

Journey's Journal: A Virtual Reality-Assisted Emotional Literacy Program for Psychological Recovery among Vulnerable Adolescent Girls

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Abstract

Adolescent girls experiencing unwanted pregnancy often face severe psychological distress, including anxiety, emotional instability, low self-esteem, and social stigma. These conditions highlight the need for innovative psychosocial interventions that support emotional recovery and resilience. This community empowerment program aimed to improve emotional literacy and psychological well-being among vulnerable adolescent girls at *Griya Welas Asih*, a shelter home in Semarang, Indonesia, through the integration of Virtual Reality (VR) Healing and reflective journaling activities known as *Journey's Journal*. The program employed the Asset-Based Community Development (ABCD) approach consisting of four stages: discovery, dream, design, and destiny. Program activities included VR Healing sessions, reflective writing through *Journey's Journal*, Reflective Tree activities, and group reflection sessions called *Tali Kasih*. Evaluation was conducted using pretest and posttest assessments to measure changes in stress and anxiety management, resilience, self-acceptance, and emotional literacy. The findings demonstrated positive psychological improvements among participants. Participants' stress and anxiety management abilities improved from 41.42% to 63.57%, resilience increased from 35.00% to 82.85%, and self-acceptance and emotional literacy improved from 40.71% to 82.85%. The integration of low-cost VR technology and emotional literacy activities effectively supported psychosocial recovery, strengthened resilience, and fostered positive emotional expression among participants. This program also contributes to the achievement of Sustainable Development Goals (SDGs), particularly Goal 3 (*Good Health and Well-Being*) and Goal 5 (*Gender Equality*).

Keywords: Emotional Literacy, Psychological Recovery, Resilience, Virtual Reality Healing, Vulnerable Adolescents

INTRODUCTION

Adolescence is a critical developmental stage characterized by significant physical, emotional, and social changes. During this period, adolescents are highly vulnerable to psychological and social problems that may affect their future well-being. According to data from the Indonesian National Population and Family Planning Agency (BKKBN) in 2024, adolescents aged 14–20 years increasingly engage in risky sexual behavior that negatively affects reproductive health and psychological development. In Indonesia, there were approximately 405 cases of unwanted pregnancy among women aged 15–25 years in 2023, while abortion cases reportedly reached 2.5 million cases (Rahmawati & Budiman, 2023). These conditions are particularly concerning because most victims are adolescents who are still in school and lack adequate emotional support and sexual education.

Limited parental supervision and low levels of sexual education literacy place

adolescent girls at greater risk of experiencing sexual abuse and unwanted pregnancy (Alifah et al., 2021). Such experiences may lead to severe physical and psychological consequences, including childbirth complications, depression, anxiety, emotional instability, low self-esteem, social stigma, and even self-harm tendencies (Yenjau et al., 2024). Adolescents who experience traumatic social situations often demonstrate emotional dysregulation, prolonged psychological distress, and difficulties in social adaptation, particularly when they receive rejection from their families and communities (Xu et al., 2025). These psychological burdens significantly affect adolescents' emotional well-being and reduce their ability to recover independently.

Based on preliminary interviews conducted with the management of *Griya Welas Asih*, a shelter home for vulnerable pregnant adolescent girls in Semarang, Indonesia, there were currently nine residents aged between 13 and 22 years old. Most residents experienced emotional instability, persistent anxiety, feelings of guilt, low self-confidence, and difficulties accepting their personal circumstances. Existing psychosocial support activities at the shelter mainly consisted of informal sharing sessions, which were considered insufficient to facilitate deeper emotional reflection and sustainable psychological recovery.

Emotional recovery plays an important role in restoring adolescents' mental well-being through healthy communication, emotional literacy education, and emotional regulation skills. Emotional literacy refers to the ability to recognize, understand, express, and regulate emotions appropriately in stressful situations and social interactions (Santhanakrishnan & Srinivasan, 2023). Adolescents with stronger emotional literacy tend to demonstrate better coping mechanisms, higher resilience, and healthier psychological adjustment. Emotional literacy interventions also contribute to reducing anxiety and improving self-awareness among adolescents facing emotional difficulties.

