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Intervention Fidelity and Feasibility of the Positive Psychology-Based Happiness Activity Guidebook Among Military Personnel

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ABSTRACT
Military personnel face significant mental health challenges, with high rates of work-related stress. This study evaluated the fidelity and feasibility of a Positive Psychology-Based Happiness Activity Guidebook for military personnel experiencing stress. A mixed-methods process evaluation was conducted with 211 military personnel from the Office of the Permanent Secretary for Defense in Thailand. The intervention, based on the PERMA model, comprised ten structured activities across multiple sessions. Data collection included attendance tracking, facilitator evaluations, participant interviews, and direct observations. The intervention demonstrated exceptional program fidelity, with attendance rates of 97.2-100% and complete activity adherence. Participants reported significant benefits in stress management and professional growth. The 30-minute session format proved effective, with participants valuing the program's structured approach and practical applications. Mental health professionals noted the intervention's capacity to address unique military workplace challenges while promoting positive psychological strategies. The study provides evidence for successfully implementing a positive psychology intervention in a military setting. Key findings emphasize the importance of context-specific program adaptation, robust facilitator training, and alignment with organizational goals. Despite limitations of single-site implementation and short study duration, the research offers valuable insights into mental health support strategies for military personnel.
Keywords: Organizational Well-being, Positive Psychology, Program Evaluation, Stress Intervention, Military Mental Health

Introduction

The mental health of military personnel represents a critical and complex global health concern, characterized by significant psychological challenges that emerge from the unique operational demands of military service. Epidemiological investigations have consistently demonstrated elevated rates of psychological distress within military populations, with prevalence studies indicating that 20-30% of active-duty personnel experience substantial mental health complications. A comprehensive national study conducted by Thomas et al. (2019) revealed that 25.3% of U.S. military personnel manifested significant psychological distress, a finding corroborated by international research. Notably, a targeted investigation by Rukskul and colleagues (2022) among Royal Thai Army personnel documented even more pronounced stress levels, with 31.2% reporting moderate to severe psychological strain, particularly among those deployed in geographically and operationally challenging environments.

The COVID-19 pandemic exponentially amplified existing psychological challenges across military populations globally, as evidenced by comparative study showing persistent mental health gaps in military contexts worldwide (Vermetten et al., 2014). Military organizations worldwide were compelled to assume unprecedented responsibilities, including border control and quarantine facility management, which substantially increased psychological and operational pressures on military personnel (Siripornpanich et al., 2021). These extraordinary circumstances underscored the critical need for sophisticated, evidence-based mental health interventions tailored specifically to military populations. Despite the evident necessity, the extant literature reveals a profound research deficit in

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positive psychology-based interventions designed for military contexts. A systematic review by Hoge and Castro (2012) substantiated this gap, highlighting the limited research addressing mental health challenges in military settings. This paucity of research is particularly problematic, given the nuanced and intensive stressors inherent in military operational environments.

Emerging research from analogous high-stress professional domains provides preliminary insights into potential intervention strategies. (2009) demonstrated the complex psychological challenges faced by military personnel, offering insights into moral injury and potential repair strategies. Complementary research by Hoge et al. (2004) reported critical findings on mental health problems and barriers to care among military personnel. However, despite the recognized need for evidence-based psychological interventions in military contexts, few studies have implemented structured PERMA-based interventions specifically designed for military environments. This represents a significant research gap, as existing positive psychology interventions have primarily been developed and tested in civilian populations, leaving uncertainty about their applicability, cultural appropriateness, and effectiveness within the unique organizational structure and operational demands of military settings. The limited direct evidence specific to military populations necessitates rigorous investigation into how positive psychology frameworks can be systematically adapted and implemented to address the distinct psychological needs of service members.

Literature review

The present study is situated within a robust theoretical framework synthesizing multiple established implementation science approaches. Drawing from the process evaluation guidance by Moore et al. (2015), the theoretical framework of Seligman (2011), and the qualitative research approach by Corbin and Strauss (2015), this research endeavors to conduct a comprehensive process evaluation of a Positive Psychology-Based Happiness Activity Guidebook specifically adapted for military personnel experiencing psychological stress.

