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Exploring the Experiences and Perceived Impacts of a Group-Based Psychosocial Intervention on Young People's Mental Health in Post-Disaster Settings: A Qualitative Interpretative Phenomenological Analysis

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Abstract

This study evaluates a three-day group-based psychosocial intervention designed to enhance well-being and resilience among youth survivors of the 2023 Türkiye earthquakes. Utilizing interpretative phenomenological analysis of semi-structured interviews, the research explores participants' experiences before and after the program. Findings indicate that the intervention significantly boosted positive emotions through shared experiences and group belonging. Three primary themes emerged: earthquake impacts, the group experience, and recovery factors. The results highlight how collective social support and witnessing peer recovery foster resilience in post-disaster settings. Ultimately, this study advocates for group-focused, culturally sensitive interventions as effective tools for addressing the mental health needs of young disaster survivors, emphasizing the healing power of community and connection in trauma recovery.

1. Introduction

According to the earthquake report published by the Department of Strategy and Budget in Türkiye, 21.3 percent of the child (0-17 years old) population (4,805,937 children) and 16.7 percent of the youth (18-29 years old) population (2.6 million young people) in Turkey live in one of the 11 provinces affected by the earthquake in the southeast region of Turkey on 6 February 2023 (Kahramanmaraş and Hatay Earthquakes Report, 2023). According to the shared statistics, approximately eight million children have experienced the earthquake and continue to struggle with the social and economic challenges brought about by the earthquake. In such large-scale disasters, it will take years for the damages and psychosocial impacts to emerge and recover. Therefore, focusing on *collective healing* is critical for reaching out to afflicted populations (Ntontis et al. 2021). In this vein, the present study focuses on a group-based psychosocial intervention developed to support the psychological and social adaptation of disaster victims who are trying to adapt to their new lives, especially in the difficulties experienced after the earthquakes occurred in Turkiye in 2023. To do so, we employed art and cultural activities that are based on expressive oriented approaches such as writing and drama (Cassina & Mochi, 2022; Lusebrink et al., 2013; Malchiodi, 2003). Furthermore, we utilized a group-based intervention methodology targeting certain intersections of social groups comprising disaster victims and university students. The main aim of the our research was to increase social adaptation and well-being of young people, who were the victims of earthquakes in Turkiye, one of the largest populations among vulnerable groups.

In addition to the traumatic stress symptoms that occur immediately after the disaster, experiences such as losing relatives, starting life anew, migration from the disaster area to another safe settlement include many difficulties that might cause the disaster victims to experience cumulative stress in the long term. Even if the physical consequences of trauma *might* disappear, its psychological and social effects might spread for a very long time (Kargillis et al., 2014). It has been observed that children and young people affected by the earthquake have lengthier psychological, social, and cognitive regression, and difficulties than adults do (Bokszczanin, 2007). There are studies indicating that the basis of this situation lies in the fact that children and young people do not yet have effective coping methods compared to adults, and are far from social and psychological support mechanisms (Fore, 2020; Norris et al., 2002; OECD, 2020). Additionally, from a developmental perspective, it is highlighted that because the brain is especially "plastic," adolescence and youth are "sensitive periods" when it comes to the risk of psychopathology brought on by exposure to trauma (Kerig, 2023; Knudsen, 2004), which greatly raises the risk of developing depression or PTSD (Bokszczanin, 2007; Dunn et al., 2017). The fact that they are away from school and friends for a long time due to the destruction caused by the earthquake can deeply affect children's psychological and social adaptation after the disaster. Therefore, it is very important to support young people and children psychologically and socially for a sustainable recovery after the disaster.

Many studies have indicated that psychosocial support programmes can be an effective tool in helping survivors cope with the multiple challenges they experience after natural disasters or accidents (Coles & Harrison, 2018; Le Brocque et al., 2017). As the experiences of disaster victims primarily related to the traumatic event they have experienced cause them to experience high levels of stress, most psychosocial support programmes are primarily focused on eliminating these symptoms. Focusing on eliminating these symptoms that emerge after disasters is certainly noteworthy. However, the cumulatively increasing stress levels, combined with shifting living situations and increasing varied stressors, complicate disaster survivors' lives even more in the long term. The need to migrate to another city specifically disrupts their routines for an extended period. When examining disaster response efforts, it is noticeable that there is a lack of work focused on solving problems that arise in the medium and long term.

1.1. Psychosocial Interventions for Youth

Research indicates a deficiency in the literature about intervention programs for children and adolescents, although it also demonstrates that the current intervention studies are successful for this demographic (Daşcı, 2024; Gibbs et al., 2021). A review of the literature specifically indicates a scarcity of studies on interventions that accommodate many languages and cultures, considering gender and socio-economic position, while being attuned to the demands of different developmental stages and their efficacy. The number of interventions developed especially for the medium and long term effects of disasters is quite low. Considering that the psychosocial effects of disasters increase over time and become more complex and challenging, there is a great need for intervention programs, particularly for children and young people.

A study (Hobfoll et al., 2021) on identifying essential elements of mid–term mass trauma intervention suggests that these five principles should be adopted in any intervention aiming at helping to cope with mass trauma: 1) a sense of safety, 2) calming, 3) a sense of self- and community efficacy, 4) connectedness, and 5) hope. Interventions especially for first two principles (promoting a sense of safety and calming) five important principles defined by Hobfoll et al. (2021) are frequently encountered. However, it is emphasised that intervention programmes for the next three principles (a sense of self- and community efficacy, connectedness and hope) are also very important for the psychological and social adaptation of disaster victims. These last three principles are particularly significant for psychological and social adaptation of children and young people after disasters. The main reason for this is the existence of risks such as the fact that many children and young people have lost their social and psychological support mechanisms after the disaster, and their psychological and cognitive development has been interrupted. In an information note published by the Education Reform Initiative (ERG–an NGO that contributes to structural transformation in education for the development of children and society by research) on the effects of the earthquake on education, it was emphasised that the school attendance rates, which had already decreased since the pandemic, were carried to much more serious dimensions with the earthquake, and that we experienced a period in which absenteeism and dropout rates were perhaps the highest (Aktaş Salman et al., 2023). Considering that school is one of the main sources where students can receive psychosocial support in addition to education and training (Fazel, et al., 2014; Theimann, 2016; Mwoma & Pillay, 2015), keeping children and young people away from school constitutes a much more risky area especially after a disaster.

It is clear that developing intervention programs focused particularly on the principles suggested by Hobfoll and colleagues (2021) is crucial in combating the mass traumatic effects of these earthquakes in Türkiye. However, considering the vulnerability of childhood and adolescence, we need to prioritize supporting these vulnerable samples. In particular, fostering a sense of self-efficacy, community involvement, connectedness, and hope in young people who have been forced to move from their cities and are separated from their families, friends, and schools

should be a primary objective. Therefore, the present study focuses specifically on these principles proposed by Hobfoll and colleagues (2021) to develop a psychosocial intervention for the displaced youth.

1.2. Group-based interventions to promote recovery

Trauma often disrupts an individual's social identity, the sense of self derived from membership in social groups. When traumatic events occur, they can shatter a person's connection to their social world, leading to feelings of isolation, loss of meaning, and a compromised sense of belonging. This disruption is particularly impactful for young adults, who are often in a critical stage of identity formation and rely heavily on social connections for emotional and psychological support (Haslam et al., 2012). Social psychology research offered the term "social cure" which refers to the idea that social identities and group memberships can serve as powerful resources for mental health and recovery. The power of the "social cure" lies in its ability to address the social dimensions of trauma, which are often overlooked in individual-focused approaches. For young adults, group-based interventions can be particularly effective in rebuilding social identity, fostering resilience, and promoting long-term recovery (Brown et al., 2017). When individuals identify strongly with supportive groups, they gain access to collective resources such as emotional support, shared coping strategies, and a sense of purpose (Kaniasty et al., 2020; Ntontis et al., 2021). For young adults recovering from trauma, group-based interventions can help rebuild their social identity and foster resilience by restoring a sense of belonging, enhancing collective coping, and promoting empowerment. When we synthesize the evidence from social cure research with the mass trauma intervention principles proposed by Hobfoll et al. (2021)., the importance of group-based interventions becomes even more apparent.