One approach that may strengthen emotional regulation and resilience is reflective journaling or gratitude journaling. Reflective writing activities provide individuals with opportunities to express emotions, process traumatic experiences, and develop self-awareness and positive thinking patterns. Nuralasari (2021) explained that gratitude journaling can improve resilience and psychological adaptation by encouraging individuals to focus on positive emotional experiences and personal growth. Through reflective writing, trauma survivors are able to identify emotional burdens, organize difficult experiences, and gradually build self-acceptance and emotional stability.

However, conventional journaling alone may not be sufficient for adolescents experiencing severe psychological trauma. Therefore, additional innovative approaches are needed to support emotional recovery more effectively. In recent years, Virtual Reality (VR) technology has emerged as a promising intervention tool in mental health treatment and psychosocial rehabilitation. VR technology creates immersive visual and auditory experiences that may stimulate relaxation, emotional comfort, and psychological safety within a controlled environment. Previous studies demonstrated that VR-assisted interventions effectively reduced stress, anxiety, depression, and trauma symptoms among adolescents and vulnerable populations (Kim et al., 2021). Furthermore, virtual reality interventions were shown to improve emotional regulation, resilience, social interaction, and psychological well-being among adolescents (Xu et al., 2025).

The immersive characteristics of VR provide emotionally safe spaces for adolescents to explore emotions without fear of social judgment. VR-based mental health interventions also increase participant engagement and emotional involvement due to their multisensory and interactive nature (Freeman et al., 2017). Trauma-focused VR interventions further demonstrated positive outcomes in improving emotional stability and reducing psychological distress among adolescents with traumatic experiences (Maples-Keller et al., 2017). Despite these promising findings, studies integrating low-cost VR healing with emotional literacy and

reflective journaling in community-based psychosocial recovery programs remain limited, particularly for adolescent girls experiencing unwanted pregnancy and social stigma in developing countries.

Therefore, this community empowerment program introduced *Journey's Journal*, an emotional literacy and psychological recovery program integrating Virtual Reality Healing and reflective journaling activities for vulnerable adolescent girls at *Griya Welas Asih* Semarang. The program aimed to improve emotional literacy, strengthen resilience, reduce stress and anxiety, and foster self-acceptance among participants through immersive VR relaxation experiences and reflective emotional expression. The intervention employed the Asset-Based Community Development (ABCD) approach to encourage participatory empowerment and sustainable psychosocial recovery within the community.

IMPLEMENTATION METHOD

Research Design

This community empowerment program employed the Asset-Based Community Development (ABCD) approach as the primary intervention framework. The ABCD approach emphasizes the identification and utilization of community strengths, local assets, and participatory empowerment to address psychosocial problems collaboratively (Setyawan et al., 2024). This approach was selected because it enables vulnerable communities to actively participate in identifying problems, expressing emotional needs, and developing sustainable recovery strategies.

The implementation process consisted of four main stages: discovery, dream, design, and destiny. Each stage was designed to strengthen participants' emotional literacy, psychological resilience, and self-acceptance through participatory psychosocial interventions integrated with Virtual Reality (VR) Healing and reflective journaling activities. The overall implementation framework of the program is presented in Figure 1.



Figure 1. Fishbone Diagram of the Program Implementation Framework

Source: Developed by the authors (2025).

Program Implementation Procedure

Discovery Stage

The discovery stage focused on identifying participants' emotional conditions, psychosocial problems, and existing support systems. Interviews and observations were conducted with both shelter managers and adolescent residents of Griya Welas Asih to understand participants' emotional instability, anxiety, trauma experiences, and psychosocial needs. This stage also explored participants' readiness to engage in the Journey's Journal and

VR Healing intervention program.

Dream Stage

The dream stage aimed to explore participants' hopes, emotional aspirations, and future goals after psychological recovery. Participants were encouraged to express personal expectations such as rebuilding self-confidence, continuing education, improving emotional well-being, and developing positive future perspectives. The reflection results from this stage were used to design intervention activities that were emotionally relevant and psychologically supportive for participants.

Design Stage

The design stage focused on planning and organizing intervention activities collaboratively with shelter managers and participants. This stage included scheduling activities, preparing VR Healing materials, developing Journey's Journal reflective writing media, and designing emotional literacy activities. The VR intervention utilized affordable and accessible technology such as Google Cardboard and smartphone-based 360° videos to ensure program sustainability and replicability.

