

**Research Paper**

Multi-Sectoral Rapid Assessment and Post-Evaluation in Kahramanmaras Earthquake, Türkiye: Addressing the Needs of Affected People

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Received: 08/11/2023

Revised: 11/03/2024

Accepted: 17/03/2024

ABSTRACT

Keywords:

Affected people;
Rapid need assessment;
Post-evaluation;
Kahramanmaras earthquakes;
Humanitarian aid

Two devastating earthquakes struck on February 6, 2023, the first with a magnitude of 7.7 at 04:17 in the Pazarcik district of Kahramanmaras, and the second one with a magnitude of 7.6 at 13:24 in the Ekinozü and Elbistan districts of Kahramanmaras in eastern and southeastern Anatolia, as well as northern Syria. These two earthquakes caused vast destruction in 11 provinces and affected 15.2 million people, including 5.4 million children, living in stricken provinces (Kahramanmaras and Hatay Report, Post Earthquake Assessment, 2023). The two earthquakes had a devastating impact on settlements, housing, and businesses in most of the impacted locations, with extremely high levels of damage in highly populated areas. The Nirengi, a Turkish Non-governmental Organization team's reflections on the severe impact of the two earthquakes and living conditions in several lifeline sectors, derived through field observations, data from interviewees, and partly desk research, which are presented briefly in this paper. The provided information was gathered a few days after the earthquake and the recommendations are noted based on the findings of initial assessment following the disaster. Also results of the observations one year after the earthquake are presented to show the trend and progress in aiding the affected people.

1. Introduction

On February 6, 2023, two devastating earthquakes struck, with a magnitude of 7.7 and 7.6 in the Ekinozü district of Kahramanmaras in eastern and southeastern Anatolia, as well as northern Syria. Around 15.2 million people, including 5.4 million children were affected in 11 provinces (Sanduvac and Turkmen, 2023) and an estimated 9.1 million people, including 2.5 million children, required immediate support (UNICEF). As of 21 February, at least 42,310 (AFAD, 2023) deaths and 108,068 injuries were confirmed (AFAD, 2023), and up to 105,794 buildings were affected (Ministry

of Environment, Urbanisation and Climate Change, 2023). Over 1 million people stayed in temporary accommodation, facing adverse winter conditions. Over 1.858 unaccompanied children have been identified (Ministry of Family and Social Services, 2023). Access to education was hampered for nearly 4 million children (Ministry of National Education, 2023), including 350,000 refugees and migrant children. The crop production areas, cereals, and other crops cultivated in agricultural regions, livestock and small cattle areas in the provinces affected by the earthquake, were also devastated.

Additionally, the economic consequences were significant. Roughly, this earthquake was estimated to cause a total of \$84.06 billion in damage. 70.75 billion dollars of housing loss, 10.4 billion dollars of national income loss and 2.91 billion dollars of loss of working days (Ministry of National Education, 2023).

Due to the massive destruction and disastrous consequences of the two earthquakes, the main goal of this assessment was to gather information on the immediate situation in the stricken areas and to determine the most pressing needs of the affected population. Additionally, it was expected that the results of this study could provide a foundation for humanitarian organizations to plan and implement assistance programs following the major earthquakes. In this paper, the primary needs and living conditions of the affected people in the two mentioned regions are explained. The paper also emphasizes briefly on mental health and psychosocial support (MHPSS) and Child Protection (CP) rapid situational analysis in order to obtain an understanding of perceived and identified MHPSS and CP needs among earthquake affected people.

2. Methodology

2.1. Target Population

The target group consisted of randomly selected affected people in the stricken area as well as key informants, senior government officials, and representatives of numerous non-governmental organizations (NGOs) and local initiatives from the two provinces of Hatay and Kahramanmaras.

87 persons were interviewed including 23 children aged 5 to 17, both boys and girls, in focus groups and/or individual interviews. The remaining 64 were between the ages of 20 and 72, with 41 females and 23 males. Furthermore, group and/or individual interviews were conducted with 42 earthquake responders/humanitarian aid workers from key public agencies, including Turkey Disaster and Management Authority (AFAD) Province Directorates staff, Ministry of Family and Social Services (MoFSS) Province Directorates staff, Ministry of Health (MoH) health workers at state hospitals and university hospitals, Gendarmes on patrol, NGOs from various sectors, including local civil society representatives, Province Bar

Associations representatives, private sector representatives, and key informants, such as school principals, teachers, and religious officers (Imams). As for educational level, only a few of the 64 interviewees had a university degree, the majority of women have completed primary school, and half of the males have completed primary school and the remainder have completed secondary school.

The sample size was not determined using a specific formula such as Cochran's. Instead, the assessment team chose to randomly engage approximately 60 affected individuals across various age groups, genders, and socioeconomic backgrounds. This approach resulted in the inclusion of 64 individuals directly impacted by the earthquake. Furthermore, the assessment team extensively observed and participated in the affected areas for extended periods, reflecting all findings in the rapid assessment report.

2.2. Assessment Tools

The assessment included a desk review, interviews with key informants, focus groups and individual interviews with earthquake affected people in the two provinces of Hatay and Kahramanmaras, as well as team observations. The interview on free-listing questions are described in the IASC Reference Group Mental Health and Psychosocial Support Assessment (IASC, 2013); *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* (Trauma- and stressor-related disorders: Post-Traumatic Stress Disorder (PTSD); Acute stress disorder; Adjustment disorder; Child Protection Rapid Assessment Toolkit (2012); and MIRA Multi-Sector Initial Rapid Assessment (MIRA, 2012). Additionally, the assessment team conducted throughout field observations to gather detailed data for defining the needs from the perspective of affected people.

