The Potential use of Thermal Springs in Building Resilience after Disaster: Conceptual Introduction and Outlook

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Abstract

The use and development of thermal springs can provide underestimated potential in relevant cultural and psychosocial resilience-building after traumatic disaster. This paper allows insight on an initial conceptual introduction and provides an outlook of thinkable ideas based on exploratory field research performed within an academic grass-roots framework. It does so by taking a look at examples of various countries under different aspects of the use of thermal springs, considering them in the context of combining disaster management with trauma pedagogy.

Keywords: *Cultural Resilience, Psychosocial Resilience, Trauma Pedagogy, Trauma Therapy, Disaster Relief Management*

1. Conceptual Introduction

In 2021, massive forest fires plagued Evia in Greece, an island some 200km (125 miles) away from Athens. The fire gutted 50,795 hectares of forested land from Ellenika in the island's far north to the east of Istaia and down to Rovies [1], threatening the lives of its inhabitants, of which dozens had to be evacuated [2]. The fire finally burnt out near the seaside resort Ilia, some 10 km (6 miles) away from the thermal springs of the coastal town Loutra Edipsos. Only a short time later, the island was internationally re-introduced and recommended as tourist destination. The maintenance of the island‘s thermal springs in Loutra Edipsos, “renowned for its mineral-rich therapeutic waters - said to cure everything from gout to heart sickness” [1], did play a role in this

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cultural development of resilience [3]. Further examples of other countries suggest that the use of thermal springs provide potential in both the development of cultural as well as psychosocial resilience-building after traumatic events such as natural or man-made disasters.

While the case of the Greek island of Evia in the aftermath of the forest fires can be seen as display for cultural resilience, examples of the use and re-use of thermal springs in Iraq [4] or mere public sanitation facilities in Syria [5] underline their potential as tool for the development of psychosocial resilience. In a more therapeutical context, when taking a specific look on the Balkans, thermal springs have also been used for the strengthening of mental health as well as for the treatment of nervous diseases as, to give an example, is indicated on the information board of the lye and healing mud near Burgas, Bulgaria [6]. These factors underline the potential use of thermal springs in trauma pedagogy, when considering the important and sometimes overlooked aspect of providing therapeutic treatment for traumatized individuals as part of long-term disaster management, specifically disaster relief management.

2. Use of Thermal Springs Under the Aspect of Cultural Development and Psychosocial Well-Being

In 2021, the cultural importance of thermal springs and the institutional structure that facilitates them was made internationally aware by UNESCO World Heritage Convention by enlisting The Great Spa Towns of Europe: "These ensembles are all integrated into an overall urban context that includes a carefully managed recreational and therapeutic environment in a picturesque landscape. Together, these sites embody the significant interchange of human values and developments in medicine, science and balneology." Further explanations point out the traditional concept of medical cure meeting both psychosocial well-being and cultural values: "Taking the cure, either externally (by bathing) or internally (by drinking, and inhaling) involved a highly structured and timed daily regime and a combination of medical aspects and leisure, including entertainment and social activities [...] as well as taking physical exercise within an outdoor therapeutic spa landscape." [7].

The concept of using sanitation facilities and thermal springs for psychosocial well-being and cultural development within the framework of disaster relief management for long-term resilience- building becomes obvious when studying the case of Hammam

Al-Nahhasin in Aleppo, Syria as well as Hammam Al-Alil near Mosul, Iraq. The traditional public bath Hammam Al-Nahhasin had to close its doors as it was located right in the center of deadly battles in Aleppo. When efforts were made to reopen it again, locals were glad to regain a part of their normal weekly family routine contributing to their psychosocial resilience after this man-made disaster. [5]. In Iraq, Hammam Al-Alil is a town near Mosul which is famous throughout the country for its healing hot waters and muddy baths on the banks of the Tigris river. The spa town, once a magnet not only for visitors from Iraq but also from Kuwait, the Gulf countries and Saudi Arabia, but was partly destroyed when the whole Mosul region turned into a terrible battlefield. In 2017, the old spa facilities were able to reopen, very much to the benefit of a severely traumatized local community [4, 8]. As the manager of Hammam Al-Alil spa, Ali Aziz Ahmed, adds, a further progress towards psychosocial resilience and cultural development was achieved as recent as in June 2022 when the thermal water was made accessible in a newly built spa center. The use of this thermal water has become part of a monthly or even weekly routine for both male and female individuals of different ages who still suffer from physical and psychological effects of man-made disaster [9].

