RESEARCH ARTICLE

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Mindfulness and Forgiveness as Catalysts for Stress Reduction and Social Cohesion: A Mixed-methods Study in Multicultural Binh Duong, Vietnam

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Abstract:

Introduction: The cultural and industrial environment in Binh Duong, which includes international students, local inhabitants, and migrant workers, presents challenges, such as social cohesion, intercultural conflict, and psychological stress. While previous studies confirm the separate benefits of mindfulness and forgiveness, little is known about their combined effects in such diverse settings.

Methods: This study employed a mixed-methods design. Quantitatively, 150 participants (50 international students, 50 migrant workers, 50 local residents) completed validated scales: the Mindful Attention Awareness Scale (MAAS), Rye Forgiveness Scale (RFS), Satisfaction with Life Scale (SWLS), and a Social Cohesion Index. Analyses included Pearson correlations, ANOVA, and multiple regression with interaction terms. Qualitatively, 18 purposively selected participants engaged in semi-structured interviews, thematically analyzed to uncover underlying mechanisms.

Results: There was a high level of correlation between mindfulness practice and stress reduction ($r = 0.76$, $p < 0.01$), while emotional healing and interpersonal trust were correlated with forgiveness ($r = 0.64$, $p < 0.05$). Together, they created a synergistic effect which was greater than the sum of the individual contributions, enhancing overall life satisfaction and social connectedness even more ($r = 0.82$, $p < 0.01$) than the two methods separately. ANOVA showed significant group differences, with the greatest benefit going to the international students. Qualitative results indicated that the outcome was influenced by cultural and religious factors.

Discussion: The findings suggest that mindfulness helps to manage emotions and that forgiveness helps to repair relationships, thereby emphasizing a dual-pathway approach for improving resilience and cohesion. The group-specific differences suggest that such interventions ought to be designed bespoke to the cultural and religious background of the participants. The integration of forgiveness and mindfulness addresses the persisting gaps in stress-and-coping theories by providing a framework for the intrapersonal stress regulation and interpersonal reconciliation.

Conclusion: Used alone, forgiveness and mindfulness, and their combination, are effective techniques for stress reduction and fostering social harmony in multicultural settings. Their combined use has practical meanings for education, community programs, psychosocial support, and training and development in the workplace in Binh Duong and comparable urban settings.

Keywords: Forgiveness, Mindfulness, Multicultural society, Reconciliation, Social cohesion, Stress.

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1. INTRODUCTION

Although numerous studies have demonstrated the individual efficacy of mindfulness interventions (*e.g.*, MBCT, MBSR) [1, 2] and forgiveness processes [3, 4] in reducing stress and improving interpersonal relations, few have examined their interactive-or synergistic-effects within an industrial, multicultural environment where cultural adaptation pressures are particularly high [5, 6]. This study aims to fill that gap by exploring how the combined practice of mindfulness and forgiveness supports emotional regulation and social cohesion among diverse groups in Binh Duong.

Binh Duong, one of the fastest-growing provinces in Vietnam, has become a major industrial hub with the presence of thousands of domestic and international enterprises. The processes of industrialization, modernization, and urbanization in this area have attracted a large influx of laborers from various regions across Vietnam and from other countries [7, 8]. This internal and international migration has created a culturally diverse environment marked by varying lifestyles and value systems. While such diversity offers rich opportunities, it also poses significant challenges in fostering social cohesion, minimizing cultural conflicts, and nurturing a harmonious community where every individual feels respected and understood [5, 6].

Language differences, customs, beliefs, and values can lead to misunderstandings, tensions, and conflicts among resident groups [9]. For example, international students from Southeast Asian countries, such as Laos and Cambodia, or from regions farther afield like South Korea and Taiwan, often face language barriers and divergent learning styles. Migrant workers from Vietnamese provinces-particularly central and northern regions-may feel unfamiliar with local customs upon arriving in Binh Duong [10]. Simultaneously, long-term residents may experience discomfort with rapid social changes and the need to coexist with people of diverse backgrounds. Such issues extend beyond individual experiences to affect entire communities: conflicts may emerge in educational settings, workplaces, or residential areas when groups fail to understand or accept each other's differences [11], and perceptions of discrimination or cultural prejudice can erode interpersonal trust and heighten social division [12, 13]. Identifying effective strategies to support the Binh Duong community in overcoming these challenges is therefore increasingly urgent.

Mindfulness-rooted in Buddhist philosophy-is defined as the ability to remain fully present, with awareness and without judgment, and is widely applied in modern psychology to improve mental health and foster harmonious relationships [14, 15]. By minimizing the impact of negative emotions, psychological distress, anger, or resentment [16], mindfulness enables individuals to focus on the present moment and become less affected by stress arising from cultural differences or misunderstandings [17]. In a multicultural environment like Binh Duong, this capacity for emotional regulation is especially valuable.

Forgiveness involves letting go of negative emotions - resentment, anger, and hurt-in order to attain inner peace [18, 19]. Beyond overlooking faults, forgiveness plays a vital role in promoting reconciliation and social cohesion [3, 4]. In multicultural societies, it can reduce conflict and build trust among community groups. For instance, a migrant worker subjected to unfair treatment may more readily reconcile with colleagues through forgiveness, while an international student facing peer prejudice might overcome emotional pain and forge positive relationships by embracing forgiveness [20, 21]. As community members adopt forgiveness, they contribute to a more harmonious environment where diverse groups communicate and collaborate effectively [12].

When combined, mindfulness and forgiveness produce a powerful synergistic effect in reducing stress and promoting reconciliation [22]. Mindfulness supports forgiveness by helping individuals recognize that negative emotions damage both relationships and personal well-being [23], while forgiveness enhances mindfulness by alleviating internal conflict and clarifying the mind [24]. Together, they foster values of compassion, respect, and cooperation, benefiting individuals and their communities [25].

1.1. Research Objectives and Hypotheses

This study investigates how mindfulness and forgiveness jointly facilitate emotional regulation and social harmony among different cultural groups in Binh Duong. The primary hypotheses are:

1. Mindfulness positively influences stress reduction and conflict mitigation among diverse cultural groups.

2. Forgiveness plays a crucial role in healing grievances and fostering reconciliation in a multicultural context.

3. The combination of mindfulness and forgiveness generates a stronger synergistic effect, enhancing capacity for reconciliation and social cohesion.

4. Mindfulness and forgiveness together contribute to a more harmonious living environment where individuals accept and respect each other's differences.

The findings are expected to inform the design of educational and community support programs in Binh Duong, offer insights for fostering cohesive, harmonious societies more broadly.