2.3. Data Collection

Nirengi team members conducted MHPSS (Mental Health and Psychosocial Support), CP (Child Protection) assessments, and MIRA in the field, with the participation of two earthquake-affected locals. All team members were experienced in the field of multi-sectoral needs

assessment, MHPSS and/or child protection had been involved in previous similar situation needs assessments. The research team expertise in conducting interviews with small kids, such as 5-year-old kids supported by the involvement of a clinical psychologist and a senior social worker. The psychologist ensures age-appropriate and sensitive communication, considering children's emotional needs and cognitive development. The social worker provides insights into the children's social and environmental contexts, aiding in data interpretation.

With experience in child-led interventions, especially in Disaster Risk Reduction (DRR), the team employs tailored methodologies in order to engage children effectively, fostering a comfortable and empowering interview environment. Through their collective expertise, the team ensures reliable data collection, justifying the deliberate inclusion of 5-year-olds in the study.

Additionally, Informed consent of the interviewees was obtained after the information was provided on the purpose of the assessment, how the data would be used, data anonymization, and confidentiality. Data collection for the initial assessment was undertaken for four days in two provinces of Hatay and Kahramanmaras between February 12 and 16. The interviews were conducted with affected people of various sexes and ages, including children in these two provinces. Some photos of the data collection stage are presented in Figure (1).

3. Living Conditions

The following issues were observed considering people's living conditions immediately following the two devastating Hatay and Kahramanmaras earthquakes. Also, in addition to the immediate assessment, an updated observation was done by the team one year after the earthquake in order to pursue the progress in people's living conditions. In the first part of the following sections, questions asked from the target population are presented in order to provide more clarification.

3.1. Shelter (Housing)

Examples of housing related questions:

- What are the primary concerns and factors



Figure 1. Interview with affected people in Antakya and Hatay provinces (Photo credit: Nirengi Association, Feb. 2023).

influencing sheltering decisions in earthquake-affected areas?

- What survival strategies are earthquake-affected individuals employing, and what are their top sheltering priorities during the winter season?
- How have provincial authorities addressed housing needs post-earthquake, and what are the drawbacks of their tent and container settlements?
- What are the consequences of scattered tent settlements on hygiene and aid access?
- How does high housing demand worsen post-earthquake housing issues?

Decision about sheltering after earthquakes is one of the very important issues. In the initial

assessment, it was found that in these affected areas, aside from those households who have lost their houses and businesses, many others were afraid to return to their homes and businesses due to the aftershocks. They attempted to survive by being outside, near houses, and in their cars. As a result, many affected people desired to have tents/containers and continue to stay in their homes and workplaces. Because of the severe winter season, especially at night, and the falling temperature, shelters became one of the top priorities also due to heavy and widespread damage and the unavailability of housing and workplaces, as well as a lack of a sufficient number of adequately equipped tents and containers. Therefore, a majority of people needed tents and connexes with adequate equipment, hygiene and heating.

One year after the earthquake, the situation regarding shelter (housing) response in the region is as follows: Post-earthquake, housing issues persist as many families seek solutions. Provincial directorates established tents and container cities for earthquake-affected people, but these settlements are limited and distant from their original neighborhoods. People prefer scattered tent settlements, affecting hygiene and access to aid. Container settlement markets for those who have lost their businesses also repurpose containers as business premises instead of shelters. The scarcity of undamaged buildings leads to high rental prices, pushing affected individuals towards already limited tents and container cities. This high demand further exacerbates the housing problems.

3.1. Food

Examples of food related questions:

- How was food distribution to meet the basic needs of affected areas?
- How were food distribution efforts organized, particularly with the involvement of local leaders and NGOs?
- How did the destruction of crop production areas and agricultural land impact the affected provinces?
- How were small-scale farms and livestock sectors affected, and what were the consequences for household income?
- What were the most pressing nutritional needs

identified by interviewees in the aftermath of the earthquake?

In the initial assessment, it was revealed that food, food items, and bottled water were supplied in numerous locations, however; not enough food was distributed to meet all of the affected areas' basic needs. Serious conflicts were reported during and after food distribution in some locations. The Mukhtars (elected village heads in villages) and some NGOs organized food distribution with the cooperation of military forces or police. However, due to the high demand for the safety & security forces in other locations, this service was not available as required. It has been observed that crop production areas, cereals and other crops, cultivated agricultural areas, livestock and small cattle areas in the provinces affected by the earthquake were also destroyed. The earthquake stricken provinces produce 20.9% of the country's crop production, 12% of cereals and other crops, 14.5% of total cultivated agricultural land, 12% of cattle and 16.3% of sheep and goats. Small-scale farms and livestock farming sectors were also harmed, disrupting household activities and income sources. Household greenhouse spaces were destroyed by demolitions or were removed to accommodate households and their family and relatives. Interviewees stated that particularly greenhouses and poultry houses were extremely curious about meeting their family's healthy various nutrition demands, ranging from vegetables, fruits, eggs, chicken meat, and so forth. A huge number of people needed adequate and quality food for a healthy life. A considerable number of households are required to resume/leverage their small-scale farm and livestock family activities.

