JURNAL INTERVENSI PSIKOLOGI

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EMPOWERING RESILIENCE USING BEHAVIORAL ACTIVATION TECHNIQUES

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Keywords/Kata kunci	ABSTRACT/ABSTRAK:
landslide disaster, resilience, survivors.	The recurrent landslides in the Banjarnegara region has far-reaching consequences, leading to widespread unemployment as agricultural lands become unusable. To enhance the resilience of survivors, an intervention in the psychosocial context was employed, utilizing the behavioral activation technique. Fourteen women, representing family units, spanning ages from 20 to 65, participated in the program. These individuals bore the dual burden of losing their homes and enduring trauma. Analysis of resilience scale data was conducted using the Wilcoxon-signed rank test technique, revealing compelling results with Z=-2.805 and p=0.005 (p<0.01), show a significant increase in the resilience of landslide survivors through the behavioral activation technique. Recommendations for subsequent cycles include: (1) widespread application of the behavioral activation technique to empower other disaster survivors, (2) the implementation of collaborative interventions to address geographic vulnerabilities, and (3) the development of targeted interventions for male survivors to facilitate their return to work in their respective villages.
bencana tanah longsor, penyintas, resiliensi	*Bencana alam tanah longsor di wilayah Banjarnegara merupakan peristiwa yang sering terjadi berulang dan berdampak luas mempengaruhi kehidupan masyarakat. Para penyintas bencana kehilangan pekerjaan akibat lahan pertanian rusak dan tidak dapat dimanfaatkan karena rawan bencana. Intervensi dalam konteks psikososial dilakukan untuk meningkatkan resiliensi penyintas bencana dengan menggunakan behavioral activation technique. 14 perempuan penyintas berusia 20-65 tahun yang kehilangan tempat tinggal dan mengalami trauma, masing-masing mewakili unit keluarga berpartisipasi dalam intervensi. Data skala resiliensi dianalisis dengan teknik analisis Wilcoxon-sign rank test. Hasil penelitian menunjukkan Z = -2,805, p = ,005 (p<0,01) sehingga dapat disimpulkan bahwa behavioral activation technique signifikan dalam meningkatkan resiliensi penyintas bencana tanah longsor. Rekomendasi untuk siklus berikutnya antara lain (1) behavioral activation technique untuk memberdayakan penyintas bencana lainnya (2) intervensi kolaboratif untuk mengatasi kerentanan geografis (3) intervensi bagi penyintas laki-laki agar dapat kembali bekerja di desanya.*

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Natural disaster is a pervasive global phenomenon, impacting different countries irrespective of the developmental status. However, the disproportionate burden of lives lost or adversely affected by disaster is borne by developing countries. This disparity can be attributed to a confluence of factors such as poor governance, pervasive poverty, external sanctions, and the weight of foreign debt. In the context of agricultural practices, these challenges compel farmers to resort to burning wood for fuel and adopting unsustainable farming technique (Zorn, 2018).

Indonesia is one of the countries that is vulnerable to disasters caused by climate and weather changes (Susanti et al., 2017). Based on data records from National Disaster Management Agency (BNPB - *Badan Nasional Penanggulangan Bencana*), landslides are categorized as disasters due to the substantial loss of life often caused. BNPB report states that 40.9 million Indonesians live in landslide-prone regions (BNPB, 2015).

Natural disaster such as landslide in Banjarnegara region is frequently recurring events with a broad impact affecting the lives of the community. DetikJateng (Hartono, 2022) reported that the last landslide disaster occurred in October 2022 in Bantar Village, Wanayasa Sub-district, Banjarnegara District. Disaster that caused the most casualties occurred in 2014, where 129 people died in several incidents. Landslide of Banjarnegara on December 12th, 2014 was preceded by heavy rains that lasted two days and caused an incident in Jemblung Sub-village, Sampang, Karangkobar Sub-district (Nugroho et al., 2015).

Banjarnegara District is located on a mountainous pathway in the middle of the Western region of Central Java, stretching from West to East. The topographical, geological, and climatological conditions make the district of Banjarnegara prone to landslide. In this context, landslide is one of the most common disasters in Banjarnegara because 70% of the district predominantly comprises old hilly and mountainous zones (Nugroho et al., 2015). External factors can exert an influence on the manifestation of land vulnerability and the instances include severe weather conditions and human activities, such as land clearance for settlements, inappropriate cliff destabilization, and other practices capable of precipitating movement (Ridwanulloh, 2022).

The Director of the Data and Information Center for the National Disaster Management Agency (BNPB), Sutopo Purwo Nugroho (Gabrillin, 2014), provided a comprehensive report on the factors contributing to landslide in Jemblung Hamlet, Karangkobar, Banjarnegara, Central Java. The primary trigger was identified as Telaga Lele hill's composition, situated in Jemblung Hamlet, which consisted of aged volcanic sediment, resulting in a substantial thickness of the soil layer. Seasonal plants,

classified as secondary crops and sparsely distributed, contributed to diminished vegetation density. Therefore, land structural integrity is weakened, increasing the susceptibility to erosion facilitated by water. The root cause of landslide can be traced back to human activities associated with agricultural practices that lack conservation measures, neglecting the soil and water conditions at the site.