Research around psychosocial intervention also supports the idea that group-based psychosocial interventions for youth in post-disaster settings can be an effective tool. Specifically for children and young people, interventions based on social connections provide a safe environment to share experiences, process emotions, and build connections with others who have faced similar challenges. For instance, a very recent study by Cruwys and colleagues (2025) highlights a cyclical relationship between loneliness and PTSD symptoms following a disaster, emphasizing that loneliness exacerbates PTSD, which in turn deepens feelings of isolation. This cycle is particularly pronounced among individuals with severe trauma exposure or pre-existing mental health risks, underscoring the need for early interventions that prioritize collective recovery and community engagement. Authors suggested that group-based interventions, such as support groups, community activities, and peer-led initiatives, can play a crucial role in breaking this cycle by fostering social connections and rebuilding a sense of belonging. For young adults, who are especially vulnerable to loneliness during transitional life stages, these interventions can provide emotional support, shared coping strategies, and opportunities for identity reconstruction. By addressing loneliness early and promoting social identity through group participation, disaster management efforts can prevent the worsening of PTSD symptoms and support long-term resilience.

Furthermore, a review by Drury (2018) presents a social identity model that explains how a sense of common fate during emergencies fosters a shared social identity among survivors, motivating supportive collective behavior and mutual aid. This emergent shared identity enhances group cohesion, leading to relational transformations that promote collective self-organization, including expected support, coordinated behavior, and collective efficacy. The model highlights the potential for group-based interventions to harness these dynamics, encouraging spontaneous cooperation and resilience in disaster recovery. By leveraging shared social identity, interventions can strengthen community bonds and empower survivors to collectively navigate crises, reducing the risk of disaster escalation.

Maintaining or acquiring new social identities is crucial for psychological resilience during life transitions, including recovery from adverse effects of disaster. For young adults, this model suggests that interventions should focus on 1) preserving existing identities through helping individuals maintain connections to pre-trauma social groups (e.g.,

family, friends, school communities); 2) facilitating new identities through encouraging participation in new groups that provide opportunities for growth and reinvention.

1.3. Museums as a background for psychosocial interventions

In the World Health Organisation's meta-synthesis research on the healing effects of various art forms, it was pointed out that cultural activities such as visiting museums and concerts increase pride in one's own culture, independence and resilience (Fancourt & Finn, 2019). In response to this, a project was created that allows psychiatrists to use museum visits in solving some psychological problems. In the project, especially in psychological disorders associated with depression and loneliness, museum visits are encouraged to be recommended to clients with a prescription. Research in this field also reveals the positive effects of museums and art on well-being. For example, researchers examined the effects of participatory museum activities on the recovery period of psychological disorders for three months using mixed methods (Goodman-Casanova et al., 2023). As a result of the participants' activities in the museum, an increase was observed in their scores in the areas of finding meaning in life, hope and optimism for the future, commitment, belonging and feeling strong. Similarly, there are studies showing that museum visits are effective places for the prevention and treatment of chronic pain (Fancourt & Steptoe, 2018). Similar studies reveal the importance of using art as a therapeutic tool and museums as safe therapeutic spaces.

Environmental psychology research also supports the idea that there is a relationship between museums and visitors' levels of affect (Cancellieri et al., 2018), which makes them a very suitable and satisfying experience for organising activities for visitors. Other psychological studies also reveal that visiting museums, especially in the cities in which one lives, and gaining knowledge about the history and culture of the city helps individuals to develop feelings of connectedness (Falk, 2021). One of the five principles proposed by Hobfoll et al. (2021) is the feeling of attachment. Therefore, in fact, through museum activities, this sense of attachment can be revealed and young people's sense of belonging to the city, culture and thus to the society in which they live can be developed and strengthened. Therefore, the present study used museums as a background in this particular intervention for the displaced youth.

1.4. Present Study

The present paper reports the findings from a group-based psychosocial intervention for the displaced youth after the earthquakes happened in Türkiye in 2023. Our primary aim was to support the psychological well-being and re-engagement of earthquake survivors through the feelings of connectedness and hope that they would re-settle in a new city. For this purpose, an art-based psychosocial intervention was designed, conducted in museums and its effectiveness was assessed through semi-structured interviews. In order to assess the effectiveness of the intervention, two separate interview forms (pre- and post-intervention) were conducted by the researchers to determine the experiences of the participants. The interview questions specifically focused on the participants' feelings about the earthquake, their experiences in Ankara after the earthquake, and their experiences of group-based museum activities.

2. Methodology

2.1. Design

The present study is planned to be conducted with a qualitative approach based on interpretative phenomenological method. The aim of interpretative phenomenological analysis is to examine how the participants make sense of their personal and social worlds. In this direction, the main goal of an analysis based on interpretative phenomenological methods is to explore the personal experiences of the participants towards that event, situation or object rather than

their personal perception of a particular situation or object (Smith & Osborn, 2007). In the current study, it is aimed to discover the meanings of the interactions and expressions of university students affected by the earthquake in the psychosocial-based museum education activities that were carried out. For this purpose, semi-structured in-depth individual interviews were conducted with the participants before and after the activities in order to understand how they make sense of their experiences towards psychosocial-based museum education activities. In this context, an interview form is prepared by the researchers for pre- and post-activity interviews.

2.2. Participants

The participants of the study consisted of 10 young individuals who were affected by the earthquake and moved to Ankara for various reasons (university, family visit, earthquake-induced transfer, etc.) after the earthquake. Three of the participants were male and seven were female. Almost all of the participants, whose ages ranged between 17 and 28 years, were university students, while only 2 participants were high school graduates and at the university entrance stage. Table 1 displays the participants' age, gender, city of origin, and educational background. Each participant received a code, and any information that might be used to identify them was omitted from the article to preserve the confidentiality of their personal data.

Table 1
Participants' age, gender, city of origin, and educational background

Participant No	Age	Gender	City of origin	Educational Status
P1	22	Female	Tokat (secondary trauma)	Hacettepe University
P2	21	Male	Gaziantep (primary trauma)	Ankara University
P3	30	Female	Gaziantep (primary trauma)	Ankara University
P4	17	Female	Kahramanmaraş (primary trauma)	High school graduate
P5	20	Female	Osmaniye (primary trauma)	Ankara University
P6	21	Female	Hatay (primary trauma)	Ankara University
P7	18	Male	Kahramanmaraş (primary trauma)	High school graduate(Ankara)
P8	19	Female	Ankara (secondary trauma)	Hacettepe University
P9	17	Female	Kahramanmaraş (primary trauma)	High school student (Ankara)
P10	22	Male	Diyarbakır (primary trauma)	Hacettepe University

The participants of the study were determined by the purposeful sampling method frequently used in qualitative research. Purposive sampling is a method that involves the inclusion of situations or people in the study process from which rich and in-depth information can be obtained. It is a sampling approach that contributes to an in-depth understanding of the subject under study rather than empirical generalizations (Patton, 2002). While the participants were included in the study, some criteria were determined in connection with the purpose of the research. In this context, the participants were required to meet the following criteria;

1. a) be a student who moved to Ankara after the earthquake,
2. b) resided in the earthquake zone during the earthquake and returned to Ankara for university education, or
3. c) whose family members are in the earthquake zone and continue their university education in Ankara.

2.3. Procedure

The researchers conducted two separate in-depth interviews with the participants before and after the intervention. The interviews were conducted by the research team. Each participant was informed about the research process and

agreed to take part in the research. Informed consent was obtained from all individual participants included in the study. The study protocol was approved by the Social and Humanities Scientific Research and Publication Ethics Committee of Kastamonu University (Date: October 4, 2023; Meeting No: 11, Decision No: 1) and conducted in accordance with the principles of the Declaration of Helsinki.