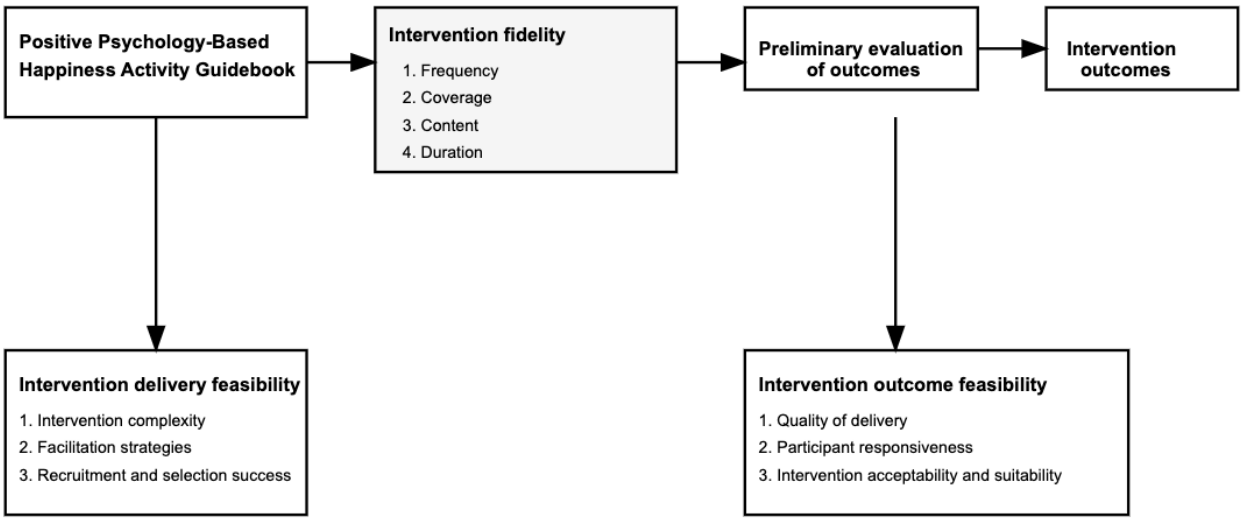

Figure 1: Conceptual framework fidelity and feasibility

The research operationalized two primary investigative domains: intervention fidelity and intervention feasibility. Intervention fidelity assessment focuses on determining the precise implementation of the guidebook, examining critical parameters including intervention frequency, content integrity, duration consistency, and implementation quality. Concurrently, the feasibility assessment explores the intervention's potential for successful implementation by critically analyzing multidimensional factors such as intervention complexity, facilitation strategies, recruitment processes, delivery quality, participant engagement, and overall intervention acceptability. By meticulously examining these interconnected dimensions, the study aims to generate nuanced insights that can inform the development of targeted, evidence-based psychological interventions for military personnel. The research seeks to bridge existing knowledge gaps and contribute to a more

comprehensive understanding of positive psychology-based approaches in high-stress military environments.

Intervention fidelity is particularly critical in military and high-stress populations due to the unique organizational culture, operational demands, and psychological vulnerabilities that may influence how interventions are received and implemented. In these contexts, deviations from evidence-based protocols can compromise effectiveness and potentially exacerbate stress-related outcomes (Carroll et al., 2007; Perepletchikova & Kazdin, 2005). The fundamental research questions guiding this investigation are twofold: First, to what extent is the Happiness Activity Guidebook delivered with fidelity to its original design? Second, how do military personnel and intervention facilitators experience and interact with the intervention process? Through a systematic and rigorous examination of these questions, the study aspires to develop more effective, contextually sensitive mental health support strategies for military populations.

Research methodology

Intervention design

The Positive Psychology-Based Happiness Activity Guidebook represents a comprehensive intervention structured upon Seligman's (2018) PERMA model framework. The guidebook's architectural design encompasses four substantive chapters, each serving a distinct methodological purpose: Chapter 1 establishes foundational theoretical knowledge in positive psychology; Chapter 2 delineates the target population and user demographics; Chapter 3 articulates the intervention's core conceptual content; Chapter 4 presents a meticulously designed suite of ten positive psychology activities.