The psychological impact of natural disaster includes the emotional and cognitive aspects of victims. Emotional stress occurs with symptoms such as shock, fear, sadness, resentment, guilt, shame, helplessness, and loss of emotions including feelings of love, intimacy, joy, or attention to daily life. The cognitive aspect also experiences changes such as confused thoughts, misperceptions, decreased ability to make decisions, reduced concentration and memory, and blaming oneself (Rahmat & Alawiyah, 2020).

The characteristics of disaster survivors influence the effects experienced. The psychological effects can be more severe among children, women, and dependent elderly population (Makwana, 2019). After a disaster, this demography develops as the most vulnerable population, necessitating special attention and care for the distinct needs (Makwana, 2019).

Women show a higher susceptibility to adverse mental health consequences in the aftermath of disasters compared to men. Disaster-related PTSD and different depression levels are experienced following

these events. However, women have a lower likelihood of developing alcohol use disorder than men in the aftermath of disasters, as well as in non-disaster contexts (SAMHSA, 2020).

Bell (National Institute on Aging, 2022) stated that the disruption of fundamental infrastructure due to disaster could lead to significant healthcare interruptions, resulting in health implications. The elderly demographic is particularly vulnerable, given the prevalence of chronic diseases among the group, necessitating increased care. A substantial 85% of U.S. adults aged 65 and above contend with one or more chronic conditions, showing the critical need for consistent access to healthcare services (National Institute on Aging, 2022). Disaster poses challenges to the usual delivery of healthcare services, affecting older adults with chronic illnesses. Besides healthcare accessibility issues, the elderly also contend with limited mobility, which diminishes their capacity to access important resources such as food and assistance. Moreover, the nutritional intake of older adults may be compromised since the food received is not consistent with digestive conditions (Brown et al., 2019).

School-age children have been identified as a demographic more susceptible to negative psychological effects compared to adults. According to Chowhan et al. (2016), among the 100 children and adolescents studied, 41 were diagnosed with

at least one psychiatric condition. PTSD surfaced as the most prevalent diagnosis, followed by generalized anxiety disorder (GAD), major depressive disorder (MDD), and separation anxiety disorder. Furthermore, higher rates of psychiatric morbidity were observed in pre-adolescents, girls, primary school students, those from combined families, individuals in upper and lower socio-economic classes, children, and those with limited social support. The prevalence of psychiatric disorders persisted in children and adolescents long after the occurrence of disaster. It is crucial to acknowledge that diverse vulnerabilities exist based on age and gender. However, recognizing these differences does not decrease the impact of disasters on other community groups. As traumatic experiences, disaster disrupts the normal functioning of victims' lives and result in losses for individuals, families, and communities. Families affected by natural disasters are subjected to a loss of identity through the disruption of usual work activities. Additionally, individuals may experience a lack of hope and disturbances in the roles in the community. The loss of resources, disruption of daily routines, loss of control over possessions, and a decline in social support have been associated with increased levels of acute psychological distress (Makwana, 2019).

Bakic and Ajdukovic (2021) showed that stronger individual, interpersonal, and community resources were found to be related to better post-disaster outcomes directly and indirectly through psychosocial resource loss. Therefore, there is an interrelationship between individual factors and resources in the recovery process from the negative impacts of disaster.

In post-disaster recovery, efforts are directed toward the domains of social, built, economic, and environmental aspects, as stated by Ryan et al. (cited in Morley et al., 2020). The recovery transcends the reconstruction of infrastructure and assets or the provision of welfare and environmental rehabilitation. The essence lies in the effort to rebuild in a resilient and astute manner, presenting opportunities for the improvement of social and economic systems, as well as the natural and built environments. However, the accomplishment requires a profound understanding and consideration of the intricate and interconnected needs of communities and individuals (Morley et al., 2020).

Winkworth in Morley et al. (2020) stated that the repercussions of disaster on individuals, families, and communities often draw attention to the event. However, the distress endured is frequently a result of the challenges faced during the subsequent recovery phases rather than the initial event. Social devastation is identified as a protracted and consequential outcome of natural disasters, incurring enduring costs for individuals, families, and communities. Therefore, there is a recommendation to

integrate resilience into planning decisions and enhance efforts to support communities in preparing and recovering from disasters.

Definitions of disaster resilience typically include one or more components, such as the identification of external or internal stressors, the capacity to absorb and recover, the ability to return to a functioning state post-event, the aptitude to derive lessons from the experience, and the capability to adapt, transform, or develop adjustments in response to the circumstances (Morley et al., 2020). Resilience, as articulated by Boon et al. (2012), assumes varied interpretations depending on the level of analysis at the individual, community, or ecological system level. Norris et al. (Boon et al., 2012) defined resilience applicable to both individuals and communities, characterizing the variable as "a process linking a set of adaptive capacities to a positive trajectory of functioning and adaptation after a disturbance." The development extends beyond fortifying infrastructure to reinforce social capital, address disruptions, and necessitate a comprehensive societal technique. In this situation, residents play an important role as collaborators and partners in the solution process (Centre for Liveable Cities, 2022).

Determining the definition of disaster resilience is connected to stating the associated indicators. Boon et al. (2012) stated two crucial aspects concerning resilience: a) Recovery, showing the extent of fully rebounding and recovering from challenges, with resilient individuals showing an increased ability to regain physiological, psychological, and social equilibrium post-stressful events, supporting community resilience, and b) Sustainability, including the capacity to persist in the face of adversity, particularly in the context of climate change-induced natural disaster.

