

The Effectiveness of Game-Based Outdoor Activities in Enhancing Well-Being and Resilience Among Young Adults

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PowerPoint Structure:

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Introduction

The Problem

Mental health is more than the absence of illness.

Keyes' Dual-Continua Model (2002)

- Clinical illness and positive well-being are two separate dimensions not opposites.
- People can be free of illness yet still be languishing.
- The goal: move toward flourishing optimal emotional, psychological & social well-being.

Mental Health in Indonesia

2023 Indonesian Health Survey (SKI) — Key Findings

1.4%

National depression prevalence

Higher rates in younger cohorts

10.4%

Individuals who sought professional help

Only 1 in 10 gets support

89.6%

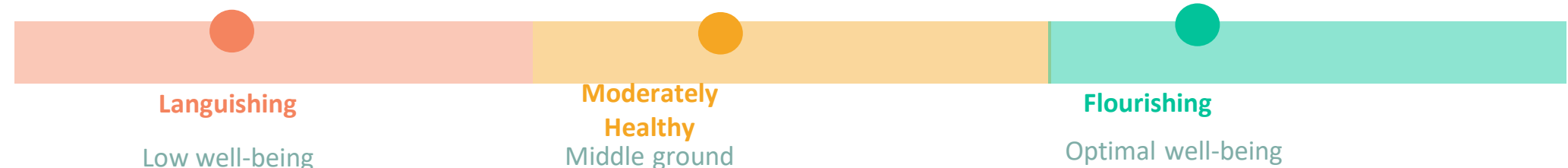
Left without adequate support

The treatment gap

Key Insight

A low diagnosis rate does not mean positive mental health. Most people with depression in Indonesia receive no help at all — this is the treatment gap.

Mental Health Continuum



Introduction

The Response

Theory, Evidence & What This Study Sets Out to Do

01

Nature & Outdoor Activity

A meta-analysis of 50 studies found that nature-based activities significantly improve both mental and physical health in adults.

Coventry et al., 2021

02

Experiential Learning Theory

Kolb (1984) describes learning as a cycle: Concrete Experience → Reflective Observation → Abstract Conceptualisation → Active Experimentation. Outdoor programs naturally follow this cycle.

Kolb, 1984

03

The Research Gap

Few studies have combined nature exposure with game-based approaches as a mental health intervention — especially in the Indonesian context.

Current Literature Gap

WHO WE STUDY

Young Adults (ages 18–40)

This life stage brings major stressors: career pressure, identity questions, and relationship transitions — collectively described as the quarter-life crisis, typically peaking in the mid-to-late twenties (Hasyim et al., 2024). Resilience is positively linked to well-being in Indonesian adults (Nur Shabrina et al., 2021).

STUDY AIM

Can a game-based outdoor program improve well-being and resilience?

This study tests whether a structured outdoor activity program — grounded in Experiential Learning Theory — can meaningfully improve well-being and resilience among Indonesian young adults.

RESEARCH METHODOLOGY

Study Design & Instrumentation



Research Design

Approach: Quantitative, Pre-Experimental Design

Type: One-Group Pretest–Posttest Design

Duration: 6 Sessions with structured behavioral analysis

Rationale: Quantifies pre-to-post score changes (Campbell & Stanley, 1963)



Participants

Sample: N = 20 young adults, aged 24–35

Definition: Early adulthood (Hurlock, 1980)

Sampling: Convenience sampling from varied backgrounds

Inclusion Criteria: Attendance at all 6 sessions + completion of both assessment points



INSTRUMENTATION

Pretest → 6-Session Intervention → Posttest

MHC-SF

Mental Health Continuum–Short Form

Keyes et al., 2008 · Indonesian adaptation: Putra, 2023

14 items covering 3 dimensions:

- Emotional Well-being
- Psychological Well-being
- Social Well-being

Output: Flourishing / Moderate / Languishing

CD-RISC 10

Connor–Davidson Resilience Scale

Connor & Davidson, 2003 · Indonesian translation: Simamora, 2024

10 items assessing 4 capacities:

- Adaptive capacity & stress recovery
- Cognitive focus under pressure
- Self-efficacy

Scale: 5-point Likert (0–4) · Total range: 0–40

ANALYSIS PLAN

01

Descriptive Statistics

Participant summary

02

Shapiro–Wilk Test

Normality on Δ scores

03

Paired-Samples t-Test

04

Cohen's d Effect Size

Small·Medium·Large

✓

Normality assumption satisfied → parametric paired-samples t-test applied for both well-being and resilience