2.4. Data Collection

In the current study, two separate interview forms (pre- and post-intervention) were developed by the researchers for in-depth interviews to be conducted before and after the intervention to determine the experiences of the participants. The interview questions specifically focused on the participants' feelings about the earthquake, their experiences in Ankara after the earthquake, and their experiences of group-based museum activities. It was carried out with semi-structured interview techniques. For instance in the pre-intervention interview participants were asked questions like "*What was your process like? Where were you during the earthquake? Can you give me some information?*" and "*Were there any methods, techniques you used to cope with that process? What did you do*?". In the post-intervention interview participants were asked questions like "*What is the difference between the person you were before you joined the project and the person you are now?*" and "*Was there a different technique you learned in this three-day experience that helped you cope?*"

The interviews in the study were carried out by the activity coordinators/researchers in the morning before the activities start. Accordingly, the first day was audio recorded in a venue of the Museum of Anatolian Civilisations. The last interviews were conducted in the private meeting rooms of the Piggy Bank Museum. The interviews were conducted by 4 different researchers, and are expected to be completed in a total of 2 hours. Participants were reached through online tools before the event. It is aimed to reach high school and university students who settled in Ankara after the earthquake or who were in the earthquake zone at the time of the earthquake.

2.5. Data Analysis

The data obtained through individual in-depth interviews with the participants are planned to be analysed using the analysis method based on the interpretative phenomenological approach (Clarke, 2010; Van Manen, 2017). In this direction, the following stages of interpretative phenomenological analysis was taken into account in the data analysis process (Smith & Osborn, 2007); 1- multiple reading and note taking, 2- transforming notes into developing themes, 3- searching for connections and clustering themes, and 4- reporting the findings of the analysis. Therefore, first the in-depth interviews were transcribed by the researchers.

2.5.1. Role of Research Team & Reflexivity

According to the qualitative approach, the primary tool for data collection and analysis is the researcher themselves (Patton, 2002). Therefore the authors of this study also served as facilitators of the intervention program. This strengthened the researchers' bonds with the participants and contributed to the development of a rich understanding of the process by observing the participants' experiences during the intervention. On the other hand, To minimize the potential biases arising from researchers' dual roles (facilitator and data collector), as well as the extent to which researchers' personal and academic experiences and backgrounds are reflected in the research process, certain measures have been taken. To this end, the following measures were taken through continuous reflection:

1. Researchers held regular meetings to discuss their own biases, their expectations of the intervention, and the potential impact of their interactions with participants on data collection and analysis.
2. Multiple data sources were used to minimize bias and broaden the narrow perspective that could arise from the researchers' interventionist role. In addition to individual in-depth interviews, a focus group interview was

conducted after the intervention, and participants were asked to complete written end-of-day evaluation forms at the end of each session. This three-pronged approach ensured that participants' experiences were captured not only through the researcher-interviewer axis, but also through participants' interactions with each other (focus group) and their individual, written, immediate feedback (forms), thereby strengthening data triangulation and diversity of perspectives.

3. To minimize bias, all audio recordings and transcripts of the pre-test and post-test in-depth interviews were shared with the entire research team, and a different researcher conducted the pre- and post-interviews with each participant.

These measures were intended to prevent leading or presumptive questions that could arise from the interviewer's role in the intervention process and to provide a neutral environment where participants could share their experiences more freely.

2.5.2. Trustworthiness

The trustworthiness of the qualitative research was enhanced by adhering to the criteria established by Lincoln and Guba (1985) to ensure the validity, reliability, and transferability of the study. For credibility, both pre- and post-intervention interviews were used for data triangulation. A data triangulation strategy was adopted to ensure credibility. To this end, both pre- and post-intervention interviews were used, and participants' experiences were gathered from three different sources: individual in-depth interviews, focus group discussions, and written end-of-day evaluation forms. This reduced the impact of researcher bias and ensured a comprehensive understanding of the facts. To ensure dependability and confirmability, the analysis process was conducted transparently. The themes and codes were developed independently by two researchers, and these analyses were then systematically reviewed by the other two researchers acting as external auditors. During this audit process, the consistency between the original data (transcripts) and the emerging themes was checked for over-interpretation or extra-data inferences, and inconsistencies were resolved through consensual discussions involving the entire research team. Furthermore, extensive space was given to direct quotations from participants (thick description) in the results section, enabling the reader to see the basis for the findings and form an opinion about transferability.

3. Findings

As a result of participants' answers in the pre- and post-intervention interviews, three overarching themes and several sub-themes emerged. These themes were the effects of earthquakes, the group experience and the factors of recovery. Figure 1 summarises the main and sub-themes from our analysis.

Theme 1: The Effects Of Earthquakes

This theme discovers the participants’ experiences post-disaster, which is based on their answers in the pre-intervention interviews. Based on their insightful and rich answers this theme is grouped in two sub-categories: direct and indirect trauma impact with varied initial coping and profound shifts in life perspective and priorities.

1.1. Direct and Indirect Trauma Impact with Varied Initial Coping: Participants experienced the earthquake's impact with varying degrees of directness—ranging from severe physical hardship, displacement, and loss of life or close ones to indirect psychological distress from the destruction of meaningful places or family experiences from afar. Initial coping mechanisms were often individualistic, including isolation, academic disinterest, or seeking professional help.

Participants' answers revealed various experiences which are mostly aligned with symptoms of PTSD, loss and grief. For instance, P1 says that "In fact, I am not a victim of the earthquake [...] But for me, there was a Hatay which has been very close to my heart. [...] The destruction of that place affected me very negatively. I have never recovered since then. I am actually indirectly depressed like the rest of the country" which indicates an indirect impact of the earthquakes. Similarly, some participants experienced indirect impact of earthquakes through their families direct exposure and initial terror. For instance, P8 says that "When the earthquake struck, my family was in Antep and I was in Ankara. [...] I tried to call my family for the first five hours but couldn't reach them. It was terrifying."

On the other hand, P3 reveals direct impact, significant loss, initial isolation and adds "My family was torn apart. We were left homeless. Many of my acquaintances, friends, relatives, my uncle, and cousins died. [...] I didn't go outside for days, I didn't talk to anyone." Some participants experienced severe PTSD symptoms. P4 says that " My sleep problems increased, I started to become a little more emotional, I started to fear and worry about the smallest things. I started to fear losing my family very much." Similarly, after the initial shock P6 suppressed their emotions: "Actually, during the earthquake, the first moment I jumped out of bed... I really didn't understand what I was going through. [...] I was just very angry. I was too angry. Because help wasn't coming." Some participants also highlighted that they had to overcome harsh conditions after the disasters. For instance P7 says that: "We understood the value of life. We understood that death could come at any moment. Our house was slightly damaged. We were very scared at that moment; it was snowing and raining, and there was no electricity. It was very scary; we stayed outside for a few months." Similarly, P5 adds that: "During the earthquake, I was with my family in Osmaniye. [...] My family is living in a container city because our house was damaged. Four people living in 20 square meters was very difficult, and we also have three cats."

These were mostly in relation to activities which encompass academic, social and daily responsibilities. In regards to the academic domain, participants mostly experienced loss in academic motivation and interest. For instance, P1 says that "Especially, we are people who study a lot. For example, we had forced ourselves to listen to lectures a lot, to think about the lectures. However, after this earthquake, something affected us and when the three of us sat down, we realized that - we are a group of three friends in general - Damla, Gamze, me, the three of us... And we decided that we should not study, or if we study, let's minimize it because there is death. We could be under that building at any moment. We were reminding ourselves of this." Similarly P2 says "I watched some TV shows to take my mind off things. Our school had been postponed anyway. I didn't think about school. Classes were online anyway. Classes started two or three weeks later. But my mind wasn't on the lessons at all. I didn't study much during the online period either. That's how it was for the first month. Once I lost track at the beginning, I couldn't catch up anyway."

In regards to social domain, disaster impacted participants in two ways: some participants increased their socialisation whereas others isolated themselves from people. In regards to this, one of the emergent sub-category was the fear of loss and anxiety related to the disaster. For instance, P8 says "The fear of loss has increased significantly. While doing things, I started thinking more intensely and differently, constantly telling my friends to take care of themselves, etc. I started telling people more often to take care of themselves and stay safe. For example, as a woman, when I meet up with my friends at night, I text them when they're heading home, saying things like, "Call me when you get home." This has increased even more. The fear of loss has become my nightmare." Moreover, P5 answers "As I said, my priorities have changed. I am now perhaps even more devoted to my family than before. I need to get constant feedback from them, I need to communicate with them constantly. I have two siblings. The bond between me and my sister, in particular, has grown much stronger. Because during the earthquake, our house was two floors high. I can't shake off the anxiety I felt while pushing them down the stairs of the upper floor. That's why our communication is much more active now."