Destiny Stage

The destiny stage involved the implementation and evaluation of the psychosocial intervention program. Activities included Virtual Reality Healing sessions, reflective writing through Journey's Journal, Reflective Tree activities, and group reflection sessions known as Tali Kasih. Participants attended immersive relaxation sessions using VR technology and subsequently completed reflective emotional journaling activities to strengthen emotional literacy and self-acceptance. Monitoring and evaluation were conducted through journal reflections, emotional observations, and pretest-posttest assessments to measure participants' psychological improvement.

Participants and Community Partner

The program was implemented at *Griya Welas Asih*, a shelter home in Semarang, Indonesia, which provides psychosocial assistance for adolescent girls experiencing unwanted pregnancy and social rejection. Participants consisted of nine adolescent girls aged 13–22 years old who were actively residing at the shelter during the implementation period. Most participants experienced emotional instability, anxiety, low self-esteem, social withdrawal, and difficulties in self-acceptance due to traumatic experiences and social stigma.

Participants were selected using purposive sampling based on the following criteria:

1. adolescent girls residing at *Griya Welas Asih*,
2. participants experiencing emotional or psychological difficulties,
3. willingness to participate in all intervention activities.

Data Collection and Evaluation

Data were collected through interviews, observations, reflective journals, and pretest-posttest questionnaires. Interviews and observations were conducted to identify participants' psychosocial conditions before and after the intervention program. The effectiveness of the intervention was evaluated based on three psychological indicators:

1. stress and anxiety,
2. resilience,
3. self-acceptance and emotional literacy.

The collected data were analyzed descriptively by comparing participants' psychological conditions before and after the intervention. Improvements in emotional regulation, resilience, and self-acceptance were used as indicators of program effectiveness.

RESULTS AND DISCUSSION

The community empowerment program was implemented through four stages of the Asset-Based Community Development (ABCD) approach, namely Discovery, Dream, Design,

and Destiny. During the Discovery stage, interviews and observations were conducted with the managers and mentors of *Griya Welas Asih* to identify participants' psychosocial conditions, emotional instability, anxiety, low self-esteem, and difficulties in self-acceptance caused by traumatic experiences and social stigma.

The Dream stage focused on exploring participants' hopes and emotional aspirations for psychological recovery and emotional stability. Based on interviews and group discussions, participants expressed the need for a supportive and non-judgmental emotional reflection space that could help them process traumatic experiences positively. These findings became the foundation for designing the Virtual Reality (VR) Healing and *Journey's Journal* intervention program.

During the Design stage, the research team collaboratively developed VR Healing activities using Google Cardboard and smartphone-based immersive content, including calming visual relaxation videos and interactive experiences. Additionally, *Journey's Journal* was designed as a reflective emotional literacy medium that encouraged participants to express emotions, document self-reflection, and strengthen self-acceptance. The intervention design was adjusted to participants' psychosocial conditions to ensure emotional safety, accessibility, and sustainability.

The Destiny stage involved implementing the intervention program through three visits consisting of VR Healing sessions, reflective journaling activities, and a reflective activity called *Reflective Tree*. Participants wrote personal hopes and emotional reflections on origami bird papers and attached them to a symbolic tree as a representation of emotional healing and self-acceptance. Based on field observations and posttest assessments, positive improvements were identified across all psychological indicators measured in the program.

Table 1. Pretest and Posttest Assessment Results

Measured Aspect	Pretest Average (%)	Posttest Average (%)	Improvement
Stress and Anxiety Management	41.42	63.57	+22.15
Resilience	35.00	82.85	+47.85
Self-Acceptance and Emotional Literacy	40.71	82.85	+42.14

Source: Processed primary data (2025).

The findings demonstrated substantial improvements in all measured psychological aspects after the implementation of the intervention program. Improvements were identified in participants' stress and anxiety management abilities, which increased from 41.42% during the pretest to 63.57% during the posttest. Significant improvements were also observed in resilience, increasing from 35.00% to 82.85%, as well as in self-acceptance and emotional literacy, which increased from 40.71% to 82.85%. These findings indicate that the integration of Virtual Reality (VR) Healing and reflective journaling activities effectively supported participants' psychosocial recovery and emotional well-being.

Overall, participants demonstrated better emotional regulation, more positive self-perception, and stronger social interaction after participating in the intervention activities. Participants became more willing to express emotions openly, communicate with peers, and engage in reflective emotional activities. The supportive and non-judgmental environment created during the intervention also contributed significantly to participants' psychological comfort and emotional recovery.

