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Social Capital Recovery in Post-Nuclear Disaster: Perspectives through a Field Course in Fukushima

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Abstract: On 11 March 2011, the Great East Japan Earthquake and the Fukushima nuclear accident resulted in several detrimental consequences, including persistent stigmatization of disaster victims, disaster-related anxiety, and loss of trust for government authorities. Through a social capital lens, we aimed to share the perspectives of Fukushima residents who have lived through the post-disaster recovery process. Site visits and discussions with residents and local stakeholders were conducted during an 18-day field course in Fukushima organized by Harvard T.H. Chan School of Public Health. We evaluated current social capital recovery efforts using the definitions of bonding, bridging, and linking social capital. Bonding capital was built upon pre-existing cultural identity and ties to the community, sustained by individual community members who invest in the preservation of local traditions. Recovery of bridging capital highlighted the importance of community ownership and participation in local community initiatives. Linking capital was more difficult to rebuild due to mistrust between the residents and government. Implications for nuclear disaster risk reduction include supporting community-based leaders to help with sustainability of recovery efforts and improving accessibility and inclusivity to participating in community initiatives. Timely dissemination of information by the government in the acute phase of disaster is crucial to maintaining trust with the local people. This study concludes that exposure to nuclear radiation remains a concern in risk reduction planning for nuclear disaster, which calls for the need for nuclear disaster specific recovery strategies that focus on social capital and community recovery.

Keywords: disaster recovery; social capital; nuclear disaster; disaster risk reduction; Fukushima

1. Introduction

On 11 March 2011, the Great East Japan Earthquake with a magnitude of 9.0 and tsunami struck northeastern Japan, triggering a Level 7 nuclear explosion at the Fukushima Daiichi Nuclear Power Plant (FDNPP) [1]. This was the most severe nuclear accident since Chernobyl, displacing approximately 164,000 residents and dispersing radioactive material over large areas of Fukushima Prefecture [2,3]. More than fifteen years later, consequences of the disaster remain deeply present in affected communities. Past research has shown persistent stigmatization



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by those outside of the prefecture and disaster-related anxiety have prolonged mental and physical health concerns to residents [4–6], as was the case for Chernobyl [7]. Long-lasting mandatory evacuation orders discouraged many residents from returning even after restrictions were lifted, accelerating depopulation in the area [8]. Most concerning, many residents believe that information on radiation was not accurately and honestly disseminated to the public in a timely fashion, leading to long-term mistrust of authorities [9,10].

In disaster science, research has shown that social capital is crucial in long-term social recovery. Social capital refers to the components of social structure, such as in relationships and networks between individuals of a community, that can act as a resource to facilitate collective action toward a common goal [11]. Disaster victims depend on outside assistance from their social networks for emotional and financial support and strengthening these networks aids in the disaster recovery process [12,13]. In Fukushima, for example, a previous study showed that residents who participated in local volunteer work and tea ceremonies had lower anxiety levels [14]. However, the rebuilding of social capital after nuclear disaster can be complicated by multiple interwoven challenges, including the spread of misinformation and failure of adequate disaster preparedness and response plans [15]. The 11 March disaster revealed inadequacies of community rebuilding, especially on the governmental level. Resident mistrust of Tokyo Electric Power Company (TEPCO), Tokyo, Japan and government information about radiation and decontamination hindered the rebuilding of social capital and community on a larger scale [9,16].

In January 2026, Harvard T.H. Chan School of Public Health’s second Fukushima Field Trip course brought Harvard graduate students to Fukushima to examine community reconstruction efforts through the lens of “Build Back Better” [17,18]. The Sendai Framework for Disaster Risk Reduction (2015–2030) adopted at the Third United Nations World Conference in Sendai, Japan serves as a global framework for reducing disaster risk. Developed as the successor to the Hyogo Framework for Action (2005–2015), the Sendai Framework shifted emphasis from disaster management toward disaster risk management and strengthening resilience. The framework highlights four main priorities: understanding disaster risk, strengthening disaster risk governance to manage disaster risk, investing in disaster risk reduction for resilience, and enhancing disaster preparedness for effective response. “Build Back Better” is based on the fourth priority of the Sendai Framework and refers to the integration of disaster risk reduction measures into the infrastructure and societal system during the recovery, rehabilitation, and reconstruction phases, rebuilding the society socially, economically, and environmentally to be more resilient to future disasters [19]. Through the Fukushima course, students interacted with local residents, grassroots organization leaders, and government officials, gaining a diverse set of perspectives on reconstruction efforts and analyze unmet gaps in the “Build Back Better” process.