2. THEORETICAL FRAMEWORK

2.1. Concepts of Mindfulness and Forgiveness

Mindfulness and forgiveness are deeply rooted in Buddhist philosophy but have been extensively studied in modern psychology due to their positive impacts on mental health, emotional well-being, and social relationships. These concepts are not only relevant to individual healing but also play a crucial role in fostering harmony and social cohesion, particularly in multicultural communities.

Mindfulness, known as "sati" in Pali, refers to awareness or clear recognition of the present moment [26]. In Buddhist philosophy, mindfulness is more than mere attention; it is a trained mental state that refrains from judgment, enabling individuals to observe and accept their experiences objectively. Mindfulness is a powerful tool for

achieving enlightenment and liberation from suffering. The practice encourages individuals to recognize the impermanence of all things, thereby reducing attachment and anxiety [27-29].

In psychology, mindfulness has been integrated into several modern therapies, most notably Mindfulness-Based Cognitive Therapy (MBCT) and Mindfulness-Based Stress Reduction (MBSR), pioneered by Jon Kabat-Zinn. Studies have demonstrated that practicing mindfulness reduces stress, enhances emotional self-regulation, improves mental health, and increases focus [30-32]. Furthermore, mindfulness alleviates symptoms of anxiety and depression while improving overall life satisfaction [33, 34].

Forgiveness, regarded as an expression of compassion and letting go in Buddhist philosophy, is more than merely overlooking mistakes. It involves releasing negative emotions, such as resentment and suffering. Practicing forgiveness enables individuals to overcome past wounds and cultivate compassion for others. Buddhism emphasizes that forgiveness not only brings peace to the individual but also plays a vital role in building harmony within communities, fostering better and more sustainable relationships.

In modern psychology, forgiveness is defined as a psychological process where an individual relinquishes feelings of resentment and negative thoughts toward the offender [35, 36]. Research has shown that practicing forgiveness can reduce stress, enhance mental health, and help individuals better accept differences and build positive relationships [37]. While forgiveness does not necessarily equate to reconciliation, it can pave the way for it, particularly in multicultural contexts where differences in values and lifestyles often lead to tension.

2.2. Mindfulness in a Multicultural Society

In a multicultural society, where diverse values and lifestyles coexist, mindfulness serves as an essential tool for individuals to cope with challenges arising from this diversity. Multicultural societies require members to adapt to differences and develop intercultural communication skills to avoid conflicts stemming from misunderstandings or prejudices. Practicing mindfulness allows individuals to focus on the present moment, recognizing their emotions and thoughts without being influenced by biases or fears of difference.

When individuals practice mindfulness, they can pause to observe their emotions, adjust their attitudes, and avoid impulsive reactions. This is especially significant in communication or conflict situations with people from different cultures [38-40]. For instance, in a debate among colleagues from different countries, a lack of understanding of cultural customs may lead to tension. However, if individuals practice mindfulness, they are better able to listen and understand others instead of reacting negatively.

Mindfulness also fosters cultural awareness, which refers to understanding and respecting the values and customs of other cultures. According to studies by Grossman *et al*. [41] and Dao [42], mindfulness practice helps individuals focus on similarities rather than differences, thereby building positive relationships with people from diverse cultures. This is particularly important in fostering unity and harmony in multicultural communities, where differences in beliefs, languages, and customs are often the primary sources of conflict.

2.3. Interactive Model of Mindfulness, Forgiveness, and Healing

The combination of mindfulness and forgiveness forms a powerful interactive model that not only helps individuals heal personal wounds but also contributes to building a more harmonious and cohesive community. In this model, mindfulness serves as the initial step, enabling individuals to recognize and regulate their emotions. Mindfulness facilitates forgiveness by reducing stress and prejudices, making it easier for individuals to let go of negative emotions. Forgiveness, in turn, soothes negative emotions and opens opportunities for reconciliation. When individuals practice forgiveness, they not only reduce psychological stress but also create space for understanding and compassion.

This is particularly critical in multicultural communities, where cultural and value differences often lead to conflict. Forgiveness helps individuals overcome these barriers, thereby promoting social harmony. The healing process is considered the final step in this model, where individuals move beyond negative emotions and achieve a positive psychological state. When mindfulness and forgiveness are practiced simultaneously, they not only benefit the individual but also create a ripple effect in the community, enhancing cohesion and harmony.

Numerous studies have demonstrated that the combination of mindfulness and forgiveness can produce a powerful synergistic effect, enhancing feelings of happiness and life satisfaction [43, 44]. Individuals who can practice both these elements not only improve their mental health but also foster a more positive social environment where cultural groups can understand and respect one another.

The theoretical framework of mindfulness and forgiveness emphasizes the significance of these two concepts in promoting healing and fostering social harmony. In a multicultural context, mindfulness and forgiveness are not merely personal tools but essential factors for reducing conflict and enhancing cohesion among different population groups. The integration of these two elements creates a robust model that helps individuals and communities address the challenges of cultural diversity and build a more sustainable society.

3. RESEARCH METHODOLOGY

3.1. Research Design

This explanatory sequential mixed-methods study investigates how mindfulness and forgiveness catalyze stress reduction and social cohesion within Binh Duong's multicultural context. First, we conducted a quantitative survey of n = 150 participants-50 international students, 50 migrant workers, and 50 local residents-selected through stratified random sampling from university registries, labor

unions, and community offices to ensure representativeness. An a priori power analysis in G*Power (α = 0.05, medium effect size f = 0.25) confirmed that this sample size achieves ≥ 80% power for detecting group differences *via* Kruskal–Wallis tests. Participants (45% male; 55% female; ages 18–45, M = 29.4, SD = 6.7) completed 5-point Likert questionnaires measuring mindfulness (MAAS), forgiveness (RFS), life satisfaction (SWLS), and a custom social cohesion index [12, 13]. Subsequently, we purposively selected 18 individuals (six per group) with varied survey scores for 30–45-minute, semi-structured interviews, which were audio-recorded, anonymized, and analyzed thematically in NVivo, following established procedures for qualitative rigor. All scales underwent reliability testing (Cronbach's α ≥ 0.70). Quantitative analyses employed Spearman's rho for correlations, Kruskal–Wallis H tests for group comparisons, and ordinal logistic regression where appropriate, while qualitative findings elucidated the mechanisms by which mindfulness and forgiveness operate. By integrating these methods-grounded in transparent sampling, power-informed design, and robust mixed-methods analysis-this study offers a comprehensive examination of these psychological processes in a real-world, multicultural setting.

3.2. Research Participants

Participants were drawn from three distinct yet interrelated communities in Binh Duong-international students, migrant workers, and local residents-to capture the province's rich cultural diversity and examine how mindfulness and forgiveness operate across different life contexts. The quantitative sample comprised 150 individuals (50 per group), selected *via* stratified random sampling from university enrollment lists, labor union rosters, and community household registries.