One year after the earthquake, the situation regarding food and nutrition response in the region is as follows: Community kitchens were set up in the earthquake-affected regions, mainly operated by local civil society organizations or private sector support, heavily relying on volunteers. These kitchens exist in various forms, including neighborhood-style setups and those within container cities. Food vouchers are inconsistently distributed in container cities for financial food support. The ongoing destruction negatively impacts the hygiene of open-style community

kitchens, while the lack of proper storage and refrigeration facilities can result in food spoilage, particularly in the summer. Some soup kitchens face criticism for serving repetitive menus lacking in calorie and protein balance. Additionally, outside volunteers have provided food items for children, often low-quality chocolate, sweets, and sugary fast-food items with potential carcinogenic substances, during special events or general distributions.

3.2. Water, Sanitation and Hygiene (WASH)

Examples of food related questions:

- What were the primary water, sanitation, and hygiene concerns identified in the initial assessment following the earthquake?
- How did the lack of water and power in affected areas impact the resilience of the population?
- What were the specific needs identified in terms of tap water, drinking water, latrines, sanitation, and waste disposal following the earthquake?
- What measures were taken by authorities and organizations to address the water and sanitation challenges in the affected provinces one year after the earthquake?
- Can you elaborate on the current situation regarding tap water quality, distribution of drinking water, and efforts to establish new water sources in the region?

Another vital issue that should be considered after an earthquake is water, sanitation and hygiene concerns. In the initial assessment, it was seen that many individuals who lived outside, in surrounding houses or cars had to use the area in which they live for toilet and waste disposal. As a result, feces, organic waste, and other types of trash can be seen in living places. In fact, lack of water and power in the area made life very tough for the affected people and limited their resilience. A large number of people needed tap water and drinking water, latrines (separate for men and women), sanitation, garbage collection, enough spare traditional underwear, and sanitary pads and diapers. Tap water for latrines and personal hygiene was a major issue in both provinces, but drinking water is distributed by trucks in some areas.

One year after the earthquake, the situation

regarding WASH response in the region is as follows: Following the earthquake, the Ministry of Health initially was cautioned against drinking tap water in the affected provinces for two months, restricting its use to cleaning water only. Presently, local residents avoid consuming tap water, with authorities still advising against it, though water quality analysis results remain unclear. Frequent disruptions in tap water supply due to building demolitions or pipe repairs lead to day-long water cuts. This inability to use tap water for drinking, especially in the hot summer months, is very difficult for earthquake-affected individuals. Various organizations irregularly distribute limited quantities of bottled drinking water, causing environmental concerns. Efforts to open new water wells are ongoing, though concerns about their proximity to debris collection areas still exist. Additionally, some civil society organizations have established water purification systems at select locations in the region.

3.3. Health

Examples of health related questions:

- What were the immediate health needs identified by district health directorate officials, hospital staff, and Mukhtars following the earthquake?
- How were medical personnel deployed to the impacted regions, and what challenges were faced in meeting the demand for health personnel?
- What specific medical supplies and medications were urgently required in the affected areas, and what challenges were encountered in their distribution?
- Can you describe the challenges faced in transporting patients to hospitals, and what were the consequences of the lack of medical resources?
- What is the current situation regarding health response in the region one year after the earthquake, particularly in terms of primary healthcare facilities, hospital services, and vaccination challenges?

Paying attention to the health of people in the affected areas after the earthquake is one of the primary concerns. According to the reports by

district health directorate officials, hospital staff, and Mukhtars who were interviewed initially after the earthquake, people were in need of urgent health requirements. Therefore, personnel in the medical field; the Ministry of Health and university hospitals health workers were sent to the impacted regions on a rotating basis, but there was still a strong demand for health personnel. Additionally, patient transportation vehicles, ambulances, and medicines; medicines for chronic diseases (heart, blood pressure, thyroid, and diabetes medications); medicines for acute skin and skin diseases; colds, green prescription medicines, children's pain relievers, first aid supplies, and adult diapers for the elderly were among the requirements of the region. Problems raised with the distribution of medical assistance parcels, particularly medications, since distributions without medical personnel and/or assuring the security of vehicles carrying medical aid parcels were troublesome. Also, transportation to hospitals was impossible owing to the large number of badly injured people in the area. The number of casualties among the critically injured in hospitals was quite high. Unfortunately, even on the fourth day after the earthquake, the remaining bodies waiting to be buried were wrapped in blankets due to the lack of body bags, and; therefore, posing a major risk to both mental distress and public health. Emergency room staff at the hospital confirmed head injuries caused by falling pieces of sidings as well as noted the high number of applications to the emergency room for hand and foot injuries due to rebar, nails, glasses, etc. in and around collapsed buildings. They also drew attention to tetanus symptoms due to the dirty injuries produced by construction nails, irons, and other objects, because of the very low immunization rate. In total, many people needed health services and medical supplies following the disaster.

One year after the earthquake, the situation regarding health response in the region is as follows: The earthquake has disrupted the primary healthcare facilities, causing redirection of citizens to neighboring districts for medical care. Overburdened public hospitals in the region face increased patient numbers due to the destruction of hospitals in nearby districts, limiting inpatient

services, especially in essential specialties. Asbestos presence poses health risks during demolitions, as safety regulations are often disregarded, leading to asbestos dispersion in the environment. Concerns arise regarding vaccination challenges, with experts warning of a potential measles outbreak due to healthcare shortages. Reports indicate a significant increase in measles cases compared to the previous year. Poor hygiene conditions, vaccine shortages, and limited healthcare access heighten concerns about potential epidemics in the earthquake-affected areas.