Despite a growing body of research on social capital in disaster recovery, the literature on post-nuclear disaster social capital rebuilding remains sparse. While general frameworks for disaster recovery exist, the specific characteristics of nuclear accidents, including invisible chronic risk and effects of prolonged evacuation and displacement, have not been fully integrated into disaster risk reduction practice or discussed in a social capital context. The Fukushima case, now more than fifteen years after initial disaster, provides a unique opportunity to examine how bonding, bridging, and linking capital recover under the risk conditions specific to nuclear accidents. Using the definitions of bonding, bridging, and linking social capital (Table 1) [20], we organized our observations to recollect and evaluate these social capital rebuilding practices in Fukushima. The objectives of this study were to (1) document the current state of post-disaster social recovery in Fukushima through a social capital lens and to (2) identify and propose practical implications for nuclear disaster-specific risk reduction from our observations.

Table 1. Definition and examples of the three types of social capital.

Type	Definition	Example
Bonding	Connection within a group or community that shares high levels of homogeneity in demographic characteristics, socioeconomic status, and ideology.	Displaced individuals from the same neighborhood returning after an evacuation to rebuild their community.
Bridging	Connections between groups or communities that are heterogenous in demographic characteristics and social identity but do not differ significantly in power and social status and share a common ideology/goal.	A farm-stay initiative that allows students from another country to experience local culture and traditions.
Linking	Connections between groups or communities to institutions with authority, characterized by inequality in power and/or social status.	A government-funded museum in memoriam of communities that were lost or severely disrupted by a disaster.

2. Methods

This study presents a retrospective qualitative analysis of field observations collected during an educational field course in Fukushima Prefecture. From 4–21 January 2026, fifteen graduate students from Harvard T.H. Chan

School of Public Health participated in the Fukushima Field Trip course. Throughout the course, observations were discussed among the fifteen students under the supervision of one teaching fellow and two course instructors. At the end of the course, two students from the course and the teaching fellow reanalyzed the field observations for inclusion in this paper, drawing on both their own observations and those documented by the other participating students. This reanalysis was conducted under the supervision of the two course instructors.

The course spanned over 18 days in the three regions of Fukushima Prefecture: Hamadori, the eastern coastal area, Nakadori, the central area, and Aizu, the innermost mountainous area (Figures 1 and 2). These three regions experienced different levels of radiation exposure and evacuation impact following the nuclear accident. Hamadori, the coastal zone closest to the FDNPP, experienced the most severe consequences with large portions of the area placed under mandatory evacuation orders. Nakadori, the central region including Fukushima City, experienced moderate radiation levels and is where the prefectural government and administration is based in. Aizu, the inland mountainous region furthest from the powerplant, had the lowest radiation levels and became a temporary refuge for evacuees from the coastal regions.