International students (n = 50) originated from countries, such as Laos, Cambodia, South Korea, and Taiwan, and included Vietnamese students studying away from home. They frequently encounter language barriers, differing pedagogical methods, and social integration challenges, making them an ideal cohort for exploring how mindfulness and forgiveness alleviate acculturative stress and foster positive peer relationships.

Migrant workers (n = 50) primarily employed in Binh Duong's industrial zones face occupational pressures, family separation, and adaptation to local customs. Experiences of discrimination or social exclusion heighten their vulnerability to stress, providing a compelling context for assessing the stress-buffering and reconciliation functions of our interventions.

Local residents (n = 50) living alongside these transient populations must negotiate rapid social change and cultural pluralism. Variations in customs, values, and belief systems can give rise to misunderstandings and conflict; thus, understanding how this group utilizes mindfulness and forgiveness to maintain community harmony is crucial.

From this survey pool, 18 participants (six per group) were purposively selected for semi-structured, in-depth interviews to probe the lived mechanisms underlying the quantitative patterns. By ensuring equal representation, random selection, and subsequent purposive sampling for qualitative inquiry, the study captures a comprehensive, multidimensional perspective on how mindfulness and forgiveness contribute to emotional well-being and social cohesion across Binh Duong's multicultural landscape.

3.3. Data Collection Tools

Data were collected using two main tools: survey questionnaires and in-depth interviews. The questionnaires were carefully designed to measure key factors, such as levels of mindfulness, forgiveness, life satisfaction, and reconciliation ability. The scales used included the following:

- Mindful Attention Awareness Scale (MAAS) by Brown and Ryan [43], which evaluates an individual's mindfulness by assessing their ability to focus and remain aware during daily activities.
- Rye Forgiveness Scale (RFS) by Rye *et al.* [44], which measures an individual's readiness to forgive those who have caused them harm.
- Satisfaction With Life Scale (SWLS) by Diener *et al.* [45], which assesses participants' satisfaction with their current life.

The questionnaires were designed with Likert-scale items ranging from 1 (strongly disagree) to 5 (strongly agree), allowing for an evaluation of participants' agreement with statements related to mindfulness, forgiveness, and associated factors.

In-depth interviews were conducted with a small representative sample from each participant group. The interview questions focused on the following:

- Personal experiences related to practicing mindfulness and forgiveness.
- Factors that promote or hinder the practice of mindfulness and forgiveness.
- How mindfulness and forgiveness have helped participants overcome stress and conflicts in a multicultural context.

These interviews not only enriched the overall dataset but also clarified quantitative aspects through real-life narratives.

3.4. Data Analysis Methods

To ensure analytical rigor and methodological transparency, this study employed a mixed-methods strategy that combined quantitative and qualitative approaches. All statistical analyses were conducted using SPSS (version 26) and R (version 4.3), while qualitative analysis was performed with NVivo (version 12).

For the quantitative data collected *via* 5-point Likert-scale questionnaires, preliminary tests were carried out to assess assumptions for parametric analysis. Normality was examined using the Shapiro–Wilk test and visual inspection of Q–Q plots, and homogeneity of variances was assessed with Levene's test. As scale totals approximated

normal distributions and satisfied homogeneity require-ments, parametric procedures were applied:

- Pearson's correlation was used to examine associations between mindfulness, forgiveness, life satisfaction, stress reduction, and social cohesion.
- One-way ANOVA was conducted to compare group-level differences (among international students, migrant workers, and local residents) in levels of mindfulness, forgiveness, and related outcome variables. Effect sizes (η^2) were reported alongside *p*-values.
- Multiple linear regression was applied to test the predictive effects of mindfulness and forgiveness on life satisfaction and social cohesion. An interaction term between mindfulness and forgiveness was included to assess potential moderating effects. Model assumptions (linearity, independence, homoscedasticity, and normality of residuals) were checked and satisfied.

Internal consistency reliability was evaluated using Cronbach's α for each scale (MAAS, RFS, SWLS, and the Social Cohesion Index), with all values exceeding the recommended threshold of 0.70.

For the qualitative data, 18 semi-structured interviews were transcribed, anonymized, and coded using an inductive thematic approach. The analysis involved:

- Initial coding of keywords and meaning units related to stress, cultural conflict, reconciliation, mindfulness practice, and forgiveness.
- Theme development, in which recurring patterns were clustered into higher-order categories, such as emotional regulation, intercultural empathy, and healing.
- Comparative analysis across participant groups to explore how the lived experiences of mindfulness and forgiveness differ by demographic or cultural background.

Findings from both strands were integrated during the interpretation phase. Quantitative trends were supported and contextualized through qualitative narratives, helping to explain not only whether mindfulness and forgiveness are effective but also how and why they function differently across groups.

This mixed-methods strategy provides both statistical validity and contextual depth, offering a nuanced under-standing of the psychological and social mechanisms through which mindfulness and forgiveness promote healing and cohesion in Binh Duong's multicultural society.

4. RESULTS

4.1. Key Findings

The analysis of survey data (n = 150) and in-depth interviews underscores the pivotal roles of mindfulness and forgiveness in stress reduction, reconciliation, and relationship enhancement among multicultural community groups. As shown in Table 1, descriptive statistics reveal balanced representation across International Students, Migrant Workers, and Local Residents, enabling robust comparisons [7, 8]. Reliability analysis indicated satis-factory internal consistency for all scales (Cronbach's α > 0.70).

Preliminary tests confirmed that assumptions for parametric analysis were satisfied (Shapiro–Wilk $p > .05$; Levene's test $p > .05$). The results of the correlation analysis are summarized in Table 2 below. A Pearson correlation analysis demonstrates a strong and significant association between mindfulness practice and stress reduction ($r = 0.76$, $p < 0.01$) [17]. Participants with higher scores on the Mindful Attention Awareness Scale (MAAS) consistently reported better emotional regulation and lower perceived stress, underscoring the role of mindfulness in fostering calmness and resilience in intercultural contexts.

The results of the one-way ANOVA are presented in Table 3 below. The analysis demonstrates significant between-group differences in the perceived effectiveness of interventions ($F(2,147) = 5.32$, $p < 0.01$, $\eta^2 = 0.07$). International students reported the highest gains in emotional self-regulation following mindfulness training, while migrant workers noted greater improvements from forgiveness exercises.

Table 1. Descriptive statistics of participant groups.

Group	N	Mean Age	Gender (% F)	Years in Binh Duong
International students	50	22.4	54%	1.8
Migrant workers	50	28.7	47%	2.5
Local residents	50	30.5	52%	-

Table 2. Correlations among mindfulness, forgiveness, and outcome variables.

Variable	1	2	3	4
1. Mindfulness (MAAS)	-	-	-	-
2. Forgiveness (RFS)	0.64*	-	-	-
3. Stress reduction	0.76**	0.64*	-	-
4. Social cohesion index	0.71**	0.62*	0.68**	-

Note: *$p < 0.05$; **$p < 0.01$.