3.4. Education

Examples of education related questions:

- How were educational activities impacted immediately following the devastating earthquake, particularly in terms of teachers and student casualties and the use of school buildings as shelters?
- Can you provide details on the Ministry of National Education's plan to gradually reopen pre-school, primary, middle, and high schools in the affected provinces?
- What measures were taken by the Ministry of National Education and the Council of Higher Education to ensure continuity of education, especially in the disaster zones, following the earthquake?
- What challenges were faced in reopening schools one year after the earthquake, and how were damaged and destroyed school buildings addressed?
- What specific concerns and uncertainties persist regarding children's education, teacher assignments, and accommodation issues in the affected areas during the 2023-2024 academic year?

In the initial assessment, it was revealed that all educational activities were completely disrupted due to the devastating earthquake. Unfortunately, in this earthquake, a large number of teachers and students lost their lives or were injured, many of them became homeless and the undamaged school buildings and dormitories were used as shelters for the displaced ones. In this regard, the Ministry of National Education announced that pre-school, primary, middle, and high schools would be opened

gradually in the affected provinces. According to the announcement made by the Ministry of National Education on February 20, 2023; schools were ought to be opened on March 1 in Adana, Kilis, Diyarbakir and Sanliurfa, on March 13 in Gaziantep and Osmaniye, and on March 27 in Adiyaman, Malatya, Hatay and Kahramanmaraş. Education in all provinces other than the 11 earthquake affected provinces was scheduled to start on February 20, 2023. In addition, the Council of Higher Education announced that universities continued their online (distance) education in the spring semester (Council of Higher Education, 2023). Given the restorative, healing, protective, and preventive roles of education, it was critical that education began as soon as possible, particularly in the disaster zones. A majority of children and adolescents needed access to quality assurance, safe, and inclusive education.

One year after the earthquake, the situation regarding education in the region is as follows: After the earthquake, the Ministry of National Education reopened the schools on September 11th, but challenges remained. Ongoing repairs are addressing damaged school buildings alongside completely destroyed ones. The 2023-2024 academic year experiences the use of a "transportation system" in some areas. Concerns arise over children's education in slightly or moderately damaged buildings. Teacher assignments and accommodation pose uncertainties, particularly for those especially outside the province. The Higher Education Council (YOK) began the academic year on October 2nd, but accommodation problems persist due to dorm unavailability in the affected areas.

3.5. Safety and Security

Examples of safety and security related questions:

- What were the immediate security concerns observed in Hatay and Kahramanmaraş following the earthquake, particularly regarding extensive looting and human-caused safety issues?
- Can you provide details on the types of businesses and enterprises that were looted in the initial assessment, and how widespread was the looting in both cities?

- What measures were taken by gendarmerie and police patrol teams to address the looting incidents, and how did the situation evolve in the first week after the earthquake?
- What were the security concerns reported by Mukhtars regarding looting in abandoned high-rise buildings and conflicts during aid delivery?

Extensive looting is a severe security problem for the affected population following an earthquake. Human-caused safety and security issues were considered in Hatay and Kahramanmaraş. It was noted in the initial assessment after the earthquake that looting appeared at a variety of small and big enterprises, including stores, marketplaces, shops, and workshops. Automobile showrooms, electrical and electronic stores, pharmacies, hairdressing salons, optical repair shops, perfume shops, heavy furniture displays, and other businesses were also looted. There was not a single property on the main streets in both cities that has remained un-looted. Fortunately, several gendarmerie patrol teams in both cities stated that the number of looting complaints had dropped since the fourth day and no looting reports had been received as of the first week. It was difficult for gendarmerie and police patrol teams to track malicious people due to the rapid population mobility, which poses a high security risk. Mukhtars reported continuing looting of households in high-rise buildings abandoned due to damage, particularly in better-off neighborhoods. They also noted security concerns relating to conflicts during and after the unscheduled delivery of aid materials. Roads were blocked in highly damaged regions due to the fallen structures and debris flooding into roads and residential areas. Transportation of humanitarian supplies and everything else, as well as travel by automobile in these locations, was extremely problematic, both in terms of driving safety and the issue of lengthy traffic. Phone and internet connectivity issues remained, particularly in Hatay. Electricity was a major issue in both provinces. In addition to the issues mentioned, given the enormous quantity of traumatized and very needy individuals, it was therefore extremely difficult to organize the distribution of relief materials safely and secure.

One year after the earthquake, the situation

regarding safety and security in the region is as follows: Security challenges in the affected regions stem from human factors and demolition activities. Looting has decreased compared to the immediate aftermath of the earthquake. However, outsiders break into vacant buildings, especially lightly damaged ones, resulting in legal actions. Official directives for secure demolitions are often not followed. Individuals are unable to regain their belongings from undamaged building sections during destruction, sometimes having to pay for retrieval. Ongoing demolitions cause power outages as well as impacting the security. Road damage from large vehicles during destruction affects safety. Legal actions prevent the demolition of many heavily damaged, insecure buildings, posing threats to the nearby residents.