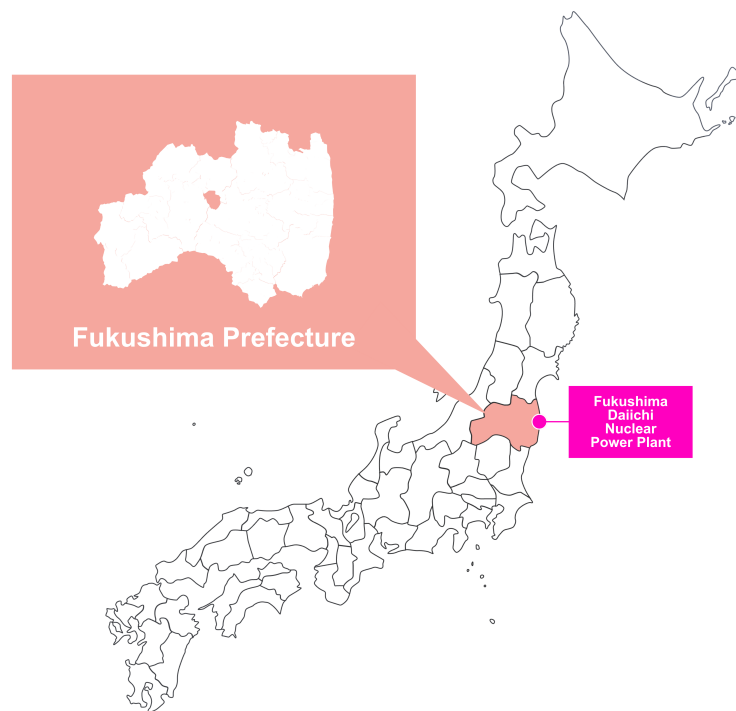


Figure 1. Map of Japan with location of Fukushima Prefecture and Fukushima Daiichi Nuclear Power Plant.

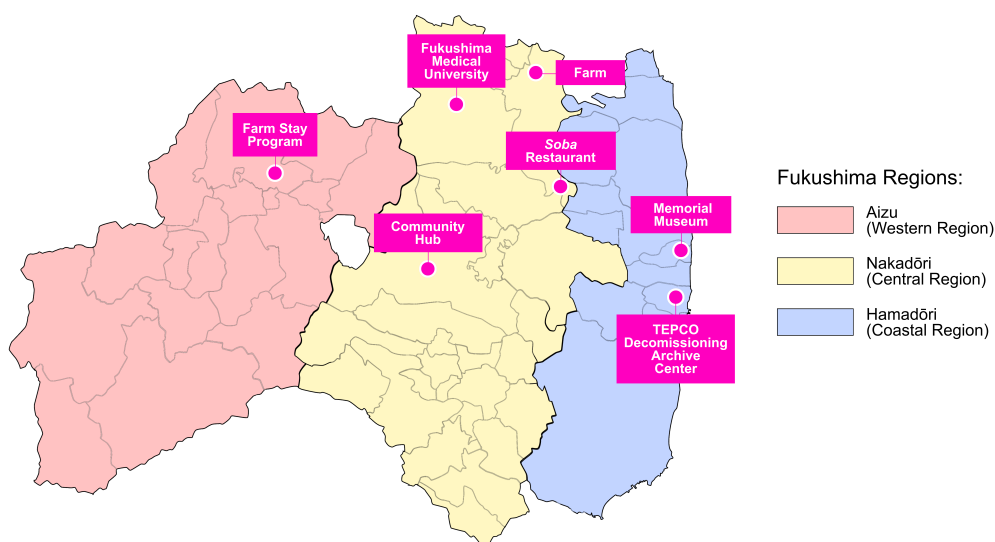


Figure 2. Map of Fukushima Prefecture and location of relevant sites visited.

In each region, a total of fifteen students, one teaching assistant, and two course instructors traveled to the locations of each site, which ranged from individually owned restaurants to the government-owned Great East Japan Earthquake and Nuclear Disaster Memorial Museum, Futaba Town, Japan. Sites were selected by course faculty with expertise in community health development in post-disaster settings and were chosen to demonstrate the complexity of community restoration and the process of “Build Back Better”. The selected sites were intended to capture perspectives from a broad range of sectors involved in post-disaster recovery to allow comparison of revitalization efforts at different scales. At each site, we conversed with local stakeholders, including city government officials, farmers, and public health nurses. Unstructured discussion regarding personal experiences of the disaster and how each entity recovered from the nuclear disaster were conducted. At some sites, formal presentations regarding their efforts to improve community recovery were given by their respective organization’s officials. Each site visit lasted from a minimum of 3 h to a maximum of 24 h. The specific locations and sites relevant to our analysis of social capital are outlined in Table 2. These interactions aimed to uncover the goals and initiatives of each entity, as well as how the broader community perceived them. Discussions attempted to capture both the current state of each entity and its status during and immediately following the disaster, including the evolution of its role and activities over time. English translation from Japanese was provided by course instructors, an official translator at the site, or by students fluent in Japanese. We compiled field notes during each visit alongside primary documents such as presentation materials and institutional pamphlets. When necessary, we contacted representatives via informal communication after the course. While the surveyed sites are not representative of all disaster recovery efforts in Fukushima, the intentional variety enabled the inclusion of diverse perspectives from individuals across different social and institutional contexts.