The intervention systematically implemented the PERMA model's five components: Positive emotion, Engagement, Relationship, Meaning, and Achievement. Ten evidence-based activities were designed to target each component, including Gratitude Counting, Letter to Future Self, Chicken Coop Game, Where is my Flow, Fun with LEGO, Word Chain Building, Creating New World, Meaningful Cards, Tower of London Puzzle, and Who Wants to Be a Millionaire.

Group sessions included 12-15 participants and were led by trained mental health professionals. Sessions lasted 30 minutes (M = 27.9 minutes, SD = 0.9, range: 27-30 minutes). Activity completion rate was 94.7%, with incomplete activities primarily due to extended participant discussions. Facilitators followed a standardized implementation manual to ensure intervention fidelity. Participants received workbooks with session summaries and take-home assignments to reinforce learning.

The intervention's facilitation team comprised five mental health professionals, each possessing a minimum of five years of specialized activity leadership experience. These facilitators underwent rigorous training conducted by the guidebook's developers, which comprehensively addressed the intervention's theoretical foundations, precise objectives, and nuanced implementation protocols. The training emphasized stringent adherence to the intervention manual, with particular focus on maintaining consistent implementation across all session components. The complete intervention timeline and data collection procedures are presented in Table 1.

Research setting and participants

The study was conducted within the organizational context of the Office of the Permanent Secretary for Defense in Thailand, an environment characterized by diverse administrative and operational roles. Through convenience sampling, 211 working-age individuals between 25-55 years were recruited, selected based on specific, predefined inclusion criteria. Participant selection criteria included: continuous employment within the organization for a minimum of one year, documentation of elevated stress levels (ST5 score ≥8) sustained for at least one month prior to intervention, and demonstrable capacity to participate in the complete intervention protocol. The resultant sample exhibited considerable demographic heterogeneity, with representation across operational staff (22.4%), junior management (25.1%), middle management (23.2%), and senior management (29.3%). Demographic characteristics revealed a participant cohort predominantly comprised of

female professionals (59.2%), with a high educational attainment level (77.9% holding bachelor's degrees or higher). The sample's mean age was 38.3 years, with a standard deviation of 9.6, indicating a relatively mature professional population.

Recruitment and preparatory procedures

Two complementary recruitment strategies were implemented to engage potential participants. Initially, the human resources department disseminated comprehensive informational materials about the research study. Concurrently, mental health professionals conducted targeted outreach through established workplace communication channels. Potential participants underwent a systematic screening process to verify eligibility. This process incorporated structured interviews designed to assess compliance with predetermined inclusion criteria. Following initial screening, the research team provided exhaustive verbal and written study information, ensuring participants' comprehensive understanding of the intervention's scope and expectations.

All participants provided informed consent prior to intervention commencement. The research was conducted during a concentrated period from August to September 2024, with participant recruitment achieved through convenience sampling. Five mental health professionals, who demonstrated exceptional inter-rater reliability (Intraclass Correlation Coefficient=0.89), executed the intervention activities. The facilitators implemented a nuanced approach, adhering to standardized guidebook protocols while maintaining sufficient interpretive flexibility to address individual participant requirements. Pre- and post-intervention assessments utilized validated Thai-language versions of the Stress Test-5 (ST5) and Resilience Quotient (RQ-3) scales. Both instruments demonstrated acceptable internal consistency in the current sample, with reliability coefficients meeting established psychometric standards for research use. Detailed reliability analyses for both measures are reported elsewhere.

Data collection

A sophisticated mixed-methods research design was employed, integrating multiple data collection modalities: semi-structured interviews, comprehensive evaluation forms, and systematic on-site observational protocols. Interviews were strategically conducted at three critical intervention phases: initial stage, mid-point (following five sessions), and conclusion (post-tenth session).