Various interventions have been implemented to increase resilience among natural disaster survivors. Octarina & Afiatin (2013) used religious coping training to increase resilience in female survivors of the Merapi eruption in Yogyakarta, with the result that therapy was effective in increasing the variable. Uyun and Rumiani, (2012) examined patience and *shalat* (prayer) as a model for increasing resilience in the Merapi eruption disaster region in Yogyakarta.

The previous study was carried out by Anam et al. (2018) to reduce PTSD and increase resilience of landslide survivors in Jemblung, Sampang, Karangkobar, Banjarnegara, Central Java. The results showed a significant decrease in PTSD symptoms, but were not accompanied by increased resilience. Based on the problems, this study is aimed at conducting further interventions by identifying the problems and needs of survivors of landslide in Banjarnegara. The hypothesis proposed was that Behavioral Technique could increase resilience of survivors.

METHOD

Study Design

This study used an action design in line with Kurt Lewin's original framework (Willis & Edwards, 2014). The iterative process includes the following steps: a) Identification of a general or initial idea through collaborative development, b) Reconnaissance, progressing through stages of studying the problem and potential solutions, c) Planning and implementation, creating and executing an action plan tailored to the specific context or setting, d) Evaluation, assessing the outcomes of the implemented plan, e) Revision of the action plan based on the results, and f) Initiating another cycle of action study, continuing the recursive process. The overall model of action study proposed by Lewin is summarized in Figure 1.
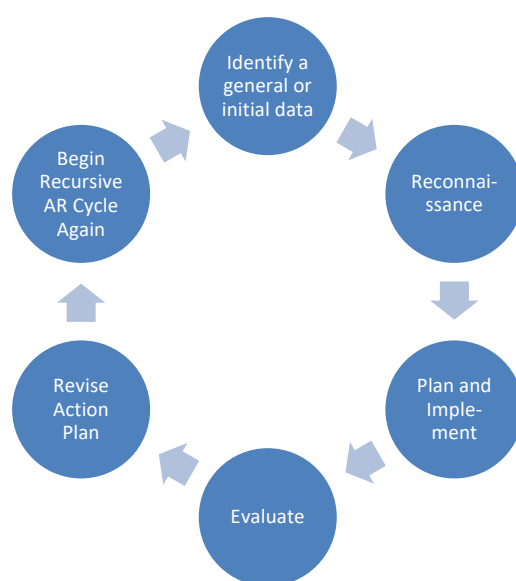

Figure 1. Kurt Lewin's original plan for action study

Subject

A total of 14 survivors participated in behavioral activation intervention, each representing a family unit (head of household). However, for quantitative data analysis, the focus was on the inclusion of 10 subjects. This selection was based on factors such as data completeness and a participation rate in therapy exceeding 75%. The subjects shared common characteristics of being aged between 20 and 65 years, having experienced landslide, lost the homes, and being subjected to traumatic experiences.

Measuring Instruments

Resilience scale used was modified by Wagnild & Young (Resnick et al., 2011), which consisted of 25 items showing five aspects of resilience (1) Self-reliance: confidence, and the knowledge of possessing strength (2) Spirituality: the realization of life (3) Equanimity: a balanced perspective between life and experience (4)

Perseverance: firm in the face of difficulties or disappointments (5) Existential aloneness: understanding that everyone is unique.

Intervention Procedure

Intervention was conducted to increase resilience for survivors using behavioral activation technique. The process consisted of 8 meetings, carried out twice a week for 4 weeks, and each session lasted 120-180 minutes. The intervention was followed by 14 participants, facilitated by 2 psychologists and 8 students as facilitators and co-facilitators.

Behavior activation is used because the technique is solution-oriented in which therapists and clients collaborate to identify possible or real problems. In this variable, behavior change is accomplished through several core strategies, including (a) assessment and monitoring of behavior, and (b) structuring and scheduling of activation goals. Through the identification of various patterns, including events that often precipitate maladaptive behaviors and the ensuing negative consequences, clients enhance the awareness of situations prone to improve avoidance habits (Kent et al., 2013).

The fundamental concept behind the technique is for therapists to assist clients in identifying activities associated with improved mood to incorporate more of these pleasant activities into clients' lives. The technique does not necessitate an in-depth understanding of higher-level thought patterns, making it less complex and intensive for many clients. Due to relative simplicity, behavioral activation has proven effective with clients experiencing various disorders and more complex populations (Cuijpers et al., 2023). A summary of the stages of implementation of behavior activation can be seen in Table 1.