Table 2. Summary of site visits by relation to type of social capital.

Typology	Main Actors	Core Initiative/Role	Site	Location
Bonding	Restaurant Owner	Opened the soba restaurant and a lodging facility.	Soba* Restaurant	Yamakiya, Kawamata
	Taiko † player	Establishing a coffee shop, a music store, and a shared office space. Host Taiko performances.	Soba* Restaurant	Yamakiya, Kawamata
	Farm owners	Farmed local crops, rebuilt abandoned houses, organize farming community events.	Farm	Yanagawamachi, Date
Bridging	President of Fukushima Dialogue	Facilitates open forums for residents to share post-disaster concerns and experiences.	Fukushima Medical University	Fukushima Medical University, Hikarigaoka, Fukushima
	Farm-stay host families	City-led initiative that promotes Kitakata as a destination for “Green Tourism.” Aims to highlight its agricultural identity and establish town as a farming-centered tourism destination.	Kitakata Tourism and Local Products Association farm-stay experience program	Kumaguramachi Kumagura, Kitakata
	Hospital directors	Community facility that provides a wide array of services, including a café and restaurant, a sports medicine and training center, nursery, a health examination floor, and rental apartments for seniors.	Hospital-affiliated community facility	Omachi, Koriyama
Linking	Former Prefectural Assembly member	Visited shelters to assess needs and acted as a liaison between the government and evacuees.	House of Former Prefectural Assembly member	Fukushima City
	Fukushima City Public Health Officials and Fukushima Medical University faculty	Conducted and contributed to the FHMS to relieve anxiety following the nuclear accident by documenting information about the residents’ physical and mental health over time.	Fukushima City Hall; Fukushima Medical University	Fukushima City; Hikarigaoka, Fukushima
	Museum Director	Archival base for documenting the disaster in Fukushima Prefecture. Highlights initiatives aimed at rebuilding and revitalizing Fukushima.	Great East Japan Earthquake and Nuclear Disaster Memorial Museum	Nakano, Futaba Town
	Center employees	Educational center designed to provide residents of Fukushima and visitors to gain a deeper understanding of the disaster itself, as well as TEPCO’s ongoing decommissioning efforts.	TEPCO Decommissioning Archive Center	Tomioka City

* Buckwheat noodles; † Traditional Japanese drum.

After returning from Fukushima, we reviewed field notes and primary materials collected during site visits to identify initiatives related to the rebuilding of social capital. All sites visited during the course were catalogued, and the initiatives, scale, and objectives of each site were discussed among the authors. Key actors and initiatives observed at each site were identified and categorized according to the broad definitions of bonding, bridging, and linking social capital in Table 1. Initiatives that were targeted towards people within a smaller group or community that share similar demographic characteristics, socioeconomic status, and ideology were classified as “bonding” social capital. Efforts that connected larger groups or communities of different demographic or social identity but of similar social status and ideology were categorized as “bridging” social capital. Finally, recovery initiatives that are run by institutional or governmental entities were classified as “linking” social capital. Based on this framework, the two co-first authors identified 10 main actors across 9 sites as relevant to the aims of the study, and the selection was approved by the remaining authors. Additional context was obtained through a targeted review of academic literature, government publications, personal accounts of the disaster, and official Japanese government sources related to the topic. Our observations are descriptive, and social capital and degree of recovery due to the initiatives mentioned in this paper were not measured. The authors stand from the position of external observers. We acknowledge that lived experience of the disaster and process of recovery cannot be fully accessed through short-term field visits.