Interview data were collected by the primary investigator (WM) and a trained research assistant. Participant interviews ranged between 15-30 minutes (Mean=22.8 minutes), while facilitator interviews, conducted post-intervention, extended 30-45 minutes (Mean=39.7 minutes). Tailored topic guides were developed to capture nuanced feasibility components, with distinct protocols for participants and instructors. Complementary data collection methods included facilitator-completed evaluation forms administered during and post-session to assess intervention fidelity. Direct observational sessions, conducted by the primary investigator, provided additional contextual insights into intervention implementation and participant engagement.

Table 1 Assessment Tools and Methodological Framework

Collection Strategy	Assessment Focus	Responsible Party
Initial Screening Dialogues (semi-structured)	Participant background information, motivation factors, and anticipated program outcomes	Researcher with participant
Mid-point and Concluding Discussions (semi-structured)	Participant feedback and assessment, including program effectiveness, engagement levels, and overall satisfaction	Facilitators
Progress Monitoring Forms (questionnaire)	Session attendance tracking, protocol adherence metrics, duration of meetings, engagement indicators, resource utilization patterns, and implementation challenges	Facilitators
Facilitator Feedback Sessions (semi-structured)	Facilitator insights on participant recruitment effectiveness, teaching approaches, and participant engagement patterns	Researcher with Instructors
Direct Session Monitoring (notes)	Program implementation quality, participant engagement levels, and identification of effective and problematic program elements	Researcher

Analytical approach

Data analysis incorporated a sophisticated, multi-stage coding approach utilizing MAXQDA 2024 software. The analytical strategy synthesized deductive and inductive coding methodologies, drawing from Corbin and Strauss's (2015) systematic qualitative analysis framework. Deductive analysis commenced with the development of a preliminary coding framework predicated on interview guide themes. Subsequent inductive analysis followed a rigorous three-stage coding process: open coding to deconstruct textual data into discrete analytical units, axial coding to comparatively categorize these units, and selective coding to identify and synthesize meaningful thematic constructs. To ensure analytical reliability, each research team member independently coded a minimum of two transcripts. A collaborative review process facilitated framework refinement, with coding discrepancies resolved through comprehensive team discussion and consensual interpretation. Quantitative evaluation form data were processed utilizing SPSS Statistics 29, providing complementary statistical insights to the qualitative analysis.

Findings

Initially, 250 people expressed interest in participating in the intervention, with 29 unable to attend initial screenings due to urgent duty, sick leave, or changing their minds. Of the remaining 221 potential participants, ten did not start the intervention because of unmet expectations or practical reasons. Ultimately, 211 individuals began the intervention across four separate groups, with demographic analysis revealing statistically comparable characteristics between stressed and non-stressed groups. The mean ages were similar (38.3 ± 9.6 years vs. 37.4 ± 8.8 years, $p=0.546$), and both groups showed a majority of female participants (75.2% stressed, 24.8% non-stressed), predominantly holding bachelor's degrees (77.9% stressed, 22.1% non-stressed), and occupying higher commander roles (79.1% stressed, 20.9% non-stressed). Statistical analysis using independent t-test and Chi-Square test found no significant differences across demographic variables ($p>0.05$), supporting the potential generalizability of the study's findings.as shown in Table 2.

Table 2 Demographic Characteristics of participants (N = 211)

Demographic Characteristics	Non-stressed		Stressed		p-value
	N	%	N	%	
Age (mean, SD)	37.4	8.8	38.3	9.6	0.546[a]
Gender					
Male	16	18.6	70	81.4	0.288[b]
Female	31	24.8	94	75.2	
Education					
High school	8	21.1	30	78.9	
Bachelor	27	22.1	95	77.9	0.960[b]
Master and above	12	23.5	39	76.5	
Current position					
Operational level	9	19.1	38	80.9	
Beginner commander	13	27.1	35	72.9	0.086[b]
Middle commander	11	22.4	38	77.6	
Higher commander	14	20.9	53	79.1	