Table 1. Procedure for implementing behavioral activation interventions

Stage 1: Assessment	Providing rationale: discussing subjects' problems, providing summaries, building empathy, validating, providing support, and instilling hope and optimism.
	Valuing assessment: determining the values that are very important in the life of subjects and behavior will be activated.
	Activity monitoring: therapists give home assignments to carry out activities that increase at the next meeting and monitor the activities.
	Simple activation: therapists integrate activation targets resulting from living values by monitoring activities to create a hierarchy of activities. Providing a hierarchy of activity sheets, which lists activities and ways to overcome difficulties in carrying out activities.
Stage 2: Discussion and evaluation of activity failure	Start a simple activity from the activity hierarchy: therapists and subjects collaborate to discuss the activity hierarchy column that contains a hierarchy of accompanying activities and emotions and a column on anticipation lists.
	Activity monitoring: therapists and subjects collaborate to discuss the activities and the emotions felt by the subjects that have been filled in on a monitoring activity sheet. Therapists reward the slightest effort from subjects.
	Activity monitoring: maximizing the likelihood of successful behavioral activation, uncovering barriers that cause activity failure based on activity monitoring, and continuing the session by discussing the most appropriate problem-solving to overcome obstacles.
Stage 3: Activity monitoring and continuing simple activity	Continue activity: reviewing homework on the monitoring sheet, therapists and clients discuss the activities and the emotions of the clients.
	Monitor activities: providing follow-up homework, by carrying out activities and recording them in the activity hierarchy sheet.
	Activity monitoring: showing the obstacles and identifying strategies to overcome them and showing the success achieved.
Termination	End therapy session: At the end of therapy there will be positive reinforcement from subjects. Therefore, the aim is to pair environmental changes with the provision of skills in responding to negative life events.

Data Analysis

Wilcoxon test was applied to determine the difference between pretest and posttest data. Furthermore, data analysis was conducted with the SPPS 19.0 program.

RESULTS

The implementation was carried out using activities in action study based on Kurt Lewin's original plan (Willis & Edwards, 2014), as follows:

1. Identify a general or initial idea: This includes conducting an assessment by interviewing and observing techniques with disaster survivors who live in permanent housing and the assessment results are:

a) Some of male survivors have moved out to other cities to find work, hence, residents are mostly adult women and children.

b) Only a few people welcomed the visit of the study team and some residents showed strong resistance by closing the doors.

c) Children survivors showed signs of deep grief.

d) The small food businesses initiated in the initial study have persevered, showing a level of survival. However, not all survivors from the initial study are currently engaged in these businesses.

e) Despite the absence of significant changes in the geographical

conditions at the disaster site, some survivors attempted to cultivate perennials. However, the perennials, specifically the sengon trees, were harvested and sold rather than being retained for cultivation.

f) The location of the school which was in the danger zone, has been relocated to the resettlement of residents.

The evaluation of the situation was conducted using the Force-Field Analysis. Subsequently, the outcomes were examined to construct a visual representation in line with the context. This representation was articulated in the form of a fishbone diagram, as shown in Figure 2.
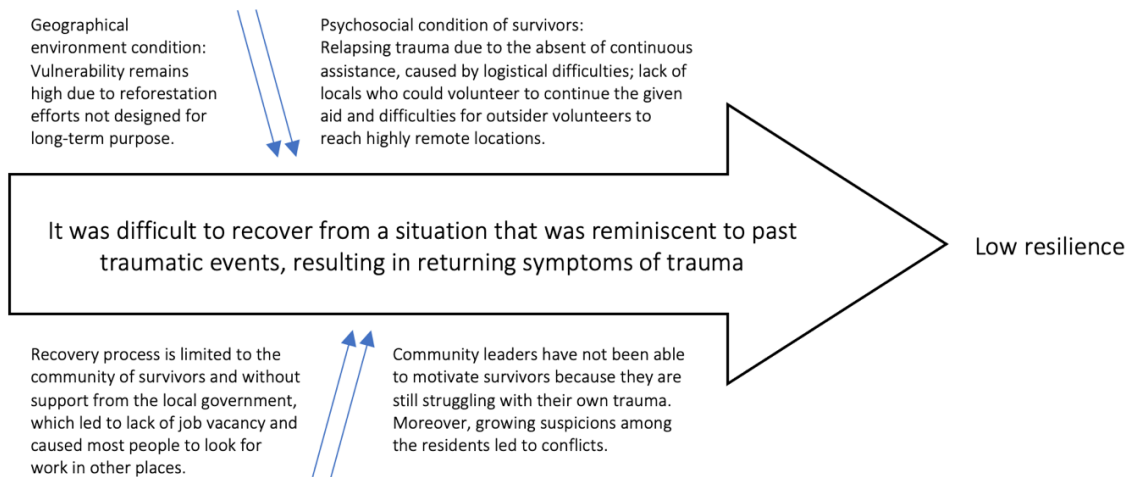

Figure 2. Fishbone diagram

2. Reconnaissance: The action included conducting assessments to thoroughly examine the situations faced by residents showing pronounced symptoms of trauma. The results served as the foundational basis for implementing trauma-coping interventions. The identification of obstacles was collaboratively conducted with community leaders representing survivors. Despite the majority of survivors having returned to work, a significant portion has not secured permanent employment. A primary impediment identified was reluctance to participate in the study due to the necessity of temporarily leaving the jobs, thereby hindering financial sustenance. To address this issue, a solution was implemented where financial compensation was provided in place of economic activities. Another obstacle pertained to variations in the emotional and psychological conditions

among residents, leading to potential unpreparedness for participation in community group interventions. The resolution included individualized interventions to accommodate diverse emotional and psychological states among residents.