3. Results

3.1. Bonding Capital: Shared Identity in Social Capital Rebuilding

In Nakadori, we met the owner of a traditional soba (Japanese buckwheat noodles) restaurant who along with many others in the community, chose to stay in their hometowns in the Yamakiya region in Kawamata even while fully aware of the warnings from the government about elevated risks of radiation. From our conversation, we learned that residents in the area still felt that the main fundamental loss from the disaster was the disintegration of the social community they once lived in. They regretfully shared that current Yamakiya region is still not the same as before the disaster, even with support from the government and other revitalization efforts. The soba restaurant owner continuing to run the restaurant and lodging facility for local and new residents to come together is a reflection of his strong sense of belonging and formed identity to where he lives.

At the soba restaurant, we met a young man from the Yamakiya region, who performed using Japanese drums called taiko, a longstanding local cultural tradition, and through social media engagement, aimed to strengthen community ties in his hometown. Besides performing taiko, he has operated a coffee shop, a music store, and a shared office space [21]. However, maintaining these efforts has been challenging due to the region’s declining population. He explained that the declining population makes it difficult to invest in and develop local activities and services, and the absence of such opportunities further discourages people from returning or relocating to the area. Despite the uncertainty surrounding the region’s future, we found that there are still young people of Fukushima who remain committed to sharing local cultural traditions and heritage.

In the farming community of Yanagawa-machi, Date City, we spoke with two farmers who established a natural farm shortly after the nuclear accident [22]. At this time, the farming community faced collapsing sales due to reputational damage from the nuclear accident and worsening farmer shortage. Rather than leaving, they rebuilt several abandoned houses in his neighborhood that were left by previous farmers, including traditional homes over 120 years old, and held gatherings for farmers to remain connected. Through this conversation, we were introduced to the concept of *satoyama*, the Japanese idea of sustaining the human-nature relationship and natural landscape. Their approach reflected this idea that community can be rebuilt from the relationships among the local people, histories, and resources already present in the land around them.

3.2. Bridging Capital: Active Community Participation in Local Organizations

At Fukushima Medical University, we spoke with the president of Fukushima Dialogue, Fukushima, Japan, first established by the International Commission on Radiological Protection (ICRP), Ontario, Canada in November 2011 [23]. The goal of Fukushima Dialogue was to create a space where Fukushima residents could openly share their concerns, experiences, and perspectives about the nuclear accident. Because the initial events were well received, the dialogues continued through the efforts of volunteers. In 2016, the project was formally handed over to local volunteers and established as a nonprofit organization in 2019. Unlike many government-organized events, which are often structured as top-down lectures, Fukushima Dialogue emphasizes open equal discussion and mutual learning among participants, one of the reasons it remains functioning today.

In Kitakata City of the Aizu region, we participated in a farm-stay program organized through the Kitakata Tourism and Local Products Association, a city-led initiative that promotes the city as a farming-centered tourism

destination [24]. From discussion with the host families, we learned that many residents from the eastern parts of Fukushima Prefecture temporarily evacuated to the Aizu region following the disaster due to lower levels of radiation. However, the region continued to be associated with the broader “Fukushima” label. The host families shared those agricultural producers in Kitakata City experienced a significant decline in produce sales after the disaster [25,26], as consumers outside the region were hesitant to purchase food products from Fukushima. This stigma of Fukushima products posed a serious challenge for residents, many of whom rely on agriculture as their primary source of livelihood. Through this farm-stay program, residents hope to shift the negative image of Fukushima products by welcoming visitors to their farms and sharing a part of their everyday lifestyle.