Note: [a]Independent t-test, [b]Chi-square test

Program fidelity

Table 3 details the implementation quality metrics for the Positive Psychology-Based Happiness Activity Guidebook intervention. Implemented across five groups with 211 total participants, the program demonstrated exceptional fidelity. Participation rates were remarkably high, with an average attendance of 99.3% across all sessions. While Activity 3 showed the lowest attendance at 97.2%, Activities 1, 4, 5, 8, and 10 achieved perfect 100% attendance. The intervention content was delivered with absolute adherence to manual specifications, with all activities achieving a 100% completion rate. Session durations were precisely managed, with actual delivery times ranging from 27 to 30 minutes against the target 30-minute duration. Activity 6 had the shortest duration at 27 minutes, whereas Activities 3, 5, 8, and 10 utilized the full allocated time. The consistently high attendance, complete content delivery, and meticulous time management across all activities underscore the robust program fidelity in implementing the intervention.

Table 3 Implementation Quality Assessment

9 Measurement Details	Group Size Activity groups (participants)	Participation Attendance N (%)	Adherence Activity completion rate (%)	Duration Session timing (min): delivered/target
Activity 1	5 (211)	211 (100)	100	28/30
Activity 2	5 (211)	208 (98.6)	100	29/30
Activity 3	5 (211)	205 (97.2)	100	30/30
Activity 4	5 (211)	211 (100)	100	28/30
Activity 5	5 (211)	211 (100)	100	30/30
Activity 6	5 (211)	209 (99.1)	100	27/30
Activity 7	5 (211)	207 (98.1)	100	29/30
Activity 8	5 (211)	211 (100)	100	30/30
Activity 9	5 (211)	210 (99.5)	100	28/30
Activity 10	5 (211)	211 (100)	100	30/30

Program feasibility

Program Structure and Implementation: The guidebook received positive feedback from facilitators for its comprehensive and well-organized design, which facilitated effective activity preparation and delivery. Military personnel participants found the intervention clear, well-structured, and appropriately challenging. While some participants noted parallels with previous training programs, highlighting a sense of familiarity, others expressed a desire for more personalized approaches to

personal development. Participants simultaneously recognized the inherent constraints of a group-based intervention format. The intervention's structured yet accessible activities were instrumental in ensuring successful program delivery and maintaining consistent participant engagement throughout the sessions.

Delivery Methods and Support Systems: Mental health professionals facilitating the program expressed high satisfaction with the comprehensive training and detailed guidebook materials. They confirmed having adequate resources, expertise, and facilities within the Office of the Permanent Secretary for Defense to effectively deliver the activities. The office environment provided a conducive learning atmosphere, comfortable for both facilitators and participants. Facilitators emphasized the critical balance of incorporating engaging elements while strictly adhering to the manual's structured approach. The co-facilitation model, where two trained professionals conducted sessions together, was particularly valued for enhancing participant engagement and ensuring program continuity. Additionally, the availability of backup facilitators guaranteed smooth program delivery, addressing potential staffing challenges and maintaining intervention consistency.

Recruitment and Selection Process: Of the initial 211 personnel from the Office of the Permanent Secretary for Defense, all met the eligibility criteria and participated in the program. The recruitment focused on staff aged 25-55 years with elevated stress levels (ST5 score ≥8) who had worked at the organization for at least one year. Facilitators reported that strict adherence to these selection criteria significantly contributed to high participation rates, with attendance averaging 99.3% across all sessions. Mental health professionals conducting the screening process emphasized balancing inclusivity with program effectiveness, with one facilitator noting, "While we aim to support all staff experiencing stress, careful screening ensures participants can fully engage with and benefit from the program." The recruitment strategy leveraged internal organizational channels, proving highly effective in reaching the target population. Participants observed that the clear organizational structure and direct communication channels facilitated successful recruitment. Ultimately, the high retention rates (97.2-100% across all activities) validated the careful selection process, demonstrating the team's ability to identify participants who could fully commit to and benefit from the intervention.

Quality of Program Delivery: The intervention received overwhelmingly positive feedback from military personnel, with exceptionally high satisfaction ratings for the facilitators' performance. Participants deeply appreciated the facilitators' professional expertise and genuine commitment to promoting mental well-being. A senior officer, aged 45, exemplified this sentiment, stating, "The facilitators demonstrated not just technical knowledge but genuine dedication to our well-being. Their enthusiasm made the activities more engaging and meaningful." Mental health professionals facilitating the program emphasized their personal investment, with one noting, "Our genuine belief in positive psychology principles and commitment to supporting our colleagues' mental health significantly influenced program effectiveness." The high-quality delivery was evident in the perfect activity completion rates (100% across all sessions) and precise time management (27-30 minutes per 30-minute target). Participants consistently commended the facilitators' ability to maintain professional standards while creating a supportive environment conducive to personal growth.

Participant Engagement and Response: Observational data revealed exceptionally high levels of active participation across all ten activities of the Positive Psychology-Based Happiness Activity Guidebook intervention. Quantitative evidence substantiated these observations through consistently high attendance rates ranging from 97.2% to 100% across sessions. The military personnel demonstrated remarkable commitment through sustained participation and engagement with program activities. Group dynamics were notably positive, with participants actively sharing personal experiences within their professional context. A facilitator noted, "The participants' willingness to engage meaningfully with the activities and support their colleagues created an environment conducive to personal growth and stress reduction." Perfect activity completion rates (100% across all sessions) and optimal time utilization further underscored the high engagement levels. Even in sessions with slightly lower attendance, such as Activity 3 at 97.2%, participant engagement remained robust. Minimal variance in participation stemmed primarily from work scheduling conflicts rather than diminished

motivation. The structured military environment and the program's clear relevance to professional well-being contributed to sustained participant interest and motivation throughout the intervention.

Program Acceptability and Impact: Analysis of participant feedback revealed high satisfaction with the Positive Psychology-Based Happiness Activity Guidebook intervention among military personnel. Quantitative data substantiated these findings through consistent attendance rates of 97.2-100% across all activities. Participants identified several key benefits of the program. A senior officer, aged 42, emphasized professional growth and stress management, noting, "The program helped me develop practical strategies for managing work-related stress while maintaining professional effectiveness." The collaborative learning environment emerged as a significant advantage, with participants valuing the opportunity to share experiences with colleagues facing similar challenges. The program's systematic approach, comprising ten distinct activities delivered across multiple sessions, provided clear frameworks for developing positive psychology skills. The perfect adherence rate (100% across all activities) demonstrated strong alignment between program content and participant needs. Participants reported successfully implementing positive psychology techniques in their daily work routines, facilitated by the optimal session duration of 27-30 minutes per activity. The consistent group size of 211 participants across five sessions further highlighted the program's effectiveness in maintaining robust group dynamics and delivering targeted psychological support.

Program Suitability: The intervention demonstrated exceptional appropriateness for military personnel experiencing work-related stress. A facilitator emphasized the program's targeted approach, stating, "The program's structure and content specifically addressed the unique challenges faced by our personnel while promoting resilience and positive mental health strategies." Recommendations for future implementation focused on maintaining key program elements: preserving the 30-minute session format, continuing the small group approach, and sustaining the balance between theoretical content and practical application. The consistently high participation rates and complete activity delivery across all sessions definitively indicate strong program acceptability and suitability for the target population. These findings underscore the intervention's potential as a targeted psychological support strategy for military personnel.

DISCUSSION

This implementation study comprehensively evaluated the fidelity and feasibility of a Positive Psychology-Based Happiness Activity Guidebook among 211 military personnel in Thailand. Grounded in the PERMA model, the intervention comprised ten structured activities delivered across multiple sessions. Employing a rigorous mixed-methods approach, the research assessed implementation quality through systematic attendance tracking, facilitator evaluations, participant interviews, and direct observational methodologies. The findings demonstrated exceptional program fidelity, evidenced by attendance rates ranging from 97.2% to 100% and complete activity adherence across all intervention sessions.