Table 3. ANOVA of intervention effectiveness by participant group.

Intervention	International Students	Migrant Workers	Local Residents	F	p
Mindfulness	82.4%	75.1%	78.6%	4.15	0.018
Forgiveness	70.2%	79.3%	73.5%	5.89	0.004

Table 4. Regression of social cohesion on mindfulness, forgiveness, and their interaction.

Predictor	β	SE	t	p
Mindfulness (MAAS)	0.32	0.08	4.00	<0.001
Forgiveness (RFS)	0.28	0.09	3.11	0.002
MAAS × RFS Interaction	0.45	0.10	4.50	<0.001

Values are mean self-reported effectiveness scores (%) on intervention items. F and p reported are from one-way ANOVA comparing group means; η^2 denotes effect size.

In qualitative interviews, participants consistently attributed improved adaptability to mindfulness. For instance, Ms. Nguyen Thi Lan described how "accepting differences and focusing on common ground" eased her communication with international colleagues, thereby enhancing teamwork efficiency [10].

Forgiveness also emerged as a cornerstone for community cohesion, with RFS scores correlating positively with the Social Cohesion Index ($r = 0.62$, $p < 0.05$) [20]. Mr. Nguyen Van Hung's testimony illustrates this process: letting go of resentment enabled him to rebuild trust and improve workplace dynamics.

Finally, the synergy of mindfulness and forgiveness yielded the greatest overall benefit. Table 4 presents regression results confirming that the interaction term (MAAS × RFS) significantly predicts Social Cohesion ($\beta = 0.45$, $p < 0.01$). The regression model explained a substantial proportion of variance in social cohesion ($R^2 = 0.42$), highlighting the joint contribution of mindfulness and forgiveness. The strong correlation between mindfulness and forgiveness ($r = 0.82$, $p < 0.01$) underscores their interdependence in fostering psychological well-being [22].

Together, these quantitative and qualitative findings demonstrate that mindfulness and forgiveness-individually and synergistically-are powerful levers for stress reduction, reconciliation, and social harmony in Binh Dương's multicultural context.

4.2. Identified Relationships

Building on these results, the analysis also explored group-specific patterns in mindfulness, forgiveness, life satisfaction, and stress reduction. Table 5 below presents the mean scores across the three participant groups on a 5-point Likert scale, highlighting both commonalities and nuanced differences in how the interventions were experienced.

- Mindfulness Practice: International Students scored highest (M = 4.12), suggesting greater engagement with present-moment awareness [17].
- Forgiveness: Migrant Workers reported the strongest forgiveness tendencies (M = 3.98), reflecting their need to navigate cross-cultural tensions [20].
- Life Satisfaction: International Students and Local Residents both showed relatively high life satisfaction (M = 4.05 and 3.95), with Migrant Workers slightly lower (M = 3.80).
- Stress Reduction: All groups reported substantial stress relief from the interventions, particularly International Students (M = 4.20).

To further examine the interconnections among the core constructs, Pearson correlation analyses were conducted. Table 6 presents the correlation coefficients, revealing how mindfulness and forgiveness are linked to both life satisfaction and stress reduction.

- The strong correlation between mindfulness and life satisfaction (r = 0.71) confirms that present-moment focus fosters a positive appraisal of one's quality of life, even amidst cultural challenges [17].
- Forgiveness and life satisfaction are also significantly linked (r = 0.65), illustrating how letting go of resentment supports overall well-being [20].

Table 5. Mean scores by participant group (5-point likert scale).

Variable	International Students	Migrant Workers	Local Residents
Mindfulness practice	4.12	3.85	3.92
Forgiveness	3.74	3.98	3.88
Life satisfaction	4.05	3.80	3.95
Stress reduction	4.20	3.90	4.00

Table 6. Pearson correlations between key variables.

Variable Pair	r	p
Mindfulness – Life satisfaction	0.71**	<0.01
Forgiveness – Life satisfaction	0.65*	<0.05
Mindfulness – Stress reduction	0.76**	<0.01
Forgiveness – Stress reduction	0.64*	<0.05

Note: *$p < 0.05$; **$p < 0.01$.

Table 7. One-way ANOVA of mean differences (F, p, and η^2).

Variable	F	p	η^2
Mindfulness	3.82	0.025	0.05
Forgiveness	4.27	0.017	0.06
Life satisfaction	2.94	0.055	0.04
Stress reduction	4.64	0.011	0.06

Table 8. Effect size (cohen's d) of interventions on stress reduction by group.

Group	Mindfulness (d)	Forgiveness (d)
International students	0.82	0.75
Migrant workers	0.68	0.62
Local residents	0.45	0.38

Beyond correlations, a one-way ANOVA was performed to assess between-group differences in the effectiveness of the interventions. Table **7** summarizes these results, showing how the impact of mindfulness and forgiveness practices varied across International Students, Migrant Workers, and Local Residents.

- Significant group differences emerged for Mindfulness and Forgiveness, underscoring that each cohort benefits uniquely from the practices.
- Stress Reduction differences (F = 4.64, $p < 0.05$, η^2 = 0.06) further highlight that International Students derive the greatest relief, likely due to high initial culture-shock stress.

4.2.1. Qualitative Insights

- A Migrant Worker noted:"*Focusing on the here and now stopped me from ruminating on past slights; I now approach daily challenges with more ease.*"
- Ms. Nguyen Thi Minh, a Local Resident, observed: "*By learning to forgive minor misunderstandings, I feel lighter and more open to building friendships with newcomers.*" [21]

4.2.2. Synergistic Effect

When mindfulness and forgiveness co-occur, they reinforce one another: mindfulness creates the emotional space to forgive, while forgiveness deepens mindful calm.

In a My Phuoc industrial zone pilot, participants in combined workshops reported a 30% drop in minor conflicts and a 20% boost in cooperative behaviors-evidence of the powerful positive feedback loop these practices generate.

4.3. Unexpected and Differentiated Findings

Although mindfulness and forgiveness proved beneficial across all cohorts, their impact varied notably by cultural background and belief system. Between-group contrasts confirmed differentiated outcomes, and effect sizes further clarified the magnitude of these differences. To better capture the magnitude of differences across groups, effect sizes were calculated. Table **8** presents the Cohen's *d* values for stress reduction, highlighting how the relative benefits of mindfulness and forgiveness varied among International Students, Migrant Workers, and Local Residents.

- International Students experienced the largest gains from mindfulness (d = 0.82) and forgiveness (d = 0.75), reflecting their acute need to manage culture shock and build new social ties.
- Migrant Workers showed moderate effect sizes (d = 0.68 and d = 0.62), consistent with their ongoing adaptation pressures.
- Local Residents displayed smaller, yet still meaningful, benefits (d = 0.45 and d = 0.38), likely due to stronger attachment to traditional norms.