3.6. Psychological Impact

Examples of psychosocial impact related questions:

- How has the earthquake affected your mental well-being and emotional stability?
- Have you or your family members experienced difficulties sleeping or feelings of fear since the earthquake?
- How have children and teenagers in your community been coping with the aftermath of the earthquake?
- Have you noticed any changes in the behavior or emotional state of elderly individuals in your neighborhood following the earthquake?
- What support or assistance do you feel is needed to address the mental health and psychosocial challenges resulting from the earthquake?

Mental health (Ahmed et al. 2023), psychosocial support (MHPSS) and paying attention to post-traumatic stress problems (Fernandez et al, 2014; Bianchi and Calardo, 2013) for traumatized children and adults is another essential need throughout the earthquake zone which was observed in the initial assessment. Provincial Directorates of Family and Social Services and Provincial Directorates of National Education from several provinces deployed Psychosocial First Aid (PFA) teams to the affected provinces on a rotating basis, coordinated by the Ministry of Family and Social Services. However, there was

still a high need for specialized PSS teams. Interviewees in both provinces told similar stories of children, teenagers, and adults who could not sleep, were continually afraid, who shouted at night, and those who wanted to visit and even remain at the cemetery. Children were unable to understand the earthquake and what has happened, such as the loss of loved ones and friends, and to recognize and express their emotions, or even link what has happened to their own feelings. Nonetheless, those affected parents interviewed claimed that owing to a lack of space, they sometimes had to argue loudly or express their own fears and worries in front of their children. They observed that this increased the anxiety and stress levels of their children. Adolescents were also unable to express themselves, struggle to make sense of the disastrous situation, and tolerate ambiguity. The older people appeared to be one of the most ignored groups in this phase. Elderly people remarked that they were unable to get together with their neighbors because of the earthquake. Also, they complained that their close neighbors, with whom they used to meet regularly, had already moved to another city. This was also the case for those who had their neighbors in the earthquake. In general, a huge number of people needed access to both PFA and MHPSS including medications and supplements for mental health.

One year after the earthquake, the situation regarding psychological impact in the region is as follows: Still, there is a pressing need for mental health and psychosocial support, with a shortage of clinical psychologists, especially in child and adult psychology. Child-friendly spaces and activity centers are not consistently operational in container cities. Economic instability heightens stress levels. The arrival of heavy autumn rains triggers anxiety linked to the earthquake night and fear of another severe earthquake prevents restful sleep on rainy nights. As the summer ends, those affected keep worrying about how to face winter conditions while living outside their houses.

3.7. Children Situation

- Examples of children situation related questions:
- How did the public authorities respond to

the issue of Unaccompanied and Separated Children (UASC) after the earthquake?

- What measures did MoFSS implement to address the significant number of UASCs resulting from the earthquake?
- What were some of the challenges in reporting and addressing cases of child abuse and violence in the aftermath of the earthquake?
- How did the situation regarding children in the region evolve a year after the earthquake?
- What were some of the specific concerns and challenges faced by children in the region, particularly related to housing, schooling, and protection from abuse?

Child protection is a growing issue, with large number of Unaccompanied and Separated Children (UASC), overcrowded shelters and displacement conditions (Ministry of Family and Social Services, 2023). Initially after the earthquake, there were those children who were taken out of the rubble and transported to hospitals, or those injured in the earthquake and treated in hospitals unaccompanied or separated from their families. In general, non-governmental organizations (NGOs), closely tracked this subject against criminal risks such as child abduction, child abuse, child trafficking, organ mafia, and so on. Due to the call interruptions, MoFSS (Ministry of Family and Social Services) created a centralized system where 10 numbers were open to calls 24/7. Because of the significant number of UASCs as a result of the earthquake, MoFSS activated the online application system to incorporate these children in the state foster care system. According to MoFSS, 1.858 (DEEP, 2023) unaccompanied adolescents have been recorded in the MoFSS database since the occurrence of the earthquake. Furthermore, MoFSS claimed that over 95,000 applications were received in two days after the call for foster families. This system aimed to match children with foster families who accept to take care of them until they are reunited with their biological families or when the families were able to take care of their children.

Fortunately, the interviewees in Hatay and Kahramanmaras did not disclose any cases of unaccompanied or separated children (UASC) in their neighborhood. The two gendarmes on patrol in Kahramanmaras stated that they delivered

267 UASC to the provincial FSS Directorate in the first few days after the earthquake, but they had not received such a warning as of the 7th day after the earthquake. One of the main concerns was the possibility of an increase in areas where child marriage was already prevalent in eleven earthquake affected provinces, particularly among the UASC. Children can also be abused physically, sexually, emotionally, or digitally. Furthermore, the means for reporting these abuses, protecting the children, providing legal counseling and psychosocial assistance to the child, identifying the perpetrator, carrying out the legal process, and punishing the crime, if any, were hampered. Ultimately, in each case, the child was offended in multiple, repetitive manner which is contrary to children's rights and needed urgent attention.

One year after the earthquake, the situation regarding children's conditions in the region is as follows: Children are impacted by adult concerns due to communal living in containers and tents. They overhear discussions about housing and the economy without child-friendly language or spaces. The reopening of schools forces them to face the loss of classmates they have not heard from in a long time. The lack of child-friendly spaces results in increased screen time, negatively affecting physical and mental development and making them vulnerable to virtual violence and abuse. Environmental conditions disrupt caregiver supervision, and examples of physical violence and sexual abuse against children have risen, with concerns about unreported cases. Shelters for victims of gender-based violence have been destroyed, and economic worries have raised concerns about child marriages and child labor. Overcrowded classrooms, transportation issues, and concerns over school building repairs are also among the factors that can disrupt children's access to education.