3. Planning and implementation: The execution of plans for conducting assessments and interventions was carried out in collaboration with community leaders at a designated permanent shelter location. Several key steps were taken during this phase, including (a) assembling a proficient study team, (b) establishing rapport with survivors, (c) analyzing data, and (d) organizing interventions, developing modules, and conducting training sessions for facilitators. In this context, the ensuing actions included the following:

   a) Conducting interviews as part of the assessment in response to the results of the initial survey outlined in point 1. The primary objective was to acquire comprehensive data on resilience of survivors following disasters. The study was conducted on individuals denoted as A and B, both residing in permanent shelters. The results reported that A frequently struggled to control emotions, while B showed irritable behavior, impatience, and aggression, particularly when reminded of landslide disaster. Ineffective coping mechanisms attempt to divert attention away from traumatic events that induce stress, anxiety, and physical complaints. In contrast, Subject B manifested depressive symptoms rather than aggressive behavior. The coping strategies of A were palliative and non-adaptive, resorting to excessive smoking, coffee consumption, and loss of appetite without implementing a plan to address the issue. Meanwhile, B coped by withdrawing and avoiding conflicts with others. Both A and B acknowledged that their grievances stemmed from internal factors, yet managing emotions proved challenging, leading to the venting of frustrations on others. Despite making efforts to return to work, the results were insufficient, enhancing a pessimistic outlook. Meanwhile, the aspiration to derive a livelihood from the garden remained unrealized. This observed phenomenon served as a crucial consideration in determining the intervention strategy to be implemented.

   b) Taking measurements before (pre-test) was given as an intervention to show the psychological condition of the survivors of disaster. Resilience measurement showed that 70% of

survivors had a low level of resilience and another 30% in the moderate category.

c) Interventions designed to enhance resilience among survivors were implemented according to the outlined procedure.

4. Evaluation: Evaluation was carried out through quantitative and qualitative techniques.

a) Quantitative evaluation

Quantitative assessment was conducted by comparing pre-test measurements with subsequent tests, using resilience scale for individuals affected by disasters. The data obtained from the measurements were subjected to analysis through the Wilcoxon test. The results showed a Z-score of -2.805 and a p-value of .005 ($p < 0.01$), leading to the conclusion that behavioral activation technique had a statistically significant impact on enhancing resilience of survivors. The results showed that before the intervention (pre-test), 70% of residents reported a low level of resilience, while 30% fell into the moderate category. Following the intervention, there was a 30% reduction in the low resilience category, resulting in 40% showing low resilience. The moderate resilience category also witnessed a decrease to 20%, and 40% of residents reported a high level. Meanwhile, no survivors showed a high level of resilience in measurements conducted before the intervention (pre-test).

Table 2. Comparison of scale resilience score categories for survivors before and after intervention

Norm	Category	Interval	Before intervention		After intervention	
			F	%	F	%
≤ 125	low	26-125	7	70	4	40
126-145	moderate	126-145	3	30	2	20
≥ 145	high	146-182			4	40

b) Qualitative evaluation

Qualitative evaluation was conducted based on data acquired from the intervention processes. Dynamic changes were observed among the subjects during the intervention process using behavioral activation technique. In the initial meeting, survivors showed decreased enthusiasm, and some indicated gloomy, sad, and tearful facial expressions when recounting the

experiences of the family members who had fallen victim to landslide. During the study, the rainfall intensity in Jemblung Hamlet was high, causing concern among survivors about the potential occurrence of another disaster. Anxiety persisted despite the geographical distance between the current residence in HUNTAP and the disaster site. Almost all survivors shared the traumatic experiences in line with symptoms indicative of PTSD, such as nightmares, recurring memories, avoidance of disaster-related reminders, reliving the traumatic situation, sleep disturbances, and diminished interest in activities. These symptoms had a profound impact on survivors' relationships with family members and neighbors, leading to disputes with partners and conflicts with neighbors.

Significant improvements were reported when survivors were facilitated to participate in determining group norms. The initiation of one participant to share the ideas promoted others to actively contribute to the establishment of group norms, improving increased engagement in therapy process. A prevalent trend was developed where positive emotions were generally unrecognized when survivors were promoted to share the emotional experiences. Several individuals reported

recurrent thoughts of imaginary negative events and experienced anxiety regarding the possibility of another landslide, particularly concerning family members residing in landslide-prone environments.

The majority of survivors experienced discomfort due to the prevailing conditions, which had a significant impact on health. Instances of physical complaints, such as dizziness, stomach aches, and chest tightness, were frequently reported. A proportion of participants lacked the requisite skills to effectively address these challenges, resulting in coping mechanisms including crying, deep contemplation, pacing, and the expression of frustration through actions such as slamming kitchen appliances. In response to these challenges, an effort was made to facilitate the development of emotional management skills among survivors. Relaxation exercises, with an emphasis on improving spirituality, were implemented. Additionally, opportunities for individual assistance were provided for survivors who encountered difficulties participating in group processes. These interventions aimed to equip survivors with the necessary tools to navigate the emotional challenges more effectively.

As a consequence of these interventions, survivors showed increased enthusiasm in formulating activity plans designed to reintegrate into routine activities reminiscent of pre-disaster lifestyles. Furthermore, there were

observable physical changes among the survivors, indicative of a positive transformation.

Observing the impact of social activities aimed at reinstating routine, certain individuals encounter challenges in adapting to new conditions. Residents who remained expressed a lack of interest in engaging in activities. However, a segment of the population, having initiated small-scale food businesses using bananas and cassava, showed resilience and progress, marked by improved packaging and a diversified range of products.