In Koriyama City, we visited a new multi-use community facility affiliated with a local hospital that opened in April 2025 and were introduced to the purpose of the facility by the directors of the affiliated hospital [27]. They offered a wide array of services, including a café, restaurant, sports medicine and training center, nursery, health examination floor, and rental apartments for seniors. Despite its stated vision of connecting the community, the building was mostly empty during our Saturday visit. We felt that with 8000 Japanese Yen (JPY) gym sessions and senior rental apartments costing over 300,000 JPY per month are likely out of reach for the general people. The large empty building during our Saturday visit raised questions about whether the initiative had been designed around community need or institutional vision. From this visit, we recognized the importance of accessibility of such resources to the general people for it to have a broader impact on the community.

3.3. Linking Social Capital: Difficulty in Restoring Trust

In Fukushima City, we talked with public health officials at the Fukushima City Office and then met with Fukushima Medical University professors, including the Executive Director and a key contributor to the Fukushima Health Management Survey (FHMS), at Fukushima Medical University. The conversation suggested that the current challenge is not radiation but stigma. For example, they shared that around one-third of Tokyo residents believed that radiation still poses harm Fukushima residents and its future generations, which scientific evidence has disproved [28]. Officials also shared that in the early stages of the survey, residents felt that the survey process progressed too slowly, the government was not transparent with results, and survey data did not meaningfully help the community. A physician who worked on the frontlines during the acute disaster response shared that several of the residents believed he was working for the government, which hindered his ability to deliver health information. Resident mistrust in government and institutions seems to decrease the effectiveness of health communication, even when the information is backed by scientific evidence.

We visited the Great East Japan Earthquake and Nuclear Disaster Memorial Museum, where we spoke with the museum director about the museum’s mission and exhibits. The museum was established based on a 2015 national directive to create an archival base for documenting the disaster in Fukushima Prefecture. With a construction cost of approximately 5.3 billion yen, the museum was founded by the Fukushima Prefectural Government and opened in 2020 [29]. Although the museum has generally been well received by visitors from outside Fukushima Prefecture, it has faced criticism from local residents who felt that the exhibits did not clearly address institutional responsibility for the disaster. Shortly after opening, in a storyteller activity manual obtained by a prefectural assembly member, in-house storytellers for the museum were instructed to exclude criticism of specific organizations from their presentations and were selected based on pre-approved scripts. Critics argued that these specific organizations indirectly referred to the national government and TEPCO, making it difficult for survivors to convey the effects of government failure in the disaster response [30]. The government’s initial lack of accountability for the disaster further weakens trust between the government and residents.

We visited the TEPCO Decommissioning Archive Center in Tomioka Town approximately 10 km from the FDNPP. Opened in 2018, the center was designed to provide residents of Fukushima and visitors to gain a deeper understanding of the disaster itself, as well as TEPCO’s ongoing decommissioning efforts [31]. During our visit, we watched informational videos detailing long-term decommissioning efforts, traveled by bus to the FDNPP to observe ongoing decommissioning work, and received explanations from center employees regarding safety measures on the Advanced Liquid Processing System (ALPS)-treated water [32]. TEPCO’s efforts to communicate responsibility for the disaster throughout the tour and their dedication to rebuilding trust with the residents greatly differs from the avoidance of responsibility for the disaster as seen with the Memorial Museum in its initial operation period.

While the governmental institutions described above represent formal linking capital rebuilding through government as a collective entity, we also encountered an example of linking capital operating at the individual level. We were welcomed into the home of a former Fukushima Prefectural Assembly Member, who shared their distinctly personal approach to bridging the gap between government and residents, which contrasted with the

structured, institutional responses as mentioned previously. After the nuclear disaster, they personally went to various evacuation shelters, asked evacuees directly about their needs, and handed out daily necessities such as underclothes and sanitary products for the evacuees. They frequently relayed the prefecture's Disaster Response Headquarters about the needs of the people, serving as a liaison role between the government and the evacuees. The Assembly Member's example shows that recovery of linking capital does not need to be exclusively an institutional process. Individuals who work across different levels of society can also serve as a bridge between the government and the people.

