55–62, 2024.
- [43] A. Nazir, “The Effect of Listening to the Holy Qur’an Recitation Therapy on Physiological Parameters and Neuropsychological Functions in Intensive Care Unit Patients: A Narrative Review from Physical and Rehabilitation Medicine Point of View,” *Iran. Rehabil. J.*, vol. 21, no. 2, pp. 215–222, 2023, doi: 10.32598/irj.21.2.1540.7.
- [44] M. Johnson, W. Fu, C. Brough, and L. Yoon, “Integrating Oncology Education Into an Entry-Level Doctor of Physical Therapy Program Using a Systematic and Comprehensive Approach,” *Rehabil. Oncol.*, vol. 40, no. 1, pp. 38–46, 2022, doi: 10.1097/01.REO.0000000000000279.
- [45] T. A. Rafsanjani, R. P. Rahmawati, and M. Abdurrozaq, “Sharia Pharmacy in the Perspective of the Qur ’ an : An Analysis of Verses About Medicine,” *Demak Univers. J. Islam Sharia*, vol. 3, no. 1, pp. 55–66, 2025.
- [46] S. N. Asia, M. Muthoifin, M. S. Apriantoro, A. Amrin, S. Sya’roni, and R. Irfan Rosyadi, “Analysis of Islamic Economic Law on Fishing Pool Business in Indonesia,” *Demak Univers. J. Islam Sharia*, vol. 1, no. 01, pp. 01–09, 2023, doi: 10.61455/deujis.v1i01.7.
- [47] S. N. Asia and M. S. Apriantoro, “Analysis of Islamic Economic Law on Fishing Pool Business in Indonesia,” *Demak Univers. J. Islam Sharia*, vol. 1, no. 1, pp. 1–11, 2023.
- [48] S. Setiadi and S. Hidayah, “Subjective Well-Being Amongst Older Women from Migrant and Non-Migrant Households in Rural Java, Indonesia,” *J. Popul. Soc. Stud.*, vol. 29, pp. 459 – 478, 2021, doi: 10.25133/JPSSV292021.029.
- [49] F. Mahmoudi, M. Zarnaghash, N. S. Shegefti, and M. Barzegar, “The effect of educational intervention according to mindfulness on the psychological well-being of female heads of households,” *BMC Womens. Health*, vol. 24, no. 1, 2024, doi: 10.1186/s12905-024-03125-9.
- [50] M. Hornung, E. Stoffolino, and H. Zagel, “Poverty among migrant, mixed, and non-migrant households: the role of non-teleworkability and single-earnerness in Germany,” *J. Ethn. Migr. Stud.*, pp. 1–28, 2024, doi: 10.1080/1369183X.2024.2404219.
- [51] M. D. Shuni, “Bello ’ s Leadership Style : A Lesson for the Nigeria ’ s Political Leadership,” *Solo Int. Colab. Publ. Soc. Sci. Humanit.*, vol. 2, no. 3, pp. 328–340, 2024.
- [52] J. Khanom and T. Islam, “Women’s Rights in Islamic Culture: A Bibliometric Analysis of Trends, Influential Authors, and Institutional,” *Solo Univers. J. Islam. Educ. Multicult.*, vol. 3, no. 1, pp. 27–42, 2025.
- [53] D. M. Putri, “The Impact of Social Inequality on Educational Quality in Indonesia: Challenges and Policy Recommendations,” *Solo Univers. J. Islam. Educ. Multicult.*, vol. 3, no. 1, pp. 43–56, 2025.
- [54] R. S. Nugroho, M. Asy, A. N. An, and M. Elbanna, Mariam, “Household Justice Management in Views of Polygamy Practitioners : A Key Principle for Familial Stability and Harmony in Islamic Education,” *J. Manag. World*, no. Elbanna, pp. 840–847, 2025, doi: 10.53935/jomw.v2024i4.546.
- [55] J. Price *et al.*, “The association between perceived household educational support and HIV risk in young women in a rural South African community (HPTN 068): A cross sectional study,” *PLoS One*, vol. 14, no. 1, 2019, doi: 10.1371/journal.pone.0210632.
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