A discernible transformation in survivors became evident starting from the second meeting since individuals started donning more refined attire, presenting a brighter countenance, and showing an increased sense of dressing when participating in therapy sessions. Some took pride in showing the snacks produced, while others initiated endeavors to enhance the skills, providing avenues for leisure and income generation. Expressing a desire to learn the art of knitting, survivors collectively decided to focus on creating brooches from fabric, ribbons, and beads during structured discussions. This concept was facilitated with the inclusion of skilled trainers who conducted practical sessions, enhancing a palpable eagerness to acquire new skills. The ensuing narrative provides a reflective account of the experiences of the survivors.

Table 3. Examples of reflections on survivors' experience at the end of therapy session

What are the responses to today's activities?	What idea came after the meeting today?	When will it be done?	How to do it?	What obstacles arise?	How to handle it?
Feeling happy because they can learn and add knowledge and have new skill	Making brooch	After returning from the meeting, they want to immediately try to make it	Buy the equipment then sell it	Difficulties in marketing it	Sell it in the market
Feeling happy because it can be done at home, hence, it can fill the spare time and increase income	Making brooch	Soon	Try to make it themselves for the family, so it can be used by themselves or other family members	It is hard to get the equipment	Ask children to buy elsewhere

The reflection on survivors' experiences increased individuals who strategically planned to market acquired skills, resulting in a significant development. During the subsequent meeting, survivors shared the crafted brooches, which were sold at a considerable price of Rp. 15,000 per piece. This initiative provided substantial additional income and led to the conceptualization of a collaborative effort as

the formation of brooch craftsmen with tasks allocated based on individual expertise.

The changes observed in therapy sessions contributed to an increased sense of optimism among survivors. The eagerness to participate was evident in the enthusiastic completion of self-monitoring worksheets and active inclusion in determining therapy meeting schedules when conflicting with other commitments such as religious recitations. The initial conflicts among residents identified in the early assessment gradually decreased, enhancing improved communication among survivors, free from prejudice.

During the concluding meeting, a brief video clip showing the significance of cooperation in overcoming obstacles was presented. Survivors affirmed the validity of the message in the video clip. The session culminated with survivors joyfully singing together the song "Jangan Menyerah" by the Indonesian band D'Masiv, which translates to "Don't give up." This collective expression included resilience and positive transformation experienced by survivors in the therapeutic process.

5. Revise action plan: A personalized technique was implemented for survivors who encountered challenges participating in group sessions due to personal issues. This individualized technique showed that certain survivors were grappling with personal problems in the marriages. Due to targeted counseling interventions, survivors successfully addressed and resolved the marital concerns. Therefore, enhanced preparedness was shown to actively engage and collaborate in larger group settings. The support contributed to a more inclusive and effective participation of survivors in the therapeutic process.

6. Restarting the Recursive AR Cycle: An additional action study initiative that merits consideration includes the implementation of psychosocial interventions for male survivors. This aims to facilitate successful reintegration into the workforce in the respective community.

DISCUSSION

This study constitutes an action project in the subsequent or advanced phase of a previous investigation, with the primary objective of enhancing the resilience of residents who survived landslide in Jemblung, Karangkobar, and Banjarnegara. As a follow-up study in the framework of disaster management, the initiative was informed by the discerned needs of the affected residents. The aim was to gain a comprehensive understanding of resilience levels among adult residents and to show the responses of children to disaster.

After the antecedent study, there were indications that survivors showed conditions

in line with Kumpfer's resilience integration concept (Ungar, 2012). This concept showed successful adaptation following prolonged periods of disruption or stress, manifested in survivors' inclination to explore alternative professions due to the impracticality of sustaining the traditional roles as farmers and coffee processors. However, the preliminary assessment showed that resilience conditions in some disaster survivors did not evolve. Certain residents indicated renewed symptoms of trauma, reinforcing the need for further investigation. Therefore, this follow-up study commenced with a thorough assessment, and the outcomes served as a foundational basis for subsequent intervention strategies.

The assessment results showing resilience among adult survivors reported that the mentoring technique used in the previous study failed to obtain enduring changes. This study identified two subjects who cognitively acknowledged that the root of the issues lay in themselves, yet struggled to develop adaptive coping skills. Consequently, palliative coping mechanisms were carried out, with Subject A turning to smoking and B opting for self-isolation as a means of diverting feelings of sadness. The experiences show the inherent difficulty faced by disaster survivors in effectively coping with trauma. Li et al. (2015) study of disaster survivors in Sichuan, China, reported the complexity of the consequences of disasters. Furthermore, 71.1% of 500-plus survivors experienced complicated grief,

with 38.9% showing comorbidity with PTSD. In this context, 28% endured more severe mental stress compared to others due to PTSD and complicated grief. Li et al. (2015) showed that the loss of property tied to livelihoods and harrowing experiences during disasters significantly contributed to complicated grief. This is consistent with Subject A's experience, where the loss of economic assets in the form of agricultural land served as a substantial contributor. Despite receiving emotional support from the husband, Subject B struggled to rebound and empower herself. The results show the connection between various factors influencing survivors' ability to cope with trauma, focusing on the importance of interventions to address the challenges faced by individuals in the aftermath of disaster.