Loss and grief was one of the most prominent sub-category for the post-disaster effect theme. All of Our participants experienced one type of loss and grief to some extent as they were all victims of the earthquake. P3 experienced losing multiple loved ones and says **"**My family was torn apart, literally. We became homeless. Many of my acquaintances, friends, relatives, my uncle, and cousins died. Death seems very natural to me. At one point, I experienced a fear of death. I realized I didn't want to die. Losing so many people at once was terrible. My motivation for school dropped significantly. I faced financial difficulties. They were always there, but they increased, and I had to work." P7 also mentions the loss of sense of security and material belongings and says "We understood the value of life. We understood that death could come at any moment. Our house was slightly damaged. We were very scared at that moment; it was snowing and raining, and there was no electricity. It was very scary; we stayed outside for a few months. All our relatives were in Maraş; everyone was a victim. Everyone lost their jobs. My father's job was in Maraş, and he couldn't work." P9 highlights the loss of life order due to forced migration from their city and says "My place of residence changed. My school changed. So, actually, a lot of things have changed. My outlook on life changed too. Yes, a lot changed, actually. But I guess all of it changed for the better." Furthermore, they elaborated on the difficulties of this experience: "Adjusting to school from nothing, or adjusting to the people here. After all, I came from a very small place. So I felt a bit strange, to be honest. A lot of things, even the path I walked on, felt strange to me."

1.2. Profound Shifts in Life Perspective and Priorities: The experience, even indirectly, led to a profound re-evaluation of life priorities and an increased awareness of mortality, contrasting sharply with previous, more planned approaches to life. This shows a significant pre-post shift in life philosophy.

One of the most significant points emerged from participants' interviews is understanding life's value and acceptance of death. For instance, P7 says that "We understood the value of life. We understood that death is always at our doorstep." Similarly, P5 adds: "Death seems very natural to me. [...] That earthquake made us realize that this place does not belong to us. Nothing belongs to us, it said." Some participants indicated that their tolerance to minor problems increased. For instance P5 says that: "The earthquake actually increased my tolerance a lot during this process because when I experienced a bigger, more important problem, the other problems became insignificant in comparison."

With this important perspective shift, one of the common changes is de-prioritising academic responsibilities (vs. valuing life). Post-disaster, P6 highlighted how their priorities changed: "I was a bit of a studious student. [...] and I lost my focus academically. On top of that, I became completely lazy. I didn't want to do anything… I don't think it's that important anymore. After a while, it becomes less important than your own life. Because I think, what have I been through?" Similarly P2 says that "Because we already lost education after the earthquake. This year passed without doing anything. I think if it had been face to face, we would have been a little more distracted. I mean, we wouldn't have gotten too far away from reality. I mean, right now, after the earthquake, it was like life stopped."

In a similar vein, some participants prioritize their social connections and bonds with understanding life's value and imminent death. For instance, P5 indicates that their attachment to their family has increased, and they start to be more concerned for them: "I am now perhaps even more devoted to my family than I used to be. I need to get feedback from them much more often, and I need to communicate with them constantly." Similarly, P6 says "Since being with my family was already relaxing, I preferred to be with my family when I could normally come to Ankara and stay here all the time. Being together with my relatives and my cousins made me happy." Finally with all the changes of course some participants indicated an overall life perspective change: "My place of residence changed. My school changed. In fact, many things changed. My outlook on life also changed. Yes, many things changed, actually. But I think all of them changed for the better." (P9)

Theme 2: Group Experience

2.1. Collective Healing Through Shared Experience and Group Cohesion: The communal aspect of the intervention, characterized by shared understanding and interaction among participants with similar traumatic experiences, was vital for overcoming isolation, enabling safe emotional expression, and fostering mutual support that contributed to collective psychological relief and a sense of belonging.

Our analysis revealed that the most significant emerging code is shared experiences. Reviewing participants' group experiences, we found out that sharing pain, sense of unity and empathy in shared trauma and activity is one of the most important elements which contributed to participants' healing. For instance, P2 says that "We shared our pain with people who had experienced the earthquake. It helped me feel a little better because I saw people who were in worse situations than myself." Moreover, P9 adds that "I witnessed how the feeling of unity and togetherness made us stronger. We experienced the same moments and empathized with the emotions witnessed by different eyes and hearts. We tasted the beauty of feeling together, both in the midst of the same disaster and in the midst of the same activity." P4 indicates that being understood by peers is one of the most prominent aspects of the group experience: "I mean it was hard to remember those times. I felt a little bit resentful, a little bit sad, but it passed. It is a good thing that someone understands you, understands your feelings without you saying it. So I was able to understand them and they were able to understand me; we were able to get along. It was a little sad, but it was good."

Some participants highlighted that shared experiences and being understood by peers led to a group as a safe space for genuine emotional sharing without judgement: "We had shared experiences with the group and understood each other. You can't tell everyone because they might look at you with pity. [...] It's hard to tell others, but I didn't feel that way in this group. There was no prejudice; I felt understood." (P3). Some participants also add that they compensate for the uncomprehended feelings outside in this group experience. For instance P5 says: " Coming together with my earthquake survivor friends made me a bit hesitant at the beginning, to be honest. I thought everyone would be much more reserved. But we had a lot of fun, we were very sad, we shared a lot of things. I think these are very valuable, for me. It is good to be able to experience these things because I am alone in Ankara, [...] All my friends in Ankara are people from Ankara, they don't know much about this process. So it was good for me to talk to people who know this."

Through this safe space and shared experiences some participants point out the sincerity and comfort in self-expressions in the group. For instance, P5 says: "Sincerity… for me, the most prominent thing is sincerity because we gave each other nicknames with some of our friends... It's a very sincere environment." Some participants highlight that this sincerity and comfort contributed to a friendship, a strong, unexpected and positive bond among the group: "However, I didn't think we would bond so much. [...] During these three days, the activities we did gave us the chance to bond even more, and it became even more enjoyable with our friends." (P1). In fact, this indicates that participants experienced a sense of belonging and being a part of a group: "Group activities are much more fun. If I had come alone, I probably would have left quickly. There is also herd psychology; when someone does something, you do it whether you want to or not. So I think it was good for him. I also saw that my self-confidence increased as I met people I didn't know and got used to them." (P4). Another sign of a strong bond through the group experience is provided by P1: "The project process was really enjoyable. I had already started with great excitement and I was sure that these three days would also be exciting and enjoyable. [...] With the activities we did during these three days, we had the chance to coalesce even more and it became even more enjoyable with our friends. On the third day, for example, we said let's wear blue today. We made a decision together and advanced the project together."

Analysis also revealed that the effect of the group experience is related to decreased loneliness, improved sleep and increase in positive emotions. For instance, P8 says:"I said I felt lonely, but that loneliness has decreased considerably, especially because it's not just about finding friends, but finding friends who are like-minded." Similarly P6 indicates they found relief due to the group experience: "Actually, we all have something in common; we all went

through it, but you didn't. We saw that here in a concrete way. [...] Knowing that others have experienced similar feelings has made me feel a little better, and for example, I can sleep more easily at night.”

Another important aspect emerged in the analysis of the healing power of the group is witnessing others’ progress through learning from peers and observing others’ healing. Of course, the group process itself encompasses the social healing brought about by witnessing, but this subcategory specifically includes participant statements that emphasize witnessing the processes of others. For instance, one of the supporting quotes regarding observing others’ progress is from P2: “It was very good to see people who had experienced pain grow stronger and become happy. Seeing them play games and have fun made me feel good. There were people who were very passive and didn't talk. Later, they opened up and were able to talk.” Similarly, P6 indicates that they were following up on others’ progress and encouraging their healing: "I don't know if it was because of their age, but E. and M. had more difficulty in their adaptation process. I would have liked to involve them more." Another expression of P6 also emphasizes the healing effect of witnessing others' experiences in the group process: “There are those who have experienced more, there are those who have experienced less. There was actually an interaction. For example, D. was a friend who was only secondarily affected, but I was more affected. Understanding her feelings added a lot to me.” Moreover, P2 also provides a supporting quote regarding gaining insights from others’ perspectives and adds: "Today, when we talked with our friends, I understood that this is a great blessing. I saw that different people's approaches are important. For example, while I used to think this was not important, when I saw how much people lacked in this regard, I understood how valuable it is. I think I will now understand other people's needs in this regard better. I can also do things like listening to their troubles, hugging, or talking." Finally, P3 adds: "I learned a lot from both the museums, the activities, and my friends. For example, some friends didn't know that the tambourine I made symbolized a woman's scream. They learned this from me, and I learned something else from D. or someone else. I learned things from others and from you."