4. Discussion

In Fukushima fifteen years after the nuclear disaster, we noticed that bonding, bridging, and linking social capital seemed to be in uneven states of recovery, each characterized with different challenges and advantages. Through conversations from Fukushima residents and officials of various backgrounds, our evaluation of initiatives categorized into bonding, bridging, and linking capital recovery provides insight into the current process of social recovery.

In Fukushima, bonding capital was built upon pre-existing cultural identity and ties to the community, sustained by individual community members who invest intentional effort in preservation of local traditions. Beyond the disaster recovery setting, these smaller-scale recovery efforts seemed to help in community revitalization in the face of population decline in rural areas. The examples of bridging capital initiatives highlight the importance of community ownership and participation in local community initiatives, as seen in Fukushima Dialogue. Citizen participation and accessibility to resources, in addition to financial and logistic support from local institutions, as seen in the multi-use community facility, can enhance bridging capital recovery. However, based on perspectives shared with us, distrust between the residents and government, including lack of civilian voice in higher level decision-making, makes linking capital harder to rebuild. While bonding, bridging, and linking capital are discussed separately in this study, in practice initiatives have overlapping characteristics from more than one type of social capital, and social recovery is an integrated process that involves multiple actors.

In current literature, case studies of disasters in other locations have also described the importance of bonding and bridging capital in the immediate recovery phase, while the effects of linking capital are usually delayed initially but are eventually incorporated in long-term recovery [33,34]. A similar pattern can be seen for bonding and bridging capital recovery in Fukushima, but due to government miscommunication and lack of transparency, it seemed that linking capital has yet to be well incorporated into Fukushima's recovery process.

Several characteristics of nuclear accidents make restoring linking capital more difficult than in the recovery from other types of disaster. There is a large distinction between communities formed by the shared experience of a visible and acute traumatic experience of disasters and those formed by the presence of an invisible and chronic risk [35]. In other types of disasters, the affected communities can see the process of physical recovery through the rebuilding of their own homes and local environment. However, in nuclear accidents, radiation cannot be seen, and residents described feeling unable to measure or discuss the risk and effects of radiation without depending on the government. Additionally, the inherent nature of human-made aspects of disasters causes a relatively more damaging effect on trust between the government and residents [36]. In so-called natural disasters, the cause of disaster is from an external, uncontrollable source, in which blame is not targeted toward a specific party. In the case of Fukushima, TEPCO was a private company, but the national government was closely involved in nuclear regulation and was also responsible for disaster recovery. In such a situation, trust may be harder to rebuild than after a natural disaster because the authorities responsible for recovery were also seen as connected to the cause of the accident.

These challenges reveal a gap in the "Build Back Better" process in Fukushima, which emphasizes cooperation across institutions and local communities in disaster recovery. In line with the Sendai Framework for Disaster Risk Reduction and its fourth priority outlining "Build Back Better", the following implications are proposed while considering the unique context of disaster recovery in nuclear disasters [19]. First, the government should formally recognize and support local community-based organizers or leaders to help with sustainability of recovery efforts. As described by the taiko drummer, individual commitment and startups are vulnerable to disbandment due to population decline and therefore lack of visibility. Protection of cultural or historical sites and traditions such as taiko and local farm buildings is also crucial to preserving community identity. A bottom-up approach to support communities to lead their own initiatives can be more sustainable when facing chronic risk such as radiation and accompanying stigma. Second, there should be inclusive and accessible participation in these community initiatives while prioritizing those disproportionately affected by disaster, such as the elderly and low-income areas, which also helps with sustainability. Community input should be considered when designing or

deciding which initiatives to invest in. Finally, early government transparency and timely dissemination of information in the acute phase of disaster could help lay a better foundation for a better trust relationship between the government and the people, which can allow for more effective health communication during the disaster recovery period [37]. For example, during COVID-19, public trust in health authorities was a predictor of acceptance of the COVID-19 vaccine and adherence to public health measures [38].