4. Discussion

In regard to community sources of support, almost half of the respondents reported having good family relationships provided by their families which was received mainly through phone calls - when the telecommunication infrastructure was available-, and some little financial support. This

included the provision of advice on different matters, showing tolerance in times of stress or following the occasional bouts of anger that occur, addressing basic needs as much as possible, helping out with daily household chores, motivating and encouraging each other, and having someone who listens. Individuals who feel unsupported stated that their relatives did not assist them, meaning that they lived alone with no one to support them. Several respondents expressed dissatisfaction with their family ties. According to the majority of interviewees, the group that suffered the most from the earthquake were individuals who have lost loved ones under the debris because search and rescue services could not arrive or did arrive late, despite hearing their loved ones' calls for help.

Actually, people rescued from the rubble of the collapsed building, individuals who lost family members or loved ones in the earthquake, as well as those caring for badly injured family members or loved ones, and those who were seriously injured, can be categorized among the most vulnerable ones. Interviewees also highlighted female heads of households, widows, and women as the categories most affected by the earthquake. Those people with disabilities, particularly the elderly were next. According to half of the interviewees, these groups are primarily supported by the community through traditional moral and emotional support. Financial assistance, although limited, was also mentioned. The lack of necessary support for these vulnerable groups was justified by community members' preoccupation with the affected population and their problems and the limited emotional resources available to assist those outside their immediate family. Nearly all interviewees emphasized that these individuals, including themselves, were seriously traumatized too.

Given the severity of the earthquake and the volume of the affected population, there were severe risks to the protection and well-being of children. The family, school, and traditional structures, the community and neighbors, who used to safeguard and care for children in ordinary times, were no longer as available and inclusive protectors of children as they once were in most settings. It is a fact that when a child's connection

to school is disrupted, the chance of reporting child abuse, domestic violence, and child, early and forced marriages drop dramatically as a result. Additionally, children are at risk of developing mental health problems in many circumstances, especially when there were multiple occurrences one after the other; such as earthquakes with continued aftershocks, with little time to recover. In this situation, children experience a prolonged period of high fear and anxiety, where they do not understand what is happening. This means that they are exposed to constant stress for a long time. This can be expected to have negative effects on many children in the medium and long term. In general, a significant number of parents, caregivers, and teachers interviewed talked about their children's fears, worries and questions and expressed a need for guidance in talking and working with their children about what happened, the earthquake and its devastating impact, the existing situation, the strong negative emotions triggered by the earthquake, and how to express them, etc.

In addition to the basic needs, children urgently need to be supported with holistic mental health and psychosocial support-oriented activities. When asked, almost all interviewees recognized that there were mental health and psychological needs in earthquake-affected areas. A majority of them believed that if services for psychological or psychosocial assistance were made accessible in their region, people in need would use them. When asked why, they indicated that families have faced significant losses and terrible experiences, which have resulted in significant psychological support needs.

According to interviewees, there were no significant differences in the symptoms of psychological impact of earthquakes among adolescents (boys and girls) and adults (male and female). As for children, there were symptoms such as unwillingness to play games; interest to spend time with their parents; keeping quiet, continuously asking their friends about those who have moved to other cities; losing his/her cheerfulness; speaking joyfully or smiling same as before; losing curiosity, not being able to sleep; being in constant fear, and crying spontaneously or at night time. As for the adults, the symptoms

included strong feelings of sorrow, anxiety and fear, misbehavior problems such as violence, negative coping mechanisms include constant smoking, hopelessness, worries and fears about the future, sleep deprivation; and crying at nighttime.

Also, in order to ensure that questions were understood by the interviewees, they were asked about the usual language used to express psychological distress, stressors, and other technical terms included in the survey. Based on the responses, talks concerning psychological and psychosocial needs used the same terminology, avoiding potential misunderstandings due to cultural differences or the usage of technical terms around mental health issues and stereotypes around speaking of them.

The level of emotional distress experienced by the respondents included:

- Almost all respondents in the two provinces stated that emotional distress is prevalent in their surroundings including themselves.
- When asked to rate how strongly such emotional distress feels on a scale of 0 to 10, many of them reported having emotional distress in the high to very high range (7 to 10);
- Women with young children and middle-aged women with domestic responsibilities in particular reported very high levels of stress;
- People who have lost a family member or several family members expressed their grief using highly emotional words, sorrow, and despair.

As for children, more than 1858 unaccompanied children had been identified as of February 21. Following the earthquake, authorized search and rescue teams were unable to access numerous debris locations in a timely manner, raising concerns about how well legal processes for UASC children are being followed. Interviewees were deeply worried about the number of unaccounted for children in earthquake zones, and they presumed that some of these children were detained by those with malicious intentions. Parents looked far more anxious about their own children's safety. The people affected by the earthquake have been trying to cope with the rubble through their own efforts since the first days of the earthquake, and in the meantime, they were following up on how and to whom their rescued children have been handed

over and tried to reach their children. Similarly, there was no procedure in the rubble regions of handing over UASC to provincial/district FSS officials or keeping a report of when to transfer them to hospitals. Therefore, there was a worry about the fate of many unaccompanied children. At this point, every attempt was made to reunite UASCs with their families, and otherwise, institutional care or alternative care models had to be implemented in a way that protects the best interests and holistic well-being of the children. A significant number of interviewees having children reported that they had tremendous difficulties talking with their children and adolescents about their earthquake fears and questions and needed guidance in talking and working with the worried ones about what has happened, the earthquake and its devastating impact, the situation, the strong negative emotions triggered by the earthquake, and how to express them.