2.2. Individual Transformation/Change: In the group experience, there were also some individual transformation and change through self-discovery, increase in well-being and the city as a transitional healing and anchor space. More specifically, the intervention directly facilitated the discovery and adoption of new, often creative, expressive, or prosocial coping mechanisms, encouraging participants to move beyond previous passive or isolated strategies towards more active engagement, self-reflection, and external activities. Our analysis also revealed that Ankara served as a critical location for healing and stability, transitioning from a temporary refuge to a place associated with safety, peace, new beginnings, and positive emotional connection, aiding participants' post-trauma recovery and future outlook.

Participants stated that, following this critical traumatic experience, which they experienced at a stage in their lives when they were already engaged in self-design and self discovery in terms of development, they gained experiences that enabled them to embark on an inner journey to discover who they were in this group process. For instance, P1 talks about their inner journey during the group process: "For example, when I tell my friend about it, we see it as visiting a museum, but no, it wasn't. Actually, this was our inner journey. I saw myself there; I saw another P1 on the first day and another P1 on the second day... This gave us this opportunity." Moreover, P3 highlights a self-knowledge that they were made aware of through the group process: "I have never written in my whole life. I wrote only once and that was a very bad day in my life. I wrote about it and then I tore it up and threw it away. I didn't want to read it. I don't know if I am good at writing, but I wrote something for myself for the first time…" Through this group experience some participants also indicated that they notice how they regulate their emotions regarding the disasters. For instance, P10 says: "In the process after the earthquake, we returned to our previous emotions, but this time we were able to look at it from a more logical place, not an emotional one. I was able to progress by managing my emotions." Similarly, P5 adds: "This time, frankly, it didn't feel like escaping. It didn't feel like I was constantly running away from

the fear of the earthquake, from the reality of the earthquake. We talked about it, but we also had fun, we travelled, we learned, we hoped for things, we talked too." Moreover, P6 points out that they have an opportunity to verbalize their feelings in this group as a safe space: "My ability to verbalize my problems is a bit weak. At the same time, when I remembered my father again during the artwork making activity on the first day, when we told who the artwork we made belonged to, I didn't say this to many people, but I said to myself, "I have to do this here, I have to say this, and I have to verbalize it." I started to verbalize my feelings."

Another significant individual transformation is related to the increased positive emotions and well-being in the group experience. The most common positive emotion emerged in the analysis was self-confidence. For instance, P4 says: "I realized that my self-confidence increased as I met and got used to people I didn't know." In fact some participants also say that the group process contributed to their awareness of how they improved in expressing their ideas and feelings: "I can say that I am more sociable, more open-minded and not afraid to express my ideas and I have improved in expressing my feelings and thoughts better. This was a nice awareness for me, it was one of my fine points that I needed to realize" (P9). Participants also indicate that the group process contributed to their healing: "As for increasing emotions, I feel like I'm healing, I continue to heal. It's not complete yet, but I continue to heal. It had a positive contribution at this point." (P8). P8 also adds: "I became more active thanks to the events. I can say that I had been withdrawn for a long time. I was doing something to feel good, but I got better with this activity." Following these quotes, we can confidently say that the group process is related to increase in well-being and positive emotions for almost all the participants in this experience:

"I'm very happy. As I said, I learned different things every moment. Here, for example, I saw a new book. Everything is a very good moment and memory for us..." (P1)

"It was definitely nice to meet new people. Seeing different lives. I discovered some skills that I lacked through the activities we did in museums." (P2)

It was my first activity that I can tell years later that I visited these places in Ankara with this project. It was a very good memory." (P3)

"I learned, I listened to myself and I was able to express my feelings. I hadn't been able to talk to anyone for a long time, I overcame that." (P3)

"It was very fun, very instructive and very crazy for me. I would have liked it to last much longer, I thought it would be very boring, but it was much more fun than I expected. The activities were very well thought out. Also, today seemed to be very prepared. You really feel very valuable." (P4)

“I can even say that psychologically I am more hopeful about the future. I don't know if it's too much, but I feel some hope. It made me think of something new and make a new plan. I met different people, I met well-equipped people and I had the opportunity to chat with them." (P5)

“Meeting new people was nice. I was happy to meet Ahmet. Overall, it made me feel good. I had fun.” (P7)

"Sadness, joy, happiness, empathy and many more emotions. I realized that the dose of all of them increased and decreased during the activity." (P9)

“They were all very nice people. I think we had a good time. I thought about the things I heard about myself in the activity we did with the group yesterday. Everyone was open. I liked that." (P10)

Finally, one of the most prominent individual transformations and changes is revealed as the city as a transitional healing and anchor space. Participants disclosed that Ankara served as a critical location for healing and stability, transitioning from a temporary refuge to a place associated with safety, peace, new beginnings, and positive emotional connection, aiding participants' post-trauma recovery and future outlook. For instance P1 says: "I realized that I like Ankara more. Today, teacher Esra told me that the more we visit a city, the more we get attached to it. When I visited the museums for three days, yesterday, for example, it was there (the Museum of Anatolian Civilizations) that I felt especially heavy and intense. I had the chance to say once again how much I love this Ankara, because there was a garden on one side facing Anıtkabir, the upper Ankara Castle, and there was a view of Ankara in front of it. It was a great chance. I sat down and said "I love this city!". I understood." Similarly, P3 adds: "I have loved Ankara since the first day. I adapted, I liked it. I already had positive thoughts about Ankara, but I also saw another side of Ankara. I have been able to visit a few museums until today, such as Ulucanlar, Anıtkabir museum and other close places. I couldn't find the time, no one came with me or I was lazy, but I saw another side of Ankara. In fact, museums very close to me are within walking distance. It made me like Ankara more." Moreover, P4 highlights how their impression of the city has changed after the intervention: "I really wanted to see Istanbul, but after this project I think I decided on Ankara. I think Ankara is one of the places to visit and see. Since I love Atatürk very much, I can say that I like Ankara more because it is more compatible with Ankara. I can say that it ranks first among the cities that should be visited and seen." Similarly, P7 mentions the change in their overall impression of the city as a preferred city: "I like it here. Maybe I can come for university. I like it in general." Finally, P5 points out that the meaning of the city changed through this group experience: “Ankara is no longer just a place where I have to study or a place I will escape to when I finish my studies. I am a little more moderate, but this event really changed my perspective on Ankara because I realized that there is much more to wonder about in Ankara. Especially the Crocus and Love Flower motifs that we saw in the exhibition today based on the field I studied, these are endemic and very special plants. These are plants that should be studied and learned both in terms of science and art."

2.3. Museums as Catalysts for Transformation and Connection: Our analysis revealed that the group process profoundly redefined participants' perceptions of museums, transforming them from conventional, unfamiliar, or solely social spaces into dynamic environments conducive to healing, self-discovery, learning new skills, and fostering significant social connections. These are grouped into two main codes as museums as a background for healing and the power of objects.