Table 9. Mean forgiveness scores (RFS) by religious affiliation.

Affiliation	Mean RFS	SD	n
Religious	4.02	0.56	80
Non-religious	3.45	0.62	70

A striking qualitative example comes from Mr. Tran Van Chinh (Hoa Phu Ward):

"Even though I have tried to practice mindfulness and forgiveness, I still find it hard to accept some of the customs of migrants."

This testimony suggests that openness to practice mediates effectiveness-residents deeply rooted in familiar value systems may require additional support to integrate these tools. In addition to cultural contrasts, religious affiliation emerged as a key differentiator in forgiveness outcomes. Table **9** displays mean forgiveness scores by religious status, underscoring the role of faith-based values in motivating forgiveness practices.

- Participants with strong religious beliefs (*e.g.*, Lao Buddhists, Korean Protestants) reported higher forgiveness (M = 4.02), citing faith-based values as motivators.
- Non-religious individuals averaged lower scores (M = 3.45), often framing conflict resolution in pragmatic rather than moral terms.

These differentiated patterns highlight that cultural and belief systems shape both the adoption and impact of mindfulness and forgiveness. Religion not only motivates practice but also provides value frameworks that facilitate letting go of negative emotions.

4.3.1. Implications for Intervention Design

4.3.1.1. Tailored Outreach for Local Residents

- Culturally familiar narratives (*e.g.*, local proverbs) should be incorporated to introduce mindfulness and forgiveness concepts.
- Peer-guided workshops led by respected community figures can be used to reduce resistance.

4.3.1.2. Faith-Integrated Modules

- Partnership with religious organizations should be encouraged to frame forgiveness within spiritual practices, boosting relevance and uptake among believers.
- • Secular equivalents (*e.g.*, values-based counseling) should be provided for non-religious participants.

4.3.1.3. Ongoing Support and Reinforcement

Follow-up sessions and peer support groups should be established to sustain practice, particularly for participants with slower adoption rates.

By recognizing these unexpected and differentiated findings, future programs can be more precisely calibrated to group-specific needs-maximizing both individual well-being and collective cohesion.

4.4. Theoretical Contributions and Integration of Contemporary Stress Management Research

This study makes several meaningful contributions to current theoretical frameworks on stress coping, social cohesion, and mindfulness practice in multicultural contexts.

4.4.1. Expanding the Stress-and-Coping Framework through Synergistic Intervention Design

Building on Lazarus and Folkman's (1984) trans-actional model of stress and coping, which distinguishes between problem-focused and emotion-focused strategies, this research demonstrates that combining mindfulness-based regulation and forgiveness-based emotional release offers a dual-pathway model of coping that is particularly well suited to multicultural stressors. While traditional applications of Mindfulness-Based Stress Reduction (MBSR) or Mindfulness-Based Cognitive Therapy (MBCT) emphasize intrapersonal stress regulation, our findings suggest that integrating structured forgiveness processes can enhance overall stress adaptation-especially in socially dynamic and value-diverse environments [1, 2]. This approach responds to calls for more context-sensitive and socially integrative stress interventions. Recent evidence from Guo *et al*. (2019) reinforces this direction: their pilot study with Chinese military recruits found that MBSR significantly improved both general health and self-reported stress scores [46]. Our study extends these findings beyond uniform populations to multicultural civilian settings, showing that when forgiveness is layered onto mindfulness training, participants report deeper emotional clarity and stronger reductions in interpersonal stress. Regression results from our data confirmed this synergy, with the interaction term (MAAS × RFS) emerging as a significant predictor of social cohesion (β = 0.45, $p < 0.01$, $R^2 = 0.42$).

4.4.2. Bridging Culturally Adaptive Therapeutic Models

Our research also contributes to the growing body of literature advocating for culturally tailored mental health interventions. Perry, Gardener, and Bhui (2024) conducted a practice-based feasibility study of a culturally adapted Acceptance and Commitment Therapy (ACT) group for UK Vietnamese communities, highlighting the importance of culturally grounded values (such as harmony and relational interdependence) in intervention acceptability and impact. Their work underlines how ethnic and cultural

identity shapes how psychological tools like acceptance or mindfulness are received [47]. In the same spirit, our findings show that mindfulness and forgiveness—when framed with cultural relevance—are more readily adopted by international students and migrant workers who may experience acculturative stress. Rather than applying Western-centric techniques in isolation, this study reinforces the need for culturally congruent practices, tailored to community expectations and belief systems.

4.4.3. Extending Organizational Mindfulness Theory into Community Cohesion

Finally, this research advances insights from organizational studies of mindfulness into broader social contexts. In their seminal integrative review, Good *et al.* (2016) synthesized decades of research on mindfulness in the workplace, concluding that mindful practices support emotional regulation, prosocial behavior, and improved communication within teams. Our study applies these findings at the community level, illustrating that when individuals practice both mindfulness and forgiveness, the benefits transcend personal mental health and contribute to broader social cohesion-especially in environments where cultural misunderstanding is common [48]. By demonstrating that individual-level emotional awareness (*via* mindfulness) and relational repair (*via* forgiveness) interact significantly to predict group-level harmony ($\beta = 0.45$, $p < 0.01$, $R^2 = 0.42$), our work bridges the psychological and social dimensions of cohesion in multicultural societies.

4.4.4. Implications for Theory and Practice

4.4.4.1. Theoretical Implication

This study introduces a dual-pathway model that merges mindfulness and forgiveness into a single integrative coping framework. Future iterations of stress-and-coping theory- particularly those applied in multicultural contexts-should incorporate this dynamic interaction.

4.4.4.2. Practical Implication

Mental health educators and community program designers should sequence mindfulness training (to establish emotional awareness) before introducing forgiveness exercises (to activate relational repair), especially when targeting diverse or high-stress populations.

4.4.4.3. Future Research

Longitudinal designs are needed to assess the durability of these combined interventions and to explore moderating variables such as religious affiliation, cultural openness, and identity flexibility.

By grounding theoretical contributions in current, empirically validated sources, this study offers a timely and contextually grounded foundation for future intervention design and stress-management scholarship.

5. DISCUSSION

5.1. Significance of the Research Findings

This study has illuminated the importance of mindfulness and forgiveness in promoting reconciliation, reducing stress, and fostering harmony among diverse cultural groups. The findings not only provide robust empirical evidence for the effectiveness of these two factors but also open new avenues for their practical application to improve psychological well-being and social cohesion.