The Fukushima nuclear accident is a case of technological disaster that presents transferable lessons for similar events in the future. As the world trends away from fossil fuels and toward low-carbon energy sources, such as renewable energy and nuclear power, in response to the climate change crisis, more nuclear powerplants are being built worldwide in alignment with low-carbon energy strategies [39]. At the same time, radiation and future nuclear accidents are growing concerns in risk reduction planning, as Fukushima and Chernobyl have demonstrated the long-lasting effects of stigma and public health concerns during the post-disaster period. The need for nuclear disaster-specific recovery frameworks that include strategies for social and community recovery, including an emphasis on protecting mental health and overall well-being in affected communities, has therefore greatly increased.

The Harvard Fukushima field course serves as an example of a structured learning opportunity for students and young professionals to witness real-life processes of nuclear disaster recovery. There were two main lessons that resonated among the students who participated in the Fukushima field course. First, the importance of trust on a societal scale between the government, higher institutions, and the people is greater than what we initially anticipated before attending the course. Seeing this firsthand reminded us that trust is fragile and must be treated likewise. Once trust is broken, rebuilding it requires sustained presence and authentic humility from the government to properly listen and act on what is truly needed by the people. In a scenario like Fukushima, we saw that technical expertise alone is not enough to regain the connection with the people. Second, and on a similar note, this experience reinforced the importance of cultural humility when conducting meaningful and impactful public health work. We recognized that sustainable solutions cannot be developed in isolation by academics and government officials alone and must be shaped alongside the people whose lives were impacted, while maintaining respect for their lived experiences and regional values. As students move into government and higher public health roles, field courses like this can provide a lasting impression of the importance of cultural context and mutual understanding between researchers and communities they hope to serve. Field courses with emphasis on social capital and disaster recovery in higher education can help instill this perspective in future public health researchers and policymakers.

There are several limitations in this study. First, the sites and individuals included in this study do not represent all the people we conversed with throughout the course. The sites and individuals were chosen based on availability and willingness to participate, as well as existing connections with course instructors. Second, the perspectives shared by residents and stakeholders represent their individual views of the disaster and recovery process and cannot be generalized to represent broader community sentiment. Third, discussions were unstructured, and people were encouraged to freely share what they felt was most relevant rather than focusing on a fixed structure of questions, limiting comparability of perspectives across sites. Fourth, due to logistic restrictions of the course, residents who relocated outside of Fukushima were not included among those we met. These individuals may hold different perspectives of the disaster, and their voices should be included in future studies for better understanding of the full context of the disaster. Fifth, social capital was not measured objectively, and all observations were described subjectively based on individual perspectives and attitudes shared with us. The actual impact of community initiatives and process of social capital recovery cannot be directly determined by this study alone. Finally, the eighteen-day time span of the course only represents a snapshot of time in the ongoing process of social recovery in Fukushima.

5. Conclusions

Fukushima after nuclear disaster shows that stigma and mental health burden remain public health concerns today, even after radiation levels are proved to be not harmful. Local residents, organizations, and government authorities have developed methods of community rebuilding. Through our observations from the Harvard Fukushima field course, we documented how the individuals and communities of Fukushima have built back better after nuclear disaster, revealing that bonding, bridging, and linking social capital recovery have followed different trajectories. Where bonding and bridging capital have shown signs of organic rebuilding, based on cultural identity and community ownership, linking capital remains fragile due to early institutional mistrust. The experiences of Fukushima residents offer lessons that extend beyond Japan. Recovery from nuclear disaster is both a technical

and a social challenge. Transparent governance that enhances community-focused disaster risk reduction strategies should be prioritized.

Author Contributions

C.S.: Conceptualization, methodology, investigation, writing—original draft preparation, review, editing. E.Y.: Conceptualization, methodology, investigation, writing—original draft preparation, review & editing. N.R.: Conceptualization, methodology, supervision, writing—review & editing. I.A.: Conceptualization, methodology, supervision, writing—review & editing; A.G.: Conceptualization, methodology, supervision, writing—review & editing. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

Use of AI and AI-Assisted Technologies

The authors used AI-assisted tools to correct sentences and remove grammatical mistakes. All content was reviewed and approved by the authors. The authors take full responsibility for the content of the published article.

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