5. Key Findings

In regard to the affected people in stricken regions of Hatay and Kahramanmaras, the followings needs were identified and briefly recommended:

5.1. Shelter Needs

Shelter and settlement responses in urban settings demand specific expertise. Working in urban contexts requires expertise in urban planning and design and knowledge of rights, regulations, laws, and policies relating to housing, land, and property. A strong understanding of local housing and financial markets is crucial. The private sector can play a role in delivering sustainable market-based solutions. The responses should build on local norms and services and avoid creating parallel structures. Two different types of shelter settings; scattered settlements (tents pitched next to houses, or greenhouse tents in gardens) and also container sites should be considered. Information activities such as basic disaster awareness, earthquake structural awareness etc. (e.g. for those who live near damaged buildings, etc.) need to be prepared. Also, household items such as sleeping equipment, food preparation and storage, eating and drinking, thermal comfort,

lighting and personal clothing, bedding buckets, water storage and hygiene items, etc. should be provided, packed and delivered to needy people in the region on a need-based and impartial, non-discriminatory basis.

5.2. Security Needs

For maintaining security, shelter and settlement programs should be implemented. In this regard, local expertise can be helpful in adapting programming for different types of occupancy, especially for the vulnerable groups. Also, documentation, such as accommodation agreements have to be properly prepared and reflect the rights of all parties. In fact, ensuring as much legal certainty about the possession as possible (the "secure enough" approach), is highly important, given the context and constraints. Finally, coordinating and working with local authorities, legal professionals, and interagency forums are highly recommended.

5.3. Wash Needs

Using the expertise and knowledge required by WASH interventions, particularly in urban settings is highly important. In fact, at-risk groups are less visible in areas with higher population density, and therefore, they should be specifically targeted. WASH items such as tap (using) water and drinking water; latrines (separate for men and women); sanitation, garbage collection; enough spare traditional underwear; sanitary pads and diapers must be provided on a need-based and impartial, non-discriminatory basis. Also, due to the lack of water and toilet facilities, the affected and local population may neglect to participate in already poor sanitation practices. This needs immediate response from the expertise through WASH. Education of regular and repetitive information should be provided to the affected people on how inadequate hand hygiene, defecation in the environment, inadequate garbage collection and disposal in the absence of water and latrines can lead to public health problems and epidemics. This can be enforced by involving disaster affected community leaders in this information campaign. Additionally, practical demonstrations can be conducted with their participation, offering practical solutions for what can be done in those environments where

water and latrines are not available, particularly in shared living areas.

5.4. Nutrition Needs

There is a need to get assistance and knowledge from expertise through food and nutrition interventions, particularly in urban settings and make sure food and nutrition responses work with WASH. For example, affected people require an adequate quantity and quality of water to prepare nutritious food and to adopt safe feeding practices. Malnutrition in different affected groups can happen, and it may be necessary to include infants under six months, pregnant and breastfeeding women, older children, adolescents, adults and older people in nutrition assessments or nutritional programs.

5.5. Health Service and Medical Supplied Needs

Urban crises require a different approach to health interventions. The number of affected people in need can quickly exceed the health service capacity that can be provided and it will be challenging to identify affected people at risk or without access to healthcare, and therefore conduct outreach programs to access people in health risks. Also, technology can be employed to instantly provide accurate information about health care and services for encountering 'rumors and misinformation' that have the potential to spread rapidly in cities. Actually, people seeking to move in towns and cities rarely know about existing health services or how to access them, risking a further increase in communicable diseases. Therefore, outreach programs should be conducted to help local people cope with new urban stresses such as inadequate access to shelter, food, healthcare, etc. Secondary and tertiary healthcare providers are often more active in cities, so their capacity can be increased in order to deliver primary health care. They can be also involved in early warning and response systems for communicable diseases and increase their capacity to deliver normal specialized services.

5.6. Legal Assistance Needs

The affected people in the region should be able to claim their rights on legal assistance on entitlement for damaged buildings through

information and documentation, and support efforts to strengthen respect for rights. In fact, affected people generally have rights regardless of whether they have certain documents or not and they should be referred to reliable institutions that can provide these documents and support them. They all need full respect for their rights.

5.7. Psychological Needs

Mental health and psychosocial disorders are common among adults, adolescents and children in all humanitarian settings. The extreme stressors associated with crises place people at increased risk of social, behavioural, psychological and psychiatric problems. All affected people in various ages should receive healthcare that addresses mental health conditions and associated impaired functioning based on the community MHPSS needs assessment through well-trained, skillful MHPSS teams. Psychological first aid, psychological counseling (individual and group sessions), other psychological interventions, and clinical mental health care are all needed. In the context of a devastating earthquake, a more specific MHPSS toolkit content needs to be derived, which focuses on loss and mourning with coordination of related organizations. Also, prioritizing maternal mental health in the aftermath of earthquakes is of particular concern due to the potential impact on child care. The MHPSS should be provided in two different types of shelter settings as mentioned; one is scattered settlements (tents pitched next to houses or greenhouse tents in gardens) and the other is container sites.