3. Potential Use of Thermal Springs Under the Aspect of Resilience after Traumatic Events

Experiencing traumatic events can cause lasting mental affliction and can lead to a range of both mental as well as physical ailments [10]. The definition of trauma is described as event which is experienced as horrifying and threatening, combined with subjective vulnerability to this very threat [11]. The exposure of individuals to these catastrophic moments perceived as life-threatening for them effectively can make trauma pedagogy (or: trauma consultancy, trauma education as used in other professional contexts) an integral part of disaster relief management. While the nature of trauma can differ (caused by either natural or man-made disaster), so can the type of trauma of different individuals vary, including those being secondarily traumatized (such as journalists, aid workers, intercultural mediators, trauma therapists or lawyers that need to cope with stories of traumatized individuals) [12]. While trauma therapy specifically aims at curing a person from post-traumatic stress disorder, trauma pedagogy focuses on giving support to traumatized individuals especially by educating and empowering the people in their surroundings [6]. Therefore, as mentioned above, the thinkable concept

of trauma pedagogy and trauma therapy being used as effective tools in resilience-building and disaster relief management appear coherent.

When briefly looking at a therapeutic aspect of thermal waters for individuals traumatized by natural or man-made disasters, medical science outlines that "any improvement in the general condition significantly promotes the abation of mental disorders". Thermal springs bear the potential for both sleep promotion, providing relaxation and calm, as well as supporting a healthy rhythm of life by alternating between activation and relaxation [13].

A consideration of spa towns on the European Balkans show a successful use of thermal water in connection with medical facilities, which is, for example, widely promoted in the countries of Serbia and Bulgaria. The well-known Serbian spa towns Vrnjaka Banja, Sokobanja and Novi Pazarska Banja all host medical facilities using thermal water as part of the therapeutic schedule. It is further notable that in Novi Pazarska Banja a well-established hospital curing nervous diseases is located right next to the very historic thermal water spring of both therapeutical and highly cultural value [14]. In addition to the Serbian case examples, a potential aspect of resilience after traumatic events becomes also evident when considering the possibility of using thermal mud baths near Burgas, Bulgaria as mentioned above. While not only pointing out that positive effects were seen in individuals to improve their mental health it further explains: "The essence of the healing mud treatment is a complex effect on the entire peripheral nervous system. Its thermal features expand the vessels and open new capillaries. Thus reducing swelling and pain, healing and wounding of scars, improving the metabolic and regenerative processes." [6].

4. Conclusion and Outlook: The use of Thermal Springs as Potential Part of Resilience-Building and Disaster Management

This conceptual introduction aimed at highlighting a potential future key awareness factor in the furtherance of resilience-building which could otherwise easily remain overlooked: combining aspects of trauma pedagogy with disaster relief management in using local natural resources that have proven to be of value for cultural, psychosocial resilience-building while bearing a specific therapeutical aspect for individuals suffering from traumatic emotional and physical consequences after disaster. Current

observations regarding the use and ongoing maintenance of thermal springs after natural disaster in Greece or man-made disaster in Iraq suggest the high value of such a thinkable concept. In addition, the World Heritage Convention of UNESCO recently positioned the use of thermal springs in spa towns also as a worthwhile and historic cultural issue [7], thus further promoting the idea of thermal springs bearing a vital potential for building resilience in a cultural sense in the actuality of our disaster-stricken time [6]. Thermal springs are a natural resource easily available also in India and its South Asian neighbors, laying the focus on using them within the framework of long-lasting disaster relief management in all its aspects can be very beneficial even if only applied on a grass-route level by a trained mediator. Awareness is key – among the examples of other countries mentioned above (covering the aspect of providing therapeutic treatment for traumatized individuals), the case of Evia in Greece serves as encouragement that promotion and maintenance of thermal springs, either in the sense of cultural or psychosocial resilience, can actively form a part of exemplary long-term disaster relief management on a communal or even international level.

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