The results demonstrate that mindfulness is an effective tool for maintaining mental stability when facing challenges arising from cultural differences. By focusing on the present moment and perceiving it non-judgmentally, mindfulness enables practitioners to identify negative emotions, reduce impulsive reactions, and enhance emotional self-regulation. This is consistent with studies by Davidson [49] and Vu [50], which showed that mindfulness significantly mitigates potential conflicts in intercultural communication. In line with these findings, our data revealed strong associations between mindfulness and stress reduction ($r = 0.76$, $p < 0.01$) and between mindfulness and life satisfaction ($r = 0.71$, $p < 0.01$), further validating its role in fostering psychological resilience.

A prominent feature of mindfulness is that it not only provides temporary calm but also cultivates deep self-awareness of emotions and thoughts. This reflective capacity helps individuals adjust their responses to better align with social contexts. In multicultural societies, where differences in values and lifestyles often spark tension, mindfulness reduces conflict triggers and contributes to safer, more constructive communication spaces.

Forgiveness, especially when practiced in conjunction with mindfulness, also demonstrated powerful healing effects in multicultural environments. The study confirmed that forgiveness helps individuals release negative emotions such as resentment and stress, aligning with findings by Hui [51]. Our results further revealed significant positive correlations between forgiveness and social cohesion ($r = 0.62$, $p < 0.05$), affirming that forgiveness is not merely an intrapersonal act but also a relational process that restores trust and supports reconciliation across cultural divides.

Individuals who practice forgiveness tend to build more positive social relationships, demonstrating greater openness to differences and reduced psychological barriers toward others. This is particularly valuable in multicultural societies, where misunderstandings often emerge from divergent worldviews. In such contexts, forgiveness not only relieves individual distress but also strengthens the foundations of communal harmony.

One of the standout findings of this study is the synergistic effect of mindfulness and forgiveness. When these practices are combined, they not only enhance individual emotional well-being but also contribute substantially to life satisfaction and social cohesion. Regression analysis confirmed that the interaction between mindfulness and forgiveness significantly predicts higher levels of social cohesion ($\beta = 0.45$, $p < 0.01$, $R^2 = 0.42$). This indicates a positive feedback loop:

mindfulness helps individuals remain calm and recognize negative emotions, while forgiveness facilitates the release of those emotions, resulting in improved psychological health and stronger interpersonal bonds.

Another significant implication lies in the applicability of mindfulness and forgiveness within educational and community development programs. Integrating these practices into school curricula can help younger generations cultivate emotional regulation and compassion, thereby reducing conflict and enhancing empathy in learning environments [52]. At the community level, promoting mindfulness and forgiveness can foster intercultural under-standing, reduce stress, and create more cohesive neighborhoods. Community-based psychological support initiatives could incorporate structured mindfulness and forgiveness modules to help residents overcome cultural conflicts and build constructive relationships.

An additional key contribution of this research is the role of mindfulness and forgiveness in promoting cultural acceptance and integration. Practicing mindfulness enhances individuals' ability to regulate emotions and reduces prejudice against those perceived as different. Forgiveness, in turn, facilitates reconciliation and colla-boration across groups. Together, they act as relational bridges, enabling cultural groups to move beyond misunder-standing toward mutual respect and cooperation.

Ultimately, mindfulness and forgiveness benefit not only individuals but also entire communities. When widely adopted, these practices elevate psychological well-being, generate prosocial energy, and create a social environment where cultural differences are embraced as sources of richness rather than division.

5.2. Comparison with Previous Studies

The results of this study align with a broad body of prior research on the significant role of mindfulness and forgiveness in reducing stress and fostering reconciliation, particularly in multicultural contexts. Mindfulness has long been recognized as an effective method for enhancing psychological well-being, while forgiveness is consistently regarded as an essential tool for building reconciliatory relationships between individuals and groups.

Research by Vu [50] found that students who practiced mindfulness were better able to adapt to life and reduce conflicts arising from cultural differences. This finding resonates strongly with our results, as international students in this study reported higher levels of life satisfaction following mindfulness practice. Participants noted that focusing on the present and perceiving experiences non-judgmentally minimized stress triggered by cultural differences.

Similarly, Grossman *et al.* [41] emphasized the role of mindfulness in improving emotional self-regulation, parti-cularly in stressful contexts. Our results confirmed this association, showing that individuals with higher mind-fulness scores reported stronger control over negative emotions, fewer conflicts, and greater psychological stability. Pearson correlation analysis supported this evidence, revealing significant positive associations between mindfulness and both stress reduction (r = 0.76, $p < 0.01$) and life satisfaction (r = 0.71, $p < 0.01$). Thus, the current study strengthens prior evidence on the effectiveness of mindfulness for addressing psychological challenges related to cultural adaptation.

Like mindfulness, forgiveness has been recognized as a central factor in building reconciliatory relationships. Hui demonstrated that the ability to forgive reduces stress and fosters positive interpersonal bonds within communities [51]. This corresponds with our findings: individuals who practiced forgiveness not only overcame interpersonal disagreements but also reported stronger feelings of belonging within their communities. Regression analysis in this study confirmed that forgiveness significantly predicted higher social cohesion ($\beta = 0.28$, $p = 0.002$), underscoring its broader social role.

The study by Nguyen PCT and Nguyen NQA further highlighted that integrating mindfulness into educational programs improved students' quality of life while enhancing their capacity for forgiveness [53]. This aligns with our evidence showing that international students and migrant workers, after engaging in mindfulness and forgiveness practices, reported notable improvements in emotional regulation and the ability to establish harmonious relationships.

However, our findings also identified cultural variations in the effectiveness of mindfulness and forgiveness, which reflect insights from earlier studies. García *et al.* observed that mindfulness is not universally effective across cultures, a perspective echoed here: some individuals from Western backgrounds found mindfulness more difficult to practice, likely due to individualistic lifestyles and high-paced environments [54]. De *et al.* similarly noted that modern Western lifestyles may diminish mindfulness effectiveness, as such practices require sustained focus and detachment from external stressors [55].

Conversely, participants from Eastern cultures-such as Laos, Taiwan, and South Korea-demonstrated greater ease in adopting mindfulness practices. This reflects collective cultural orientations and Buddhist influences that emphasize harmony and balance. Kabat [31] also underscored that in cultures valuing tranquility, mind-fulness is not merely an emotional management tool but a way of life.

Religion likewise emerged as an important factor shaping forgiveness. De *et al.* found that individuals with strong religious commitments were more inclined to forgive, even in major conflicts [55]. This finding is consistent with our data: participants from religiously rich contexts (*e.g.*, South Korea, Laos, and Taiwan) showed a higher willingness to forgive, guided by compassion and harmony values embedded in Buddhism and Christianity. In contrast, non-religious individuals tended to frame conflict resolution pragmatically and were less willing to release resentment, reflecting cultural differences in how forgiveness is enacted.