Some participants highlighted how museums can lead to significant self-discovery and facilitate personal learning and change. This indicates that museums can serve as an effective background and in the group experience. For instance, P5 says: "Today's museum is a new and modern museum. You know, I said it was like psychotherapy, but it seemed like a psychological development center to me. Here, for example, I told you that I was asking myself questions like "can I do it?". Maybe I found a good subject for my master's degree. It made me think about these things. Museums do not only show the past, they can also change the present and the present you." Some participants were also surprised by museums’ effectiveness in psychosocial context: "I didn't have a great idea about how to use museums effectively in such a psychosocial project. But somehow it happened, and with this great team, this work was accomplished." (P9). Similarly some participants also point out redefining the meaning of museums’ as a background for healing. For instance P8 says: "I liked doing it this way, that is, in a museum. Honestly, I think it wouldn't be in a school, in a school environment, in a garden, etc. The museum added something extra in terms of culture. It was able to draw our attention there and transform things that we could heal again, and it also affected the design of the activities together. For example, we saw sculptures and then we became sculptures, or we saw ceramics and made piggy banks. For us, we also got to know each other and different cultures. Even that was an acculturation. The museum was actually the right choice. I don't know what could have been chosen differently at this point." In line with this, P3 also highlighted how the group activities helped change their preconceived notions of

museums, transforming them from boring places into dynamic ones: "My Museum Piggy Bank broke the classic museum taboos and molds in my mind. It doesn't have to be very old to be considered an important artifact. Another thing I realized is that we attach a meaning to something. You can explain something that seems very simple in such a way that it becomes very valuable. When you value something, others value it too. This can be yourself, your profession, etc. You will explain. I don't know much about art, but when you give value, you make it understood." In fact, the statements made by P3 and P8 highlight why museums are a good background for the healing process. Some participants emphasized that the figures and objects in museums have a catalytic effect on their inner journeys and serve to stimulate reflective thinking. For instance P1's statements regarding the power and function of objects also point to this finding: "Museums make a great contribution to this. For example, if we had done this in a garden, maybe it would not have been so effective. Actually, we also got power from the objects." Furthermore P1 adds: “Museums make a great contribution to this because there is something that belongs to us. [...] Some emphasized *the necklace*. For example, our friend A. B. said that she wished my grandmother had left me such a brooch. This is a very good thing. It actually gives people the ability to think. Even if they don't initiate it, museums also enable them to take a step like we can initiate it." Through objects in museums, participants even have the opportunity to encounter symbols that allow them to express their personal stories and concretize the meanings in their minds: "Here, we saw the things we see every day in Ankara as small figures, especially piggy banks. But I realized that a piggy bank also means collecting memories. We usually use piggy banks to save money." (P10)

Theme 3: Factors Of Recovery

Finally, another important theme emerged in the analysis regarding the effectiveness of the intervention is that the factors of recovery, either challenges or facilitators. Although participants declared that the group process contributed to their healing, they also mentioned some challenges regarding the experience.

3.1. Facilitators: This section outlines the elements that actively contributed to the positive outcomes and perceived success of the intervention, ranging from the project's design and location to the group dynamics and individual growth. Under this category, the heterogeneity of the group, group leaders’ approach and attitude towards the activities in the intervention.

Varying trauma level (direct or indirect) was one of the important points that emerged in the analysis. For instance, P1 highlights that they open up a safe space for other participants with direct traumatic experiences: "Today, I felt a bit bad. Today was actually a full merger and it was directly on this day that this issue was discussed. That's why I didn't talk much. I withdrew myself for a while. I kept quiet for my friends to talk." Some participants also indicated that witnessing others who were in worse situations than themselves gave some relief: "We shared our pain with people who experienced the earthquake. It provided some relief because, for example, I saw people who were in worse situations than myself." (P2). Similarly, having participants of varying age and also personality characteristics was also highlighted in the analysis: "Since I am already a social person, I did not have any difficulty in interacting with other people. But there were some of our other friends in the group, especially the younger ones that I observed, I think it was good for them. Because for example, they were more passive at first, and then they started to open up and talk more and more. I think maybe they felt safe." (P2). Following these supporting quotes, the heterogeneity of the group is one of the significant elements for recovery.

Another important facilitator for recovery is the participants’ attitude towards activities and the design of the intervention. Participants highlighted that the design of the intervention is effective since it was more activity-based rather than solely talk-based: "Talking is only useful to a certain extent, but alleviating its burden by having fun and engaging in activities is more meaningful." (P6). In support of this, P8 also adds the effectiveness of activity-based intervention: "For example, we saw sculptures and then we became sculptures, or we saw ceramics and made piggy

banks. This also helps in the design of the activities and makes your job easier." Some participants even emphasized that there should be more action-based activities: "I wish there were more games we played. I can't grow my childish spirit about playing games, and I don't want to give it up." (P9). Similarly, P5 highlighted that they enjoyed the action-oriented intervention and their wish that it would have been longer: “I liked you very much on my behalf. I liked this activity very much and I would like it to continue. There are many more museums in Ankara. Honestly, I would have liked it to be longer." Following these quotes, our analysis revealed that a significant facilitator for recovery is participants’ positive attitude towards the activity-based group intervention.

Our analysis also revealed that one of the most prominent facilitators of recovery is the group leaders’ approach in the intervention. Most participants provided their gratitude for the intervention and the group leaders:

"You made great progress in binding us together. We found strength in ourselves and were able to open up thanks to your smiles and cheerful faces. [...] You are also the ones who provided this sincerity. You are the most, in fact." (P1)

"Güneş, Esma, Esra, Sevilay, you are truly wonderful. It's great that they exist, it's great that we came. Thank you very much." (K3)

"Sincerity… for me, the most prominent thing is sincerity because we gave nicknames to each other with some of our friends... It's a very sincere environment. It's not just about Esin or Selma, I realized that even Emrecan, who spoke the least, was sincere, and so were my teachers. So my most prominent feeling from beginning to end was sincerity. From the first day I talked to Güneş Teacher until this last meeting, I believed in all your sincerity. Perhaps because I felt this, I was able to be comfortable and express myself by opening up and going on stage." (P5)

"But somehow it happened, this job was accomplished with this great team. I congratulate and thank my teachers Güneş, Esma, Esra and Sevilay for presenting this project to us...)" (P9)

3.2. Challenges & Limitations: This section highlights the difficulties or limiting factors that participants faced, either inherent to their trauma experience or related to the intervention's initial reception. Participants' performance anxiety about group activities and the challenge of disclosing oneself to the group are the most commonly reported challenges in this context, yet they are limited. Some participants, for instance, talked about their performance: "I don't like handicrafts at all. It's always an uneasiness. [...] There was never a moment when I enjoyed the process. The reason for this is probably not the activity itself, but the fact that it creates uneasiness in my inner world. [...] For me, if there was less activity, that would be it." (P1) Similarly, P3 says: "I'm not good at designing products in activities, I wouldn't want to do them. I try to make them beautiful but I can't. I can't do it because I'm very meticulous about material design." Another difficulty expressed by participants during the group process was, quite understandably, related to the difficulties they experienced in opening up within the group. For instance P5 says: "I don't know if there was a need to open ourselves up so much and make ourselves emotionally vulnerable in front of people we don't know very well. I can't say 'we absolutely had to do it, it was perfect'. Because that would be too subjective. Maybe it was not good for a few people. But for me, it was difficult to talk about it (the earthquake) during this process. [...] Coming together with my earthquake survivor friends made me a bit hesitant at the beginning, to be honest. I thought everyone would be much more reserved."

Finally, another important category we looked for in the participants' statements was the elements they preferred to have more or less of in the group process. In this regard, the most prominent sub-categories that emerged were issues related to time constraints, the lack/excess of activities, or group size. Most participants mentioned that more time could be spent on drama or action-oriented activities during the process. The citations supporting this subcategory are as follows:

"First of all, I wish the duration of such an activity would be much longer, because frankly, we had a very nice communication here. I liked you very much on my behalf. I liked this activity very much and I would like it to continue. There are many more museums in Ankara. Honestly, I would have liked it to be longer." (P5)

"I think I would have liked more cutting and creating activities, and the duration of the activities we played together could have been increased." (P4)

"Three days is short. I mean, I would have liked it to last longer. It could be a week, for example. Or even 10 days. Why? Because I think I need to reinforce what I gathered in these three days so I don't forget it." (P8)

"It could continue like this. As a process, it could have been spread over a longer period of time, maybe one day apart. They could have been available for a few days every two to three weeks. Maybe it would be better if there were rest periods in between." (P10)

"I would like to participate in such a project again. But if it's a bit longer, it would be better. If it's still three days, I don't think I'll get much benefit." (P2)

On the other hand, some participants who expressed their views on the limited time available stated that they wanted more time not only for drama activities but also to get to know each other better and to open up about the earthquake:

"I would have liked to extend the activity hours. Even though I don't particularly like making handicrafts, it wasn't just that, we also established a communication there. We could have had more earthquake-specific conversations." (P5)

"Actually the event was really good. There is not much I would change. Maybe it could have been a bit longer. I mean three days, even today, I had some reservations while talking. We got to know each other really well at the getting to know you stage, but I feel like it would have been more balanced if it was a little longer." (P6)

"I would have liked to get to know my friends more. I would have liked to learn more about what they go through, what they do." (P6)

"Talking about the earthquake... It's a difficult subject to talk about no matter how much time has passed, it's nice to sympathize and feel togetherness, but I think this is the only part I would like to have less of." (P9)

There are also participant statements indicating that, in addition to time-related limitations, group size further exacerbated these limitations, and that activities conducted in smaller groups would allow participants to interact with each other more:

"It could have been talked about a bit more or there could have been a bit more activities. Actually, because there are so many people, the time is getting longer. For example, the time allocated for an event can extend from one hour to one and a half hours. This is because of the large number of people. Maybe there could have been a project that included more drama work or more activities, or the day could have been extended a little longer and different museums could have been visited. It would have been more enjoyable." (P1)

"After the earthquake, for example, some of our friends still haven't spoken. It was a difficult process, me and a few of my friends spoke, but there were others who didn't speak. We tried to talk in between, but it was a very superficial conversation. Instead of individuals, maybe activities could have been done in smaller groups, groups of two, for example. Maybe it could have been more effective." (P6)

4. Discussion

The purpose of the present study was to promote well-being and psychosocial resilience in youth in a post-disaster setting through a group-based intervention over three days. It was designed as an interpretative phenomenological analysis. Semi-structured (pre- and post-intervention) interviews with participants who were the survivors/victims of two earthquakes that happened in Turkiye in 2023 were used to test the effectiveness of the intervention. This section focuses on how the results of the present study fits into the previous research in the area of post-disaster intervention focusing on young people and group-based interventions.

General analysis revealed that a group-based psychosocial intervention was related to promotion of positive emotions and well-being both at the individual and the group level. Being a part of a group, witnessing other's processes and sense of shared experiences specifically seem to frequently emerge in regards to heightened positive emotions in the analysis. This finding provides supporting evidence for the social cure (Cruwys et al., 2025) and social identity research around health, also known as *collective healing* research (Ntontis et al., 2021) indicating that being a part of a group can have healing effects on young people. This is also in line with the previous research suggesting that social support can help young people to cope with traumatic events through talking and sharing similar experiences with peers (Hiller et al., 2017). As Hobfoll and colleagues (2021) suggested, focusing on the sense of self and community efficacy, and connectedness in medium to and long-term community-based initiatives for children and young people can have a positive impact on disaster survivors' well-being. Therefore, the present study highlights the evidence that in medium to and long-term group-based psychosocial interventions can be an impactful tool to promote resilience and well-being in post-disaster settings. Three main themes emerged in the analysis: the effects of earthquakes, group experience and factors of recovery.

The first theme in our analysis, the effects of earthquakes, contributes to our overall understanding of the participant profile to work with prior to the intervention, thereby enabling us to compare pre- and post-intervention experiences. In this regard, this theme focuses on the social, emotional, and psychological effects experienced by participants after the earthquake, as well as their coping mechanisms for dealing with loss and grief. The effect of the earthquakes theme is grouped in two main categories as direct and indirect trauma with varied initial coping and profound shifts in life perspectives and priorities. The first subcategory indicates that participants' experience of the earthquakes was quite heterogeneous, ranging from severe physical hardship, displacement, and loss of life or close ones to indirect psychological distress from the destruction of meaningful places or family experiences from afar. Initial coping mechanisms were often individualistic, including isolation, academic disinterest, or seeking professional help. Participants' answers revealed various experiences which are mostly aligned with symptoms of PTSD, loss and grief. The fact that participants have mixed levels of earthquake-related experience and trauma has been found to be a contributing factor in the effectiveness of group treatments and interventions in the existing research (Sloan et al., 2013). Mixed-trauma samples showed greater results than single-trauma samples according to meta-analyses of adult group PTSD therapies, indicating mixed groups can be highly effective working with post-traumatic stress. In our study, participants with varying degrees of trauma facilitated healing by providing mutual support and enhancing empathy towards one another.

The second subcategory of the theme indicates that the disaster resulted in a significant re-evaluation of life goals and an enhanced awareness of mortality, which contrasts dramatically with previous, more planned ways of life. This demonstrates a considerable pre-post alteration in how participants perceive life. Understanding the worth of life and accepting death were two of the most prominent themes that arose from participant interviews. It is widely accepted that major natural disasters have profound and fundamental effects on individuals of all ages (Dunn et al., 2017).

However, for youth, who experience intense focus on self-concepts in many areas of life, major disasters can bring about much more complex, profound, and traumatic processes (Fox et al., 2010; Pashak et al., 2023).

Although no direct conclusions can be drawn from the findings of this study, a review of the literature on the effects of developmental stages on post-traumatic growth suggests that participants' developmental levels also had a significant impact on the emergence of this subcategory. For example, Kim's (2023) study found that post-traumatic growth in young adults in Korea during the COVID-19 pandemic was associated with finding meaning in life, resilience, and social support. Furthermore, an intervention developed for young adults who survived a terrorist attack shows that greater narrative meaning-making in trauma stories strongly predicted post-traumatic growth, suggesting that meaning-making of a devastating life event can transform trauma associated with the event into growth (Mengin et al., 2025). We also discovered a comparable pattern in our sample that is consistent with the existing research.

Another important theme that emerged in the interviews was group experiences, which focused particularly on participants' experiences regarding the effects of group intervention. In this regard, the categories that emerged under this theme were based particularly on participants' experiences regarding the contribution of this group intervention to the reduction of the effects of the earthquake that they had mentioned before the intervention. This theme is grouped in three subcategories: collective healing through shared experience and group cohesion, individual transformation and museums as catalysts for transformation and connection.

The first subcategory focuses on the communal aspect of the intervention, which is defined by shared understanding and engagement among individuals who have had comparable traumatic experiences. This was critical for overcoming isolation, facilitating safe emotional expression, and cultivating mutual support, all of which contributed to collective psychological relief and a sense of belonging. This was the most notable discovery on the impact of this intervention. After disasters, groups leverage shared identity, connectivity, and mutual aid—all of which are highly associated with resilience and improved mental health (Cruwys et al., 2024; Drury et al., 2019). A study by Cruwys and colleagues (2024) found that a strong relationship between pre- and post-disaster group relationships were predictive of reduced distress and increased resilience after wildfires in Australia. Additionally, researchers found that new group links were a mixed blessing, positively predicting both resilience and suffering. However, our data indicated that newly formed group links were the most visible and beneficial healing part of the group intervention for young people. By highlighting how group-based psychosocial therapies might promote recovery through shared identity, connectivity, and social and emotional support for young earthquake victims, our study's findings also add to the body of current research.

Another subcategory emerged in this theme was individual transformation. Individual transformation in the group experience in our study refers to self-reorganization, increased well-being, and the city as a transitional healing and anchor location. More specifically, the intervention helped participants in the discovery and adoption of new, often creative, expressive, or prosocial coping mechanisms, encouraging participants to shift away from previous passive or isolated strategies and toward more active engagement, self-reflection, and external activities. A recent study corroborates our findings, revealing that rural Canadian children who engaged in a 7-week art program experienced enhanced comfort with classmates and staff, self-discovery, a positive self-concept, clearer future ambitions, and greater emotional coping skills (Simons et al., 2025). A similar tendency was also found in post-disaster intervention studies. For example, a long-term arts project in post-war/tsunami Sri Lanka discovered that, rather than remaining trapped in helplessness, the arts helped reprocess traumatic memories, reconstruct a coherent narrative of the disaster, and mobilize people back into control of their lives and community problem-solving (Huss et al., 2016). Our findings also suggested that Ankara was an important destination for healing and stability, shifting from a temporary shelter to a place associated with safety, calm, new beginnings, and positive emotional connection, hence boosting

participants' post-trauma recovery and future outlook. Research around relocating after a disaster suggests that moving to a new safe place can improve mental health, life satisfaction, and reduce stress compared to remaining in damaged, high-risk environments, especially if it is voluntary or well-supported, provides safer living conditions, and maintains or rebuilds social connections (Hikichi et al., 2017; Matsuoka et al., 2023). One of the aims of our study was to help university students who moved to a new city after the earthquake to adapt to the city and feel safe. In line with this, and consistent with field studies, our intervention plan has been observed to help participants feel safer in Ankara, their new home.