To address the challenges faced, an intervention incorporating behavioral activation technique was implemented. This choice was driven by the shared desire among survivors to embark on new business ventures, alongside the recognition that limited knowledge and skills the realization of these aspirations. Therefore, the hindrances affected the development of survivors' potential and decreased the ability to engage in meaningful socialization. The limited coping skills among survivors pose a formidable challenge in overcoming emotional turmoil, leading to the manifestation of negative emotions and susceptibility to conflicts with others. Furthermore, these emotional struggles have

been observed to manifest in physical complaints such as dizziness, nausea, and chest tightness, having a detrimental influence on survivors' health. A lack of interest in engaging in activities has been reported by survivors, showing the persistent impact of disaster two years after the occurrence. Despite the passage of time, some survivors find it challenging to articulate experiences, hindering progress toward recovery. Vulnerability to natural disasters in these regions is increased due to factors such as residing in high-risk regions, poorly constructed housing susceptible to damage, absence of early warning systems, and limited resources along with a fragile social safety network. Therefore, these compounding factors contribute to the prolonged recovery of survivors (Zorn, 2018).

Psychosocial interventions were initiated to address the communal interests of survivors and provide a personalized technique for individuals burdened with significant personal challenges, hindering open discussion of the problems. The survivors seeking enhanced emotional management skills, experienced facilitated therapy sessions. Consequently, shifts in group dynamics ensued to enhance a more fluid atmosphere among survivors. This resulted in increased enthusiasm, and observable improvements in the physical appearance of survivors, who showed a more cheerful and optimistic demeanor.

The application of behavioral activation technique taught survivors to recognize and change distorted thought patterns that tend to affect the actualization of the creative ideas by sticking to values. Changes to the enthusiasm led to self-empowerment, facilitated by the provision of training in the manufacture of handicrafts with high value for sale. The successful resolution of personal challenges additionally impacted the interpersonal dynamics among disaster survivors, leading to the mitigation of mutual suspicions and the emergence of cohesion. This newfound unity inspired survivors to promptly organize into groups, driven by a shared desire to cultivate the craft of brooch-making. The results of quantitative data analysis showed a very significant increase in resilience of survivors. The connection of PTSD and resilience is in accordance with the results of (Kukihara et al., 2014) which found a negative relationship between resilience with various clinical problems in tsunami survivors. People with higher resiliency were predictors of low depressive symptoms, PTSD, better functioning of physical health, and low role limitations associated with physical and emotional problems. Therefore, an increase in resilience for disaster survivors is a major issue, requiring attention.

Quantitative results support the dynamics that occur among survivors because intervention with behavioral activation technique has a very significant

effect increasing resilience Z = -2,805, the value of p = .005 (p <0.01). The results show that residents are more prepared to accept the changing conditions due to disaster and develop as the community with the idea of carrying out economic activities. However, a significant aspect remains unaddressed, pertaining to reducing geographical vulnerability to prevent the recurrence of disasters. The reduction of geographical vulnerability is important to minimize the risk of survivors being exposed to landslide, thereby enabling engagement in economic activities with a sense of security. The achievement necessitates a comprehensive, multi-disciplinary intervention that actively engages local governments as key decision-makers in regional development.

CONCLUSION AND RECOMMENDATION
Conclusion

In conclusion, the application of behavioral activation technique was reported to significantly increase the level of resilience. After establishing a comprehension of the connection between emotion, cognition, and behavior, survivors expressed eagerness to formulate an activity plan aimed at resuming the previous routine activities after the disaster. Physically, survivors were subjected to transformations, with increased tidiness and sartorial refinement during participation in intervention programs. Some proactively initiated skill enhancement, specifically in crafting hijab accessories, which were marketed and sold.

Recommendation

Recommendations for the next cycles include (1) Behavioral activation technique has shown efficacy in enhancing resilience among survivors of landslide disasters. Consequently, it is recommended for application in empowering survivors of other types of disasters. (2) Collaborative intervention includes local government as a policy maker in Banjarnegara region and interdisciplinary collaboration to overcome topographical and geological vulnerability. (3) Interventions specifically designed for male survivors enhance the reintegration into the workforce in the respective villages.

REFERENCES

Anam, C., Sholichah, M., & Kushartati, S. (2018). Intervensi Psikososial Untuk Menurunkan PTSD dan Meningkatkan Resiliensi Warga Penyintas Bencana Tanah Longsor di Banjarnegara. *Psikoislamedia Jurnal Psikologi*, *3*(1), 1–72.

Bakic, H., & Ajdukovic, D. (2021). Resilience After Natural Disasters: the Process of Harnessing Resources in Communities Differentially Exposed to a Flood. *European Journal of Psychotraumatology*, *12*(1). https://doi.org/10.1080/20008198.2021.1891733

BNPB. (2015). *Kajian Risiko Bencana Jawa Tengah 2016 - 2020*.

Boon, H. J., Millar, J., Lake, D., Cottrell, A., & King, D. (2012). *Recovery from Disaster: Resilience, Adaptability and Perceptions of Climate Change*.

Brown, S., Budimir, M., Crawford, S. U., Clements, R., & Sneddon, A. (2019). *Gender and Age Inequality of Disaster Risk: Research Paper*.

Centre for Liveable Cities. (2022). *Building Community Resilience*. Centre for Liveable Cities.