5.8. Vulnerable Groups Needs

The most vulnerable groups in the affected areas need to have access to quality and safe conditions. For example, all affected children need access to inclusive and safe education. A strong, trust-based relationship between the Ministry of Education and local education authorities should be built in order to support disrupted education. Some barriers to girls' attendance in education during assessments and design interventions need to be identified. The educational requirements of children and youth of all ages should be considered. After schools reopen, students' attendance has to be

monitored, particularly adolescent girls' attendance, as well as their special needs for school attendance, particularly in the 11 earthquake-affected provinces. Additionally, regular collaboration has to be continued with the Ministry of Education or provincial education directors to provide psychosocial support (PSS) programs and activities in schools. In fact, the PSS programs can provide psychological first aid (PFA) and social-emotional learning (SEL) programs, with a special emphasis on loss and grief. This devastating earthquake disrupted protection, care, and support systems that ensure the physical, sexual, emotional, or digital protection of children within the framework of the principles of Protection from Sexual Exploitation and Abuse (PSEA). Monitoring efforts are crucial, especially concerning the functionality of the Helpline for Unaccompanied and Separated Children (UASC) and reporting of UASC. Special attention also needs to be paid to women households, pregnant and lactating women and the elderly.

6. Conclusion and Recommendations

The following issues have been concluded and recommended based on this field observation:

- Temporal Perspective: The information presented in this paper spans both immediate post-earthquake data and data collected one year after the disaster. This temporal scope allows for a comprehensive understanding of the evolving needs of the affected population over time.
- Recommendations for Immediate Action: The paper puts forth actionable recommendations aimed at complementing existing response efforts. The primary goal is to enhance the living conditions of earthquake-affected individuals and fortify their resilience during this critical period.
- Psychosocial Support Priority: Given the widespread trauma resulting from the earthquake's destructiveness, prolonged shaking, aftershocks, and recurrent large earthquakes, integrating Mental Health and Psychosocial Support (MHPSS) services in all response phases are deemed crucial. The paper underscores the importance of prioritizing the accessibility and inclusiveness of MHPSS services, especially for vulnerable groups such

as women, children, those with disabilities, and the elderly.

- **Consideration for Diversity:** The factors impacting service accessibility, including safe spaces, social norms hindering access for specific groups, and the needs of those with disabilities, must be meticulously considered. Tailoring interventions to accommodate diverse needs is imperative.
- **Trust-Building Initiatives:** The paper highlights the significance of MHPSS services engaging in initial outreach and trust-building activities for any future arrivals, acknowledging the ongoing need for psychological support.
- **Humanitarian Relief Standards:** Emphasis is placed on the critical role of humanitarian organizations in disaster relief. The quality and responsibility of relief efforts are pivotal for upholding the well-being and rights of the affected individuals. The adoption and application of the Core Humanitarian Standards in Emergencies and Sphere Humanitarian Charter and Minimum Standards are recommended to ensure consistent, high-quality, and accountable humanitarian responses.
- **Hope for Future Implementation:** The study's results are intended to inform and guide the efforts of aid groups in the region. By aligning future responses with the identified needs and standards, there is an opportunity to enhance the effectiveness of aid delivery after potential future natural disasters.

In addition, the paper recommends actions that can complement the existing response with the aim to improve the living conditions of the earthquake affected population and strengthen their resilience at this critical time. The destructiveness of the earthquake, the shaking duration, the frequency and magnitude of aftershocks, and the recurrent large earthquakes had very 'deeply' traumatized the basic sense of trust in individuals. As a reason, it is critical to involve MHPSS services in all phases of the response at all times. Along with all other primary basic needs, the accessibility and inclusiveness of MHPSS services for vulnerable groups such as women, children, those with disabilities, and the elderly is crucial. Also, it is important to guarantee that all interventions are executed with the neces-

sary adjustments for those with disabilities. The factors which impact the accessibility of services to different groups, such as lack of safe spaces, social norms and values that impede girls' and women's access, and so on need to be considered. Paying attention to MHPSS service providing initial outreach and trust-building activities for any future arrivals is a necessity.

Additionally, it is crucial to emphasize that the quality and responsibility of disaster relief offered by humanitarian organizations are of utmost importance for the well-being and rights of all affected individuals. These include the right to a dignified life, access to humanitarian aid, and protection and security in line with international laws and obligations. Consequently, there is a clear necessity for all humanitarian agencies to learn, adapt and apply the Core Humanitarian Standard in Emergencies (Applying the CHS: Lessons from Emergency Contexts Pilot Guide) and Sphere Humanitarian Charter and Minimum Standards in Humanitarian Response, during all various kinds of emergencies. This would establish a shared framework that ensures both the quality and accountability of humanitarian responses, benefiting those in need during times of probable crisis in the future.

It is hoped that the results of this field observation can be used to inform and guide the response efforts of aid groups in the region, ensuring that the aid provided fulfills the needs of the affected local population after possible future natural disasters.

Acknowledgement

This paper is extracted partly from the report entitled "Multi-Sectoral Initial Rapid Needs Assessment Mental Health and Psychosocial Support, Child Protection Kahramanmaras Earthquake", prepared by the Nirengi Association experts (first and second author of this paper) in February 2023 considering all the ethical issues related to participants in this research.

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