The final subcategory of this theme was museums as catalysts for transformation and connection. Our findings revealed that the group process fundamentally altered participants' perceptions of museums, transforming them from traditional, unfamiliar, or solely social spaces into dynamic environments conducive to healing, self-discovery, learning new skills, and fostering meaningful social connections. These are divided into two major codes: museums as a setting for healing and the power of objects. Although post-disaster museum interventions are under-studied, existing research strongly supports adapting museums for adolescent and adult group interventions after disasters (Coles & Harrison, 2018; Goodman-Casanova et al., 2023; Huss et al., 2016). Coles and Harrison's (2018) study found that museum-based art psychotherapy groups for young adults with severe mental health difficulties improved reflection, interaction, independence, motivation, creativity, and a sense of belonging beyond services. Another study (Goodman-Casanova et al., 2023) revealed that museum-based participatory arts groups for mental health service users increased recovery and functional social support, including meaning in life, hope, connectedness, identity, and empowerment.

The final theme that emerged in the study focused on certain characteristics and factors inherent in the intervention that could either contribute to participants' recovery or create obstacles to their recovery. Based on in-depth interviews conducted after the intervention, two subcategories emerged under this theme regarding experiences that facilitated or hindered recovery. Therefore, this theme is grouped in two subcategories as facilitators and challenges and limitations.

The first subcategory, facilitators, outlines the elements that actively contributed to the positive outcomes and perceived success of the intervention, ranging from the project's design and location to the group dynamics and individual growth. Under this category, the heterogeneity of the group, group leaders’ approach and attitude towards the activities in the intervention emerged as the prominent facilitators of the intervention. Earlier research on group-based interventions suggest that the heterogeneous groups could lead to a larger effect of healing for the participants (Davis et al., 2023). Additionally, to what extent the activities in the intervention are enjoyable for the participants can surely have a positive impact on how the intervention is received by the participants (Appiah et al., 2021).

The second subcategory, challenges and imitations highlights the difficulties or limiting factors that participants faced, either inherent to their trauma experience or related to the intervention's initial reception. Participants' performance anxiety about group activities and the challenge of disclosing oneself to the group are the most commonly reported challenges in this context, yet they are limited. Among the most commonly cited difficulties in group interventions are performance anxiety and disclosure difficulty. However, research indicates that these are mild, flexible limitations that can be significantly reduced with careful group design, safety standards, and particular anxiety-reduction techniques. According to a systematic review by Gonsalves and colleagues (2023), fear of self-disclosure interventions for young adults and adolescents with anxiety/depression highlights the dangers of bullying, harassment, and misuse of personal information in group settings. It also highlights how group size, voluntary participation, and explicit rules on confidentiality affect comfort with disclosure. Participants acknowledged that they

found it difficult to reveal themselves, but they also said that the facilitators' encouraging approach and methods made it simpler for them to do so. This demonstrates that while working with those in vulnerable circumstances, it is important to create harmonious, clear, and empathically led group settings (Gonsalves et al., 2023).

5. Conclusion and Suggestions for Future Research

In times of crisis, the need for structured group activities to help victims of natural and man-made disasters is very clear. This study specifically contributes to research showing that group-based psychosocial interventions can be therapeutic for youth affected by earthquakes. However, there is a need to develop more evidence-based structured intervention models and programs for different intersectional groups, including displaced individuals due to war, climate change and other disaster, women affected by violence and for those who are in the intersection of all these adversities. Following our findings and discussion, there are several suggestions we make for further research.

Most interventions focus on the initial effects of trauma, but research, particularly on collective resilience and social identity, shows that medium- and long-term community-based interventions are far more effective in mitigating the impact of disasters. Our study is particularly significant because it focuses on an intervention developed for the medium and long term. It emphasizes the importance of restoring social connection and a sense of support in reducing traumatic effects and in post-traumatic growth and development. In this era of constant crises, research should especially focus on developing intervention models and programs for medium- and long-term effects.

In interventions developed for trauma, the use of art and psychosocial tools can be much more effective in expressing emotions. This is even more important in interventions with children and young people, who are more vulnerable to the effects of trauma. Longer intervention programs can be adopted by schools and different institutions. One of the significant limitations of our intervention study may be that the established and healing-promoting group bonds may not be long enough to allow their effects to extend over a longer period. We see in the literature that art-based psychosocial or psychotherapy group interventions are extended over weeks or even months. While our intervention has contributed positively to emotional and social development in participants, considering the severity and long-term effects of the earthquakes in Türkiye, longer-term interventions would help to extend their effects over longer periods.

Finally, our study contributes significantly to research on the effectiveness of using museums as a background. Museums work effectively as group therapeutic settings that promote rehabilitation, social connection, and empowerment. Although post-disaster museum interventions are under-studied, existing research strongly supports adapting museums for adolescent and adult group interventions following disasters. Synthesizing the findings of previous studies and our own work, it can be said that museums can be used as highly functional tools, especially for migrant and displaced groups, to help them feel a sense of belonging to their new cities and communities and to support their work.

Declarations

Ethics Approval:

This study was conducted in accordance with the Declaration of Helsinki. Ethical approval for this research was granted by the Social and Humanities Scientific Research and Publication Ethics Committee of Kastamonu University (Date: October 4, 2023 / Meeting No: 11, Decision No: 1).

Consent to Participate:

Informed consent was obtained from all individual participants included in the study.

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Author Contribution

All authors contributed to the data collection process. The first and second authors conducted the data analysis and wrote the main manuscript text. The third and fourth authors served as peer debriefers during the data analysis, reviewed the entire manuscript, and provided critical feedback. All authors reviewed and approved the final manuscript.

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Data Availability

The qualitative datasets generated and analyzed during the current study are not publicly available due to participant confidentiality and ethical restrictions, but are available from the corresponding author on reasonable request.

Clinical Trial Registration: Clinical trial number: not applicable.

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Figures

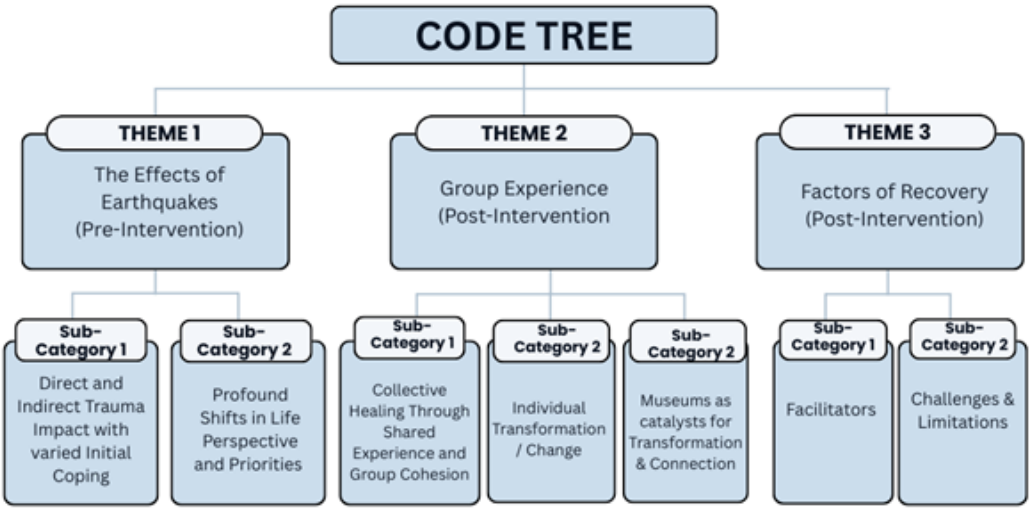


Figure 1

Themes and subthemes identified in interviews with participants of the intervention.