Shahar *et al*. argued that mindfulness not only enables individuals to focus on the present but also enhances their ability to understand others when confronted with value differences [56]. Our findings extend this perspective by demonstrating that combining mindfulness with forgiveness helps individuals reduce personal stress while fostering reconciliation across groups. Mindfulness enables a focus on shared values, while forgiveness supports the release of prejudices and emotional burdens.

Several prior studies have further highlighted the integrative benefits of mindfulness and forgiveness. Flynn showed that when embedded in educational and community development programs, these practices reduced stress and improved relationships among diverse populations [57]. This mirrors our results: in multicultural communities, mindfulness and forgiveness practices enhanced social cohesion and reduced intercultural tensions.

In summary, this study reaffirms previous findings on the benefits of mindfulness and forgiveness, while advancing knowledge by revealing how their effectiveness varies across cultural and religious groups. These findings both clarify the psychological mechanisms underlying mindfulness and forgiveness and highlight their practical value in fostering more cohesive and harmonious societies.

5.3. Practical Applications

The findings of this research highlight the broad potential for applying mindfulness and forgiveness in community development, education, psychological support, and workplace training-particularly in increasingly multicultural societies. These applications not only reduce stress and conflict but also promote understanding, reconciliation, and social cohesion.

Mindfulness and forgiveness can be widely implemented in community development programs to foster solidarity among groups with diverse cultural and religious backgrounds. In culturally mixed neighborhoods, mindfulness practices help individuals recognize and regulate emotions, thereby avoiding negative reactions when confronted with differences. Flynn, for example, emphasized that community-based mindfulness practices strengthen emotional self-regulation and deepen empathy and compassion [57]. Community workshops or classes can equip participants with skills to maintain calm in stressful situations and to focus on shared values rather than cultural differences. In a multicultural residential area, such as Binh Duong, mindfulness sessions could minimize conflicts linked to customs, traditions, or beliefs.

Simultaneously, forgiveness-based programs play a vital role in resolving conflicts and fostering reconciliation. Structured interventions that combine forgiveness exercises with storytelling or peer-sharing sessions can create opportunities for open dialogue and mutual understanding. This is especially useful in contexts where longstanding conflicts or prejudices have created social divisions.

Integrating mindfulness and forgiveness into education is equally crucial for cultivating a compassionate and accepting younger generation. In an era of globalization, education must bridge cultural gaps and nurture empathy among students from diverse backgrounds. Amoneeta [58] showed that schools implementing mindfulness and forgiveness programs reported reduced anxiety and stigma, alongside improved peer connections. Weekly mindfulness practice sessions in schools-supplemented by group discussions or role-play of intercultural conflicts-can help students develop self-regulation, empathy, and communication skills. Forgiveness lessons, embedded in ethics, civic education, or life skills curricula, encourage students to let go of resentment and foster positive peer relationships. Research by Enright *et al*. demonstrated that such programs improve school climate, reduce violence, and alleviate psychological stress [36].

Mindfulness and forgiveness also have important roles in psychological support. Mindfulness-based therapies, such as Mindfulness-Based Stress Reduction (MBSR), have consistently proven effective in reducing anxiety, depression, and interpersonal stress. Kabat-Zinn found that MBSR not only alleviates psychological symptoms but also enhances social communication [31]. In multicultural communities, psychological support centers can integrate mindfulness and forgiveness modules for immigrants and workers, helping reduce isolation and promote social integration. Forgiveness-focused counseling can further aid those struggling with anger or hurt in intercultural relationships. For example, in a case from Binh Duong, a migrant worker who practiced forgiveness during counseling sessions reported improved relationships with local colleagues.

The rise of digital platforms has expanded opportunities to incorporate mindfulness and forgiveness into daily life. Applications such as Headspace, Calm, and tailored programs enable individuals to practice mindfulness conveniently. Rosen *et al*. found that such tools not only reduce stress but also increase self-awareness and strengthen social bonds [59]. For migrant workers and busy residents in Binh Duong, mobile-based mindfulness and forgiveness modules may be particularly effective. Community organizations could develop hybrid online–offline training programs to maximize accessibility.

Finally, mindfulness and forgiveness can be embedded in workplace training to improve team dynamics in multicultural organizations. Howells demonstrated that mindfulness training enhances productivity and reduces interpersonal conflict among employees from diverse backgrounds [60]. Businesses in Binh Duong could organize mindfulness workshops to help employees manage stress and improve teamwork, while forgiveness sessions could equip them with constructive strategies for conflict resolution. This dual approach would create a more harmonious and resilient organizational culture.

In summary, the application of mindfulness and forgiveness extends beyond individual well-being to strengthen families, schools, workplaces, and entire communities. The evidence from this study provides a strong foundation for practical initiatives across multiple domains. Mindfulness and forgiveness are not only therapeutic tools but also powerful drivers of reconciliation and social cohesion in today's complex multicultural societies.

5.4. Recommendations for Integrating Mindfulness and Forgiveness

Maximizing the effectiveness of mindfulness and forgiveness requires their systematic integration into key societal domains, including education, community development, psychological support, technology, and workplace culture. These practices are not only tools for individual well-being but also critical strategies for promoting harmony, mutual respect, and conflict resolution in multicultural environments. The following recommendations highlight actionable approaches to effectively implement mindfulness and forgiveness across different sectors.

5.4.1. Education: Cultivating Compassion and Emotional Intelligence

Education provides the foundation for shaping young individuals' values and behaviors. In multicultural contexts, teaching mindfulness helps students become more aware of their emotions, regulate stress, and respond empathetically to differences. Programs may include mindfulness meditation, breathwork, and emotional awareness exercises adapted to classroom contexts. As noted by Enright and colleagues [36], incorporating mindfulness in school curricula not only supports students' mental health but also fosters empathy and intercultural understanding.

Equally important is embedding forgiveness education into moral and social development programs. Structured activities-such as reflective writing, analysis of forgiveness narratives, or facilitated group discussions-can help students learn to release anger, adopt alternative perspectives, and promote reconciliation. In Binh Duong's multicultural schools, forgiveness workshops have proven effective in fostering mutual respect among students from different cultural backgrounds, reducing peer conflicts, and encouraging early development of prosocial values.

5.4.2. Community Development: Fostering Connection in Diverse Neighborhoods

Community centers act as strategic hubs in culturally diverse areas and offer ideal venues for mindfulness and forgiveness training. Group workshops and weekly practice sessions can provide residents with tools to manage daily stress and strengthen interpersonal connections. According to De *et al*., community-based mindfulness initiatives reduce isolation and enhance communication and cooperation among members [61].

In practice, such programs can bring together local residents and migrant groups for shared activities focusing on emotional regulation, cultural empathy, and reconciliation. Public talks that integrate forgiveness themes-delivered by respected community figures, religious leaders, or psychologists-can further enhance community engagement and underscore the value of compassion in overcoming cultural tensions.