Chowhan, A., Margoob, M. A., Mansoor, I., & Sakral, A. (2016). Psychiatric Morbidity in Children and Adolescent Survivors of a Snowstorm Disaster in South Kashmir, India . *British Journal of Medical Practitioners*, *9*(1).

Cuijpers, P., Karyotaki, E., Harrer, M., & Stikkelbroek, Y. (2023). Individual Behavioral Activation in the Treatment of Depression: A Meta Analysis. *Psychotherapy Research*, *33*(7), 886–897.

https://doi.org/10.1080/10503307.2023.2197630

Gabrillin, A. (2014, December 15). *Ini Penyebab Longsor di Banjarnegara Menurut BNPB* . https://nasional.kompas.com/read/2014/12/15/16315561/Ini.Penyebab.Longsor.di.%20Banjarnegara.%20menurut.%20BNPB

Hartono, U. (2022, October 26). *Tanah Longsor di Desa Bantar Banjarnegara, BPBD: 76 Jiwa Mengungsi* . Detik.Com. https://www.detik.com/jateng/berita/d-6370654/tanah-longsor-di-desa-bantar-banjarnegara-bpbd-76-jiwa-mengungsi

Kent, M., Davis, M. C., & Reich, J. W. (Eds.). (2013). *The Resilience Handbook*. Routledge. https://doi.org/10.4324/9780203135303

Kukihara, H., Yamawaki, N., Uchiyama, K., Arai, S., & Horikawa, E. (2014). Trauma, Depression, and Resilience of Earthquake/tsunami/nuclear Disaster Survivors of Hirono, Fukushima, Japan. *Psychiatry and Clinical Neurosciences*, *68*(7), 524–533. https://doi.org/10.1111/pcn.12159

Li, J., Chow, A. Y. M., Shi, Z., & Chan, C. L. W. (2015). Prevalence and Rrisk Factors of Complicated Grief among Sichuan Earthquake Survivors. *Journal of Affective Disorders*, *175*, 218–223. https://doi.org/10.1016/j.jad.2015.01.003

Makwana, N. (2019). Disaster and its impact on mental health: A narrative review. *Journal of Family Medicine and Primary Care*, *8*(10), 3090–3095.

https://doi.org/10.4103/jfmpc.jfmpc _893_19

Morley, P., Barclay, E., & Parsons, M. (2020). *Barriers and Enables in the Long Term Recovery of Communities Affected by Natural Hazards: A Review of the Literature.*

National Institute on Aging. (2022). *Protecting Older Adults from the Effects of Natural Disasters and Extreme Weather.*

Nugroho, S. P., Kunto, A. A., & Yanuarto, T. (2015). *Life Recovery of Landslide Victims in Banjarnegara.* Center of Data, Information and Public Relations, National Disaster Management Authority.

Octarina, M., & Afiatin, T. (2013). Efektivitas Pelatihan Koping Religius untuk Meningkatkan Resiliensi pada Perempuan Penyintas Erupsi Merapi. *Jurnal Intervensi Psikologi (JIP)*, *5*(1), 95–110. https://doi.org/10.20885/intervensi psikologi.vol5.iss1.art6

Rahmat, H. K., & Alawiyah, D. (2020). Konseling Traumatik: Sebuah Strategi Guna Mereduksi Dampak Psikologis Korban Bencana Alam. *Jurnal Mimbar: Media Intelektual Muslim Dan Bimbingan Rohani*, *6*(1), 34–44. https://doi.org/10.47435/mimbar.v6 i1.372

Resnick, B., Gwyther, L. P., & Roberto, K. A. (Eds.). (2011). *Resilience in Aging.* Springer New York. https://doi.org/10.1007/978-1-4419-0232-0

Ridwanulloh, M. (2022). Level Preparedness disaster society in landslide susceptible areas Madukara Banjarnegara District of 2018.

Indonesian Journal of Environment and Disaster (IJED), *1*(1), 1–8.

SAMHSA. (2020). Women and Disasters. *Disaster Technical Assistance Center Supplemental Research Bulletin.*

Susanti, P. D., Miardini, A., & Harjadi, B. (2017). Analisis kerentanan tanah longsor sebagai dasar mitigasi di Kabupaten Banjarnegara. *Jurnal Penelitian Pengelolaan Daerah Aliran Sungai*, *1*(1), 49–59. https://doi.org/10.20886/jppdas.201 7.1.1.49-59

Ungar, M. (Ed.). (2012). *The Social Ecology of Resilience* (First Edition). Springer New York. https://doi.org/10.1007/978-1-4614-0586-3

Uyun, Q., & Rumiani, R. (2012). Sabar dan Shalat Sebagai Model untuk Meningkatkan Resiliensi di Daerah Bencana Yogyakarta. *Jurnal Intervensi Psikologi (JIP)*, *4*(2), 253–276. https://doi.org/10.20885/intervensi psikologi.vol4.iss2.art7

Willis, J. W., & Edwards, C. (2014). *Action Research : Models Methods and Examples.* INFORMATION AGE Publishing.

Zorn, M. (2018). Natural Disasters and Less Developed Countries. In S. Pelc & M. Koderman (Eds.), *Nature, Tourism and Ethnicity as Drivers of (De)Marginalization: Insights to Marginality from Perspective of Sustainability and Development* (pp. 59–78). Springer International Publishing. https://doi.org/10.1007/978-3-319-59002-8_4