The findings of this study are consistent with the emotional literacy theory proposed by Santhanakrishnan and Srinivasan (2023), which explains that the ability to recognize, understand, and express emotions appropriately contributes to reduced psychological distress and improved mental well-being. Emotional literacy activities implemented through *Journey's*

Journal enabled participants to identify emotional burdens, reflect on traumatic experiences, and gradually develop healthier emotional coping strategies.

The implementation of VR Healing sessions also showed promising psychosocial outcomes among participants. Previous studies demonstrated that VR-assisted interventions effectively reduce stress, anxiety, and emotional distress by stimulating parasympathetic nervous system responses associated with relaxation and emotional regulation (Kim et al., 2021). Similarly, Xu et al. (2025) reported that VR-based interventions improved emotional regulation, resilience, and psychological adaptation among adolescents experiencing psychosocial difficulties. Consistent with these findings, participants in this program appeared calmer, more emotionally stable, and more engaged in social interaction after participating in VR Healing activities.

The implementation of *Journey's Journal* as a reflective journaling medium further strengthened participants' emotional recovery processes. Gratitude journaling activities have been recognized as effective strategies for improving resilience, self-awareness, and emotional adaptation among individuals experiencing psychological distress (Nurmalasari, 2021). Through reflective writing, participants were able to express hidden emotions, organize traumatic memories, and gradually strengthen self-acceptance and gratitude. Additional reflective activities such as *Reflective Tree* also created a supportive emotional atmosphere and strengthened social connectedness among participants.

Overall, the findings indicate that integrating low-cost VR technology with emotional literacy and reflective journaling activities may serve as an effective psychosocial intervention strategy for vulnerable adolescent girls experiencing unwanted pregnancy and social stigma. The program also demonstrates that technology-based psychosocial interventions can be implemented in community-based settings using affordable and accessible tools while still producing meaningful psychological outcomes.

Participants appeared calmer and more emotionally engaged during the VR Healing sessions. The immersive VR environment provided visual and auditory relaxation stimuli that helped participants reduce emotional tension and improve psychological comfort. Figure 2 illustrates participants' involvement during the VR Healing activity.



Figure 2. Virtual Reality Healing Session Using VR Headset at Griya Welas Asih
Source: Author documentation (2025).

Reflective activities such as *Journey's Journal* and *Reflective Tree* encouraged participants to express emotions, share personal experiences, and strengthen emotional connectedness with peers. These activities created a supportive and empathetic environment that contributed positively to participants' psychosocial recovery. Figure 3 presents the implementation of reflective emotional literacy activities during the program.



Figure 3. Reflective Tree and Journey's Journal Activities
Source: Author documentation (2025).

CONCLUSION

The *Journey's Journal* program integrating Virtual Reality (VR) Healing and reflective emotional literacy activities demonstrated positive impacts on the psychosocial recovery of vulnerable adolescent girls at *Griya Welas Asih Semarang*. The implementation of the Asset-Based Community Development (ABCD) approach successfully facilitated participants in improving emotional regulation, resilience, self-acceptance, and stress and anxiety management abilities through participatory and supportive intervention activities.

The findings indicated that VR Healing sessions provided immersive relaxation experiences that contributed to emotional comfort and psychological stability, while reflective journaling through *Journey's Journal* supported participants in expressing emotions, processing traumatic experiences, and strengthening self-awareness. Additional reflective activities such as *Reflective Tree* also fostered emotional connectedness and social support among participants. Overall, the integration of low-cost VR technology and emotional literacy interventions proved effective in supporting psychosocial recovery within a community-based setting.

This program also demonstrates the potential application of affordable and accessible technology-based psychosocial interventions for vulnerable adolescents experiencing unwanted pregnancy, trauma, and social stigma. The intervention model may be replicated and adapted in other social institutions or community empowerment programs with similar psychosocial characteristics.

Future studies are recommended to involve larger participant groups, longer intervention periods, and more comprehensive psychological assessment instruments to evaluate the long-term effectiveness of VR-assisted emotional literacy interventions. Further research may also explore the integration of immersive technology with other psychosocial therapeutic approaches to strengthen adolescent mental health recovery programs.

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