5.4.3. Psychological Support: Addressing Multicultural Stress and Trauma

Mindfulness and forgiveness are widely recognized in clinical psychology as powerful tools for reducing psychological distress. The Mindfulness-Based Stress Reduction (MBSR) program developed by Kabat-Zinn is a leading evidence-based intervention that improves emotional regulation and reduces anxiety [31].

In multicultural settings like Binh Duong, psychological support services can integrate mindfulness and forgiveness into both individual and group counseling. For instance, a migrant worker experiencing discrimination may benefit from mindfulness exercises to remain anchored in the present and reduce rumination, while guided forgiveness practices enable them to release resentment and foster healing. This dual approach strengthens resilience and supports long-term social integration in culturally fragmented environments.

5.4.4. Technology: Expanding Access through Digital Platforms

The digital era creates new opportunities to deliver mindfulness and forgiveness at scale. Applications, such as Headspace, Calm, and similar platforms, have shown measurable benefits for stress reduction and emotional well-being. Rosen *et al*. demonstrated that app-based mindfulness use is associated with lower stress and enhanced social bonding [59].

Community organizations and schools can adopt these digital tools as low-cost, accessible interventions to supplement in-person programs. Adding forgiveness modules-such as guided reflections or compassion meditations-can further expand their impact by promoting relational healing. For multicultural teams or classrooms, digital tools provide a flexible and engaging means to reinforce emotional skills beyond formal instruction.

5.4.5. Workplace Integration: Promoting Harmony in Multicultural Organizations

As globalization accelerates, workplaces have become increasingly multicultural, presenting challenges for communication, collaboration, and conflict resolution. Mindfulness and forgiveness can be integrated into corporate training to build cultural awareness, emotional regulation, and team cohesion.

Programs may include daily mindfulness breaks, role-play scenarios, and group discussions on forgiveness and accountability. Howells found that such training reduces interpersonal conflict, improves employee satisfaction, and enhances group cohesion [60]. In industrial zones such as Binh Duong, where workforce diversity is pronounced, workplace-based mindfulness and forgiveness programs could transform organizational cultures into more inclusive, respectful, and collaborative environments.

CONCLUSION

In the rapidly evolving multicultural context of Binh Duong, this study confirms that mindfulness and forgiveness function as powerful, complementary mechanisms for reducing stress, healing emotional wounds, and fostering social cohesion. Mindfulness practice enabled participants to anchor in the present moment, regulate negative affect, and adapt more effectively to intercultural challenges [17,

31]. Forgiveness facilitated the release of resentment and anger, rebuilding interpersonal trust and strengthening community bonds [20, 36]. Importantly, when combined, these two processes generated a synergistic effect, producing greater improvements in life satisfaction and social harmony than either practice alone (r = 0.82, *p* < 0.01) [22].

By extending theoretical models of stress and coping [1, 2], culturally adaptive therapy [47], and organizational mindfulness [48], our findings situate mindfulness–forgiveness integration within multicultural civilian settings. They demonstrate that dual-pathway interventions-sequencing mindfulness training with structured forgiveness work-can be effectively scaled in schools, community centers, psychological services, and workplace programs to promote resilience, empathy, and reconciliation.

Several practical implications emerge from these findings:

- **Education**: Embedding mindfulness and forgiveness modules in school programs to cultivate emotional intelligence and intercultural empathy from an early age [36].
- **Community Development**: Offering joint workshops in community centers that combine experiential mindfulness exercises with guided forgiveness dialogues to reduce isolation and intergroup tensions [61].
- **Psychological Support:** Integrating MBSR protocols with forgiveness-focused counseling for migrants, students, and local residents to address trauma and acculturative stress [31].
- **Workplace Training**: Designing corporate well-being initiatives that blend brief mindfulness practices with team-based forgiveness activities to foster inclusive, high-trust work cultures [60].

By systematically integrating these practices, stakeholders in Binh Duong and comparable multicultural urban settings can build more cohesive, resilient communities where diversity is not merely tolerated but embraced as a source of collective strength.

LIMITATIONS AND FUTURE DIRECTIONS

Despite its contributions, this study has several limitations that warrant consideration:

1. Sample Representativeness: The n = 150 cohort-equally divided among international students, migrant workers, and local residents-provides valuable insights but may not fully represent broader demographic groups, rural contexts, or regions beyond Binh Duong.

2. Self-Report Bias: Reliance on Likert-scale questionnaires introduces potential social desirability and self-perception biases. Future studies should incorporate objective measures (*e.g.*, physiological stress indicators, behavioral observations) to enhance validity.

3. Cross-Sectional Design: This study captures only short-term associations. Longitudinal or experimental designs are necessary to evaluate the durability of

mindfulness and forgiveness effects and to establish causal pathways.

4. Cultural and Religious Moderators: While preliminary findings suggest differences by religious affiliation and cultural background, these factors were not examined in depth. Future research should explore how spiritual beliefs, cultural identity, and openness to intercultural contact moderate intervention uptake and outcomes.

5. Context Specificity: Binh Duong's distinctive industrial and multicultural profile may limit generalizability. Comparative research in rural, less diverse, or alternative economic settings would test the universality of our integrated model.

Future research directions should address these gaps through multi-site, longitudinal, and mixed-methods designs. Such approaches would deepen understanding of the mechanisms, boundary conditions, and long-term impacts of combined mindfulness and forgiveness interventions across diverse cultural landscapes, thereby refining both theory and practice.

DECLARATION

The author declares that ChatGPT (OpenAI) was used solely as a language editing and proofreading tool to improve the clarity and readability of the manuscript. The AI tool was not involved in the study design, data collection, data analysis, interpretation of results, or drawing of conclusions. All content is the sole responsibility of the author, and no AI system is listed as an author.

AUTHOR'S CONTRIBUTIONS

The author confirms sole responsibility for the following: study conception and design, data collection, analysis and interpretation of results, and manuscript preparation.

LIST OF ABBREVIATIONS

MAAS   =   Mindful Attention Awareness Scale

RFS   =   Rye Forgiveness Scale

SWLS   =   Satisfaction with Life Scale

MBSR   =   Mindfulness-Based Stress Reduction

ETHICAL STATEMENT

It posed minimal risk while still conforming to ethical standards for field research within the practices of the social sciences. Policy for Thu Dau Mot University, Vietnam, states that formal review board (IRB) approval was not necessary. This research involved human participants only. All procedures were carried out in accordance with the ethical principles of the 1964 Helsinki Declaration and its subsequent amendments, as well as comparable international guidelines.

CONSENT FOR PUBLICATION

All participants were fully informed of the study's objectives, their rights, and the voluntary nature of their

participation. Informed verbal consent was obtained prior to data collection. No personally identifiable or sensitive information was recorded, stored, or disclosed in this manuscript.

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