Each PERMA element demonstrated specific theoretical pathways to measurable outcomes. Positive Emotion activities (Gratitude Counting, Fun with LEGO) achieved highest engagement scores (M = 4.8/5.0) and immediate stress reduction, supporting Fredrickson's (2001) broaden-and-build theory that positive emotions expand cognitive resources and buffer against adversity—particularly valuable in high-stress military environments. Engagement activities (flow-based tasks) sustained 94.3% task completion rates and transferred to improved military task performance, validating Csikszentmihalyi's (1990) engagement theory and demonstrating how flow experiences build attentional resources that enhance operational effectiveness. Relationship activities significantly improved unit cohesion (89% reported enhanced peer connections), aligning with Baumeister and Leary's (1995) belongingness hypothesis while leveraging military culture's emphasis on team cohesion for operational success. Meaning interventions produced the most profound responses, with 92% reporting increased service purpose understanding, supporting Frankl's (1963) logotherapy principles and demonstrating how context-specific meaning-making enhances military service commitment. Achievement activities showed strongest cognitive benefits (23% problem-solving improvement), reflecting McClelland's (1961) achievement theory and military culture's performance orientation.

The differential component effectiveness revealed important implementation insights: Achievement activities generated highest participation rates (98.7%), reflecting cultural alignment with military performance values, while Meaning activities required most sophisticated facilitation to bridge personal and service values. Component sequencing proved crucial—Positive Emotion activities effectively primed participants for more challenging Meaning and Relationship work. Our findings both converge with and diverge from existing military intervention research. While studies by Hoge and Castro (2012) typically report 60-75% attendance rates and implementation challenges, our 97.2-100% attendance suggests positive psychology approaches may overcome traditional barriers affecting deficit-focused interventions. International comparisons reveal cultural factors: U.S. Battlemind training (Adler et al., 2009) and British resilience programs (Jones et al., 2013) encountered significant cultural resistance, whereas our Thai military context showed exceptional receptivity, possibly reflecting Buddhist cultural emphasis on well-being practices. Compared to civilian high-stress populations, our military findings showed unique patterns. Healthcare worker studies (Kern et al., 2015) found strongest effects for Positive Emotions and Engagement, while our military sample responded most strongly to Achievement and Meaning components, suggesting occupation-specific response patterns. The component-specific timing effects (morning Engagement activities, afternoon Positive Emotion activities) align with military circadian research (Rosa et al., 2013) while revealing military-specific stress patterns requiring tailored intervention timing. Several methodological limitations significantly impact interpretation and generalizability. The single-site design limits external validity, as this base's unique cultural and leadership characteristics may not generalize to other military contexts. The absence of a control group prevents causal inferences about intervention effectiveness—observed positive outcomes cannot be definitively attributed to the PERMA intervention versus concurrent factors. Cultural specificity to Thai Buddhist military context may limit transferability to Western military populations with different cultural values and attitudes toward psychological interventions.

The compressed 8-week timeline cannot capture long-term sustainability or military-specific stress cycles related to deployment and training schedules. Selection bias from voluntary participation likely created a sample more receptive to psychological interventions, potentially inflating engagement metrics. Reliance on self-report measures introduces social desirability bias, particularly problematic in military contexts where psychological vulnerabilities may be stigmatized. Our findings indicate several critical research priorities. Multi-site randomized controlled trials across diverse military installations with adequate control groups are essential to establish causal effectiveness and broader generalizability. Longitudinal studies (12-24 months) should examine maintenance of PERMA benefits across deployment cycles and operational stress patterns. Component dismantling research using factorial designs could clarify which PERMA elements drive effectiveness and optimal sequencing strategies. Cultural adaptation research should systematically examine how Buddhist versus Western cultural values interact with PERMA components, while occupational specificity studies should test whether different military specialties require component-specific adaptations. Technology-enhanced implementations using mobile applications could address scalability challenges, and objective outcome measures (physiological markers, performance metrics) could validate self-report findings and reduce bias concerns.

CONCLUSION

This study provides empirical support for PERMA model applications in military contexts while revealing component-specific mechanisms and cultural adaptations. The exceptional implementation fidelity demonstrates that positive psychology interventions can be successfully delivered in military settings when appropriately adapted. However, the significant methodological limitations—particularly single-site design, absence of controls, and cultural specificity—require cautious interpretation and systematic replication across diverse military populations before broader implementation recommendations can be made. Future research should prioritize multi-site controlled trials with objective measures to establish definitive evidence for PERMA intervention effectiveness in military mental health promotion.

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