PROCEDURES & TIMELINE

Game-Based Outdoor Activity Program

SESSION	MAIN ACTIVITIES	DURATION	FRAMEWORK
 Fun Games	Ice Breaking · Word Guessing · Pinoy Henyo / Eat Bulaga	±60 min	Positive Psychology · Social Psychology
 Bonding	Campfire Kick-Off · Web of Connection · Two Truths & One Lie · Tree of Hope	±95 min	Social Identity Theory (Tajfel & Turner, 1979) · Self-Concept Theory
 Mindfulness	River Ice Breaking · Mindful Treasure Hunt	±120 min	Mindfulness-Based Practice · Nature-Based Intervention
 Cooking	Camping MasterChef · Mystery Box Challenge	±90 min	Flow Theory (Csikszentmihalyi) · Zone of Proximal Development (Vygotsky) · Growth Mindset (Dweck)
 Trekking	Deep Breathing PST – 3 Stations · Spider 9 Grid	±90 min	Psychological Skills Training · Diaphragmatic Breathing (Ma et al., 2017)
 Reflection	MHC-SF Assessment · Tree of Hope · StrengthsFinder 21	±60 min	Reflective Practice · Strength-Based Positive Psychology (Clifton & Harter, 2003)

Table 1. Structural Overview of the Game-Based Outdoor Activity Program

SCOPE & LIMITATIONS



Single-Group Design

No randomized control condition — limits causal inference.



Small Sample (N = 20)

Convenience sampling — limits generalizability.



Two-Day Window

Short duration — limits conclusions on lasting effects.

Result & Discussion

Intervention Outcome Variables

RESEARCH FINDINGS

Results & Analysis

SAMPLE OVERVIEW

N = 20 Young Adults
65% Male · 35% Female
Mean Age: 26.25 yrs (SD = 2.93)

NORMALITY CHECK

Shapiro–Wilk Test Passed

Well-Being: $W = 0.951$, $p = .377$
Resilience: $W = 0.972$, $p = .804$
→ Paired-samples t-tests conducted

Well-Being Responds Quickly

✓ **Significant Improvement**
Pre: $M = 65.25$ (SD = 10.43)
Post: $M = 71.55$ (SD = 7.64)
 $t(19) = -2.188$
 $p = .041$

Cohen's $d = 0.489$ → Medium Effect

Well-Being Responds Quickly

Why the Difference?

Well-being is dynamic — it fluctuates in response to positive immediate experiences. The 6-module program created cumulative uplifts across emotions, belonging, mindfulness, flow, and reflection.

RESILIENCE

~ **Non-Sig. Improvement**

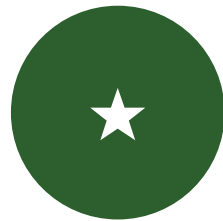
Pre: $M = 32.90$ (SD = 4.33)
Post: $M = 34.85$ (SD = 3.48)
 $t(19) = -1.596$ **$p = .127$**

Cohen's $d = 0.357$ → Small-to-Medium

Resilience Takes Longer to Build

Resilience is a stable, trait-like construct shaped over extended periods. Short-term interventions may initiate growth, but lasting change requires repeated stress exposure and long-term adaptation (Connor & Davidson, 2003).

Implications, Contributions & Limitations



IMPLICATIONS

Non-Clinical Approach

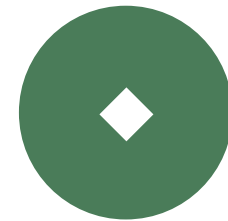
Outdoor game-based activities offer an engaging, stigma-free alternative to formal mental health services for young adults.

Deliberate Program Design

Positive outcomes stem from the intentional sequencing of 6 modules — each building progressively on the last, not from outdoor exposure alone.

Accessible & Community-Based

Overcomes common barriers: stigma, cost, and time — offering a scalable community health strategy.



CONTRIBUTION

Experiential Learning Theory

Provides empirical support for Kolb's (1984) ELT in the Indonesian socio-cultural context — a previously understudied population.

Multi-Dimensional Well-Being

Demonstrates how structured experiential learning promotes emotional, psychological, and social well-being simultaneously — beyond single dimensions.

Positive Psychology Integration

Bridges adventure education and positive psychology, showing that nature + social interaction + reflection = meaningful psychological change.



LIMITATIONS & FUTURE DIRECTIONS

Current Limitations

- No control group (pre-experimental)
- Small sample (N = 20), convenience sampling
- No long-term follow-up assessment
- Causal inference limited

Future Directions

- Use RCTs with active control groups
- Larger, more diverse samples
- Include longitudinal follow-ups
- Examine mediators: self-efficacy, engagement